RRC connection mobility procedure 8.3 8.3.1 Cell Update 8.3.1.1 Cell Update: cell reselection in CELL_FACH 8.3.1.1.1 Definition 8.3.1.1.2 Conformance requirement A UE shall initiate the cell update procedure in the following cases: 1> Uplink data transmission: 1> Paging response: 1> Radio link failure: 1> Re-entering service area: 1> RLC unrecoverable error: 1> Cell reselection: 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is 3> if the UE is in CELL_FACH or CELL_PCH state and the UE performs cell re-selection; or 3> if the UE is in CELL_FACH state and the variable C_RNTI is empty: 4> perform cell update using the cause "cell reselection". When initiating cell update procedure, the UE shall: 1> stop timer T305; 1> if the UE is in CELL_DCH state:

1> move to CELL_FACH state, if not already in that state;

1> if the UE performs cell re-selection:

2> clear the variable C_RNTI; and

2> stop using that C_RNTI just cleared from the variable C_RNTI in MAC.

1> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;

1> in case of a cell update procedure: 2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3; 2> submit the CELL UPDATE message for transmission on the uplink CCCH. 1> set counter V302 to 1; 1> start timer T302 when the MAC layer indicates success or failure in transmitting the message. In case of cell update procedure the UE shall transmit a CELL UPDATE message. The UE shall set the IEs in the CELL UPDATE message as follows: 1> set the IE "Cell update cause" corresponding to the cause specified in TS 25.331 subclause 8.3.1.2 that is valid when the CELL UPDATE message is submitted to lower layers for transmission; During the time period starting from when a cell update procedure is initiated by the UE until when the NOTE: procedure ends, additional CELL UPDATE messages may be transmitted by the UE with different causes. 1> set the IE "U-RNTI" to the value of the variable U_RNTI; 1> if the value of the variable PROTOCOL_ERROR_INDICATOR is TRUE: 1> if the value of the variable FAILURE_INDICATOR is TRUE: When the UE receives a CELL UPDATE CONFIRM message; and if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or - if the message is received on DCCH: the UE shall: 1> stop timer T302; 1> in case of a cell update procedure and the CELL UPDATE CONFIRM message: 2> includes "RB information elements"; and/or 2> includes "Transport channel information elements"; and/or 2> includes "Physical channel information elements"; and 2> if the variable ORDERED_RECONFIGURATION is set to FALSE: 3> set the variable ORDERED_RECONFIGURATION to TRUE. 1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified otherwise in the following:

1> enter a state according to subclause 8.6.3.3 applied on the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message.

. .

If the UE after state transition remains in CELL FACH state, it shall

- 1> start the timer T305 using its initial value if timer T305 is not running and periodical cell update has been configured by T305 in the IE "UETimers and constants in connected mode" set to any other value than "infinity";
- 1> select PRA CH according to TS 25.331 subclause 8.5.17;
- 1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;
- 1> not prohibit periodical status transmission in RLC;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> ignore that IE and stop using DRX.

If the UE after the state transition remains in CELL_FACH state; and

- a C-RNTI is stored in the variable C_RNTI;

...

the UE shall:

. . .

- 1> in case of a cell update procedure:
 - 2> set the IE "RRC transaction identifier" in any response message transmitted below to the value of "RRC transaction identifier" in the entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry.

. . .

1> transmit a response message as specified in TS 25.331 subclause 8.3.1.7;

. . .

If the CELL UPDATE CONFIRM message:

- includes the IE "RB information to release list":

the UE shall:

1> transmit a RADIO BEARER RELEASE COMPLETE as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include the IE "RB information to release list"; and
- includes the IE "RB information to reconfigure list"; or
- includes the IE "RB information to be affected list":

the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and

- includes "Transport channel information elements":

the UE shall:

1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- includes "Physical channel information elements":

the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or
- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI":

the UE shall:

1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- does not include "CN information elements"; and
- does not include the IE "Ciphering mode info"; and
- does not include the IE "Integrity protection mode info"; and
- does not include the IE "New C-RNTI"; and
- does not include the IE "New U-RNTI":

the UE shall:

1> transmit no response message.

If the new state is CELL_FACH, the response message shall be transmitted using the new configuration after the state transition., and the UE shall:

...

1> if the variable PDCP_SN_INFO is empty:

. . .

- 2> if the CELL UPDATE CONFIRM or URA UPDATE CONFIRM message did not contain the IE "Ciphering mode info":
 - 3> when RLC has been requested to transmit the response message,
 - 4> continue with the remainder of the procedure.

. . .

If any or several of the following conditions are true:

٠...

 reselection to another UTRA cell (including the previously serving cell) before completion of the cell update or URA update procedure;

the UE shall:

1> stop T302 if it is running;

. . .

1> check whether it is still in "in service area";

. . .

- 1> in case of a cell update procedure:
 - 2> clear any entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRA NSA CTIONS.

If the UE detects "in service area" if it has not entered idle mode, and:

- 1> if V302 is equal to or smaller than N302, the UE shall:
 - 2> if the UE performed cell re-selection:
 - 3> delete its C-RNTI.
 - 2> in case of a cell update procedure:
 - 3> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;
 - 3> submit the CELL UPDATE message for transmission on the uplink CCCH.
 - 2> increment counter V302;
 - 2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.
- 1> if V302 is greater than N302, the UE shall:

. . .

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.1.3 Test purpose

1. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell.

2. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

8.3.1.1.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active.

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

UE: PS-DCCH+DTCH_FACH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.1.1

Parameter	Unit	Cel	1	Cel	12
		T0	T1	T0	T1
UTRARF Channel Number		Mid Ran	ge Test	Mid Ran	ge Test
		Frequ	ency	Frequ	ency
CPICH Ec (FDD)	dBm/3.84MHz	-60	-69	-69	-60
P-CCPCH RSCP (TDD)	dBm	-60	-69	-69	-60

Table 8.3.1.1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions. SS switches the power settings repeatedly between columns "T1" and "T0", whenever the description below specifies that the transmission power settings for cell 1 and cell 2 be reversed.

The UE is in the CELL FACH state, camping onto cell 1. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1. The UE shall find cell 2 to be more suitable for service and hence perform a cell reselection. After the completion of cell reselection, the UE shall transmits a CELL UPDATE message to the SS on the uplink CCCH of cell 2 and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_FACH", to the UE on the downlink DCCH. UE shall verify that IE "New C-RNTI" is not included in the downlink message and shall send a CELL UPDATE message to SS again. SS shall then send a CELL UPDATE CONFIRM message which includes a valid IE "New C-RNTI". SS verifies that the UE send UTRAN MOBILITY INFORMATION CONFIRM message.. UE shall stay in CELL_FACH state. SS configures its downlink transmission power settings according to columns "TO" in table 8.3.1.1. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS replies with CELL UPDATE CONFIRM message and allocates new C-RNTI and U-RNTI identities to the UE. The IE "RRC State Indicator" is set to "CELL_FACH" in this message. The UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. Following this, SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1. The UE shall initiate a cell update procedure by transmitting a CELL UPDATE message and stating the cause as 'cell re-selection'. SS replies with a CELL UPDATE CONFIRM message which contains IE "Physical channel information elements" and IE "RRC State Indicator" is set to "CELL DCH". The UE shall move to CELL DCH state and send PHSICAL CHANNEL RECONFIGURATION COMPLETE message. The SS shall transmit PHYSICAL CHANNEL RECONFIGURATION message, asking the UE to move to CELL_FACH state. The UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message after transiting to CELL_FA CH state. Then, SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.1. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS replies with a CELL UPDATE CONFIRM message which contains IE "Transport channel information elements" and IE "RRC State Indicator" is set to "CELL_DCH". The UE shall move to CELL_DCH state and send TRANSPORT CHANNEL RECONFIGURATION COMPLETE message. The SS shall transmit PHYSICAL CHANNEL RECONFIGURATION message, asking the UE to move to CELL_FACH state. The UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message after transiting to CELL_FACH state. Following this, SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 2. SS replies with a CELL UPDATE CONFIRM message which contains IE "RB information to be affected list". The UE shall send RADIO BEARER RECONFIGURATION COMPLETE message. Then, SS configures its downlink transmission power settings according to columns "TO" in table 8.3.1.1. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS replies with a CELL UPDATE CONFIRM message which contains IE "RB information to release list". The UE shall send RADIO BEARER RELEASE COMPLETE message. Finally, SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 2. SS shall not respond to this message but SS configures its downlink transmission power settings according to columns "TO" in table 8.3.1.1. UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS shall then send CELL UPDATE CONFIRM message to UE. UE shall reply with UTRAN MOBILITY INFORMATION CONFIRM message. SS calls for generic procedure C.2 to check that UE is in CELL FACH state.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction UE SS	Message	Comment
1	UE 33		The UE is in the CELL_FACH
			state in cell 1
2		Void	SS applies the downlink
			transmission power settings,
			according to the values in
			columns "T1" of table 8.3.1.1. The UE shall find that the cell 2
			is better for service and
			perform a reselection. SS waits
			for the maximum duration
			required for the UE to camp to
			cell 2.
3	\rightarrow	CELL UPDATE	Value "cell reselection" shall be
			indicated in IE "Cell update
4	←	CELL UPDATE CONFIRM	cause" IE "RRC State Indicator" is set
4		CELL OF DATE CONFINI	to "CELL_FACH".
4a	→	CELL UPDATE	Value "cell reselection" shall be
.~			indicated in IE "Cell update
			cause"
4b	←	CELL UPDATE CONFIRM	See message content.
5	\rightarrow	UTRAN MOBILITY INFORMATION ICONFIRM	
6		CONFIRM	SS reverses the transmission
"			power level of cell 1 and cell 2.
7	\rightarrow	CELL UPDATE	
8	←	CELL UPDATE CONFIRM	New C-RNTI and U-RNTI
			identities are assigned to the
			UE. IE "RRC State Indicator" is
9	\rightarrow	UTRAN MOBILITY INFORMATION	set to "CELL_FACH".
3	/	CONFIRM	
10			SS reverses the transmission
			power level of cell 1 and cell 2.
11	→	CELL UPDATE	
11	7	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set
'-	←	OLLE OF BATE OCIVITION	to "CELL_DCH".
			IE "Physical channel
			information elements" is
			included in this message
12a		PHYSICAL CHANNEL RECONFIGURATION	
13	→ ←	COMPLETE PHYSICAL CHANNEL RECONFIGURATION	The UE is in CELL_DCH now.
13	`	THOO AL OHANNEL RECONFIGURATION	The SS shall send PHYSICAL
			CHANNEL
			RECONFIGURATION
			message to the UE asking the
			UE to transit to CELL_FACH
14		DUVEICAL CHANNEL DECONEICHDATION	state.
14	\rightarrow	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
15			The SS reverses the
			transmission power level of cell
			1 and cell 2.
16	\rightarrow	CELL UPDATE	

Step	Direction UE SS	Message	Comment
17	<u> ← 33 </u>	CELL UPDATE CONFIRM	IE "Physical channel information elements" is included in this message, and IE "RRC State Indicator" is set to "CELL_DCH". IE "Transport channel information elements" is included in this message
18	\rightarrow	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	5
19	+	PHYSICAL CHANNEL RECONFIGURATION	The UE is in CELL_DCH now. The SS shall send PHYSICAL CHANNEL RECONFIGURATION message to the UE asking the UE to transit to CELL_FACH state.
20	\rightarrow	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
21			The SS reverses the transmission power level of cell 1 and cell 2.
22	\rightarrow	CELL UPDATE	
23	←	CELL UPDATE CONFIRM	New C-RNTI identity is assigned to the UE. IE "RRC State Indicator" is set to "CELL_FACH". IE "RB information to reconfigure list" and IE "RB information to be affected list" is included in this message.
24	→	RADIO BEARER RECONFIGURATION COMPLETE	
25			The SS reverses the transmission power level of cell 1 and cell 2.
26 27	}	CELL UPDATE CELL UPDATE CONFIRM	New C-RNTI identity is assigned to the UE. IE "RRC State Indicator" is set to "CELL_FACH". IE "RB information to release list" is induded in this message
28	\rightarrow	RADIO BEARER RELEASE COMPLETE	
29	,	OF LL LIDDATE	SS reverses the transmission power level of cell 1 and cell 2.
30	→	CELL UPDATE	SS reverses the transmission power level of cell 1 and cell 2.
32	\rightarrow	CELL UPDATE	
33	+	CELL UPDATE CONFIRM	New C-RNTI identity is assigned to the UE.
34	→	UTRAN MOBILITY INFORMATION CONFIRM	
35	←→	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

CELL UPDATE (Step 3, 4a, 7,, 11, 16, 22, 30 and 32)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	In step 3, 4a and 7 check to see if set to '0000 0000
	0000 0000 0001'.
	In step 11, 16, 22, 26, 30 and 32, check to see if set to same string in IE "S-RNTI" in IE "New U-RNTI" of CELL
	UPDATE CONFIRM message in previous assignment
Cell Update Cause	Check to see if set to 'Cell Re-selection'

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in TS 34.108, clause 9.

CELL UPDATE CONFIRM (Step 4b)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
	'1010 1010 1010 1010'
RRC transaction identifier	Selects an arbitrary integer between 0 and 3, but is
	different from that used in step 4.

CELL UPDATE CONFIRM (Step 8)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New U-RNTI	
- SRNC Identity	'0000 0000 0001'
- S-RNTI	An arbitrary 20-bits string which is different from original
	S-RNTI
New C-RNTI	'0000 0000 0000 1111'

CELL UPDATE CONFIRM (Step 12)

Use the same message sub-type found in step 8 and k=0, with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
CHOICE channel requirement	
Uplink DPCH info	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
Downlink information common for all radio links	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
Downlink information per radio link list	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 12a)

Use the same message sub-type found in [9] TS 34.108 clause 9.

PHYSICAL CHANNEL RECONFIGURATION (Step 13)

Use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "Packet to CELL_FACH from CELL_DCH in PS":

CELL UPDATE CONFIRM (Step 17)

Use the same message sub-type found in TS 34.108, clause 9 with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
UL Transport channel information for all transport channels	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
Added or Reconfigured uplink TrCH information	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
DL Transport channel information for all transport channels	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
Added or Reconfigured downlink TrCH information	Same as RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
CHOICE channel requirement	
Uplink DPCH info	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
Downlink information common for all radio links	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
Downlink information per radio link list	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 14)

Use the same message sub-type found in [9] TS 34.108 clause 9.

PHYSICAL CHANNEL RECONFIGURATION (Step 19)

Use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "Packet to CELL_FACH from CELL_DCH in PS", with following exception.

Information Element	Value/remark
New C-RNTI	'0000 0000 0000 1111'

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 20)

Use the same message sub-type found in [9] TS 34.108 clause 9.

CELL UPDATE CONFIRM (Step 23)

Use the same message sub-type found in TS 34.108, clause 9 with the following exceptions:

Information Element	Value/remark
RB information to be reconfigure	
New C-RNTI	'1010 1010 1010 1010'
- RB identity	20
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	Not Present
- RB Information Release List	Not Present
- RB Information Reconfiguration List	Present
- RB Information Affected List	Present

CELL UPDATE CONFIRM (Step 27)

Use the same message sub-type found in TS 34.108, clause 9 with the following exceptions:

Information Element	Value/remark
New C-RNTI	'0000 0000 0000 1111'
RB information to release	
-RB identity	4

CELL UPDATE CONFIRM (Step 33)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark	
New C-RNTI	'1010 1010 1010 1010'	

8.3.1.1.5 Test requirement

At step 3 the UE shall reselect to cell 2 and then it shall trans mit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

At step 4a the UE shall transmit CELL UPDATE message which sets the value "cell reselection" in IE "Cell update cause".

At step 4b, the SS shall send a CELL UPDATE CONFIRM.

At step 5, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message.

At step 7 the UE shall sent a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

At step 9, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message.

At step 11 the UE shall sent a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

At step 12, the SS shall send a CELL UPDATE CONFIRM taking the UE into CELL_DCH state. In addition, it also specifies the IE "Physical Channel Information elements".

At step 12a, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the new physical channel assigned.

At step 13 and 14, the SS uses PHYSICAL CHANNEL RECONFIGURATION to take the UE into CELL_FACH state.

At step 15, the SS reverses the transmission power level of cell 1 and 2 causing the UE to reselect to a different cell.

At step 16 the UE shall sent a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

At step 17, the SS shall send a CELL UPDATE CONFIRM and take the UE into CELL_DCH state. In addition, it also specifies the IE "Physical Channel Information elements" and "Transport Channel Information elements".

At step 18, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE.

At step 19 and 20, the SS uses PHYSICAL CHANNEL RECONFIGURATION to take the UE into CELL_FACH state.

At step 21, the SS reverses the transmission power level of cell 1 and 2 causing the UE to reselect to a different cell.

At step 22, the UE shall send a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

At step 23, the SS shall send a CELL UPDATE CONFIRM taking the UE into CELL_FACH state. In addition, it also specifies "RB Information Reconfigure List and RB Information Affected List Information".

At step 24, the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE.

At step 25, the SS reverses the transmission power level of cell 1 and 2 causing the UE to reselect to a different cell.

At step 26, the UE shall send a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

At step 27, the SS shall send a CELL UPDATE CONFIRM taking the UE into CELL_FACH state. In addition, it also specifies the IE "RB Information to release list".

At step 28, the UE shall transmit a RADIO BEARER RELEASE COMPLETE.

At step 29, the SS reverses the transmission power level of cell 1 and 2 causing the UE to reselect to a different cell.

At step 30, the UE shall send a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

At step 31, the SS reverses the transmission power level of cell 1 and 2 causing the UE to reselect to a different cell.

At step 32, the UE shall send a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

At step 33, the SS shall send a CELL UPDATE CONFIRM

At step 34, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message

8.3.1.1a Cell Update: cell reselection in CELL_FACH (Cells belong to different frequency bands)

8.3.1.1a.1 Definition

This test case is identical to test case 8.3.1.1 except that the cells belong to different frequency bands.

Note: The test case 8.3.1.1 is an intra frequency test.

8.3.1.1a.2 Conformance requirement

Same conformance requirement as clause 8.3.1.1.2

8.3.1.1a.3 Test purpose

- 1. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell in different frequency band.
- 2. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection

8.3.1.1a.4 Method of test

Initial Condition

Same initial conditions as clause 8.3.1.1.4 except,

Cell 2 is mapped to cell 4 (inter frequency) of 34.108 clause 6.1 and both cells belong to different frequency bands.

Following updated System information is transmitted in both cells after UE is brought to initial state of PS-DCCH+DTCH_FA CH (state 6-11) in cell 1.

MASTER INFORMATION BLOCK

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark
MIB Value Tag	Set to (Current MIB value tag + 1)
SIB 4 Cell Value tag	Set to (Current SIB4 value tag + 1)
SB 1 Cell Value tag	Set to (Current SIB4 value tag + 1)

SCHEDULING BLOCK 1

Information Element	Value/remark	
SIB 11 Cell Value Tag	Set to (Current SIB 11 value tag + 1)	

System Information Block type 4

Use the same message type found in clause 6.1.0b of TS 34.108, with the following exceptions:

Information Element	Value/Remarks
-Qualmin	-16dB

System Information Block type 11

Use the same message type found in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length	3
coefficient	
 Inter-frequency FDD measurement indicator 	TRUE
 Inter-frequency TDD measurement indicator 	FALSE
- Inter-RAT measurement indicators	Not Present

SYSTEM INFORMATION CHANGE INDICATION

Information Element	Value/remark
Message Type	
BCCH modification info	
MIB Value tag	Set equal to Value tag sent in modified MIB

Related ICS/IXIT statement(s)

- UE supports multiple bands simultaneously yes/no

Test Procedure

Same test procedure as clause 8.3.1.1.4 with the following exception

After step 30, SS shall send CELL UPDATE CONFIRM message to the UE. UE shall reply with UTRAN MOBILITY INFORMATION CONFIRM message.

Note: If the UE supports more than 2 frequency bands, the test may be executed for various band combinations.

Expected sequence

Same expected sequence as clause 8.3.1.1.4 with the following additional test steps:

Step	Direc	tion	Message	Comment
	UE	SS		
30a	+	-	CEEE CIBILE COLLING	New C-RNTI identity is assigned to the UE.
30b	->	•	UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

Same specific message contents as clause 8.3.1.1.4. The message content for the additional test steps are given below.

CELL UPDATE CONFIRM (Step 30a)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark	
New C-RNTI	'00000000000001'	

8.3.1.1a.5 Test requirement

Same test requirements as clause 8.3.1.1.5 with the following additional test requirements:

At step 30a, the SS shall send a CELL UPDATE CONFIRM

At step 30b, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message

8.3.1.1b Cell Update: cell reselection in CELL_FACH(TDD)

8.3.1.1b.1 Definition

All UEs which support TDD

8.3.1.1b.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:...1> Paging response:

1> Radio link failure:

. . .

1> Re-entering service area:

. . .

1> RLC unrecoverable error:

. . .

1> Cell reselection:

- 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:
 - 3> if the UE is in CELL_FACH or CELL_PCH state and the UE performs cell re-selection; or
 - 3> if the UE is in CELL_FACH state and the variable C_RNTI is empty:
 - 4> perform cell update using the cause "cell reselection".

```
When initiating cell update procedure, the UE shall:
   1> stop timer T305;
   1> if the UE is in CELL_DCH state:
   1> move to CELL_FACH state, if not already in that state;
   1> if the UE performs cell re-selection:
       2> clear the variable C_RNTI; and
       2> stop using that C_RNTI just cleared from the variable C_RNTI in MAC.
   1> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;
   1> in case of a cell update procedure:
       2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;
       2> submit the CELL UPDATE message for transmission on the uplink CCCH.
   . . .
   1> set counter V302 to 1;
   1> start timer T302 when the MAC layer indicates success or failure in transmitting the message.
In case of cell update procedure the UE shall transmit a CELL UPDATE message.
The UE shall set the IEs in the CELL UPDATE message as follows:
   1> set the IE "Cell update cause" corresponding to the cause specified in TS 25.331 subclause 8.3.1.2 that is valid
       when the CELL UPDATE message is submitted to lower layers for transmission;
             During the time period starting from when a cell update procedure is initiated by the UE until when the
             procedure ends, additional CELL UPDATE messages may be transmitted by the UE with different
             causes.
   1> set the IE "U-RNTI" to the value of the variable U_RNTI;
   1> if the value of the variable PROTOCOL_ERROR_INDICATOR is TRUE:
   1> if the value of the variable FAILURE_INDICATOR is TRUE:
```

When the UE receives a CELL UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI ; or
- if the message is received on DCCH:

the UE shall:

1> stop timer T302;

1> in case of a cell update procedure and the CELL UPDATE CONFIRM message:

2> includes "RB information elements"; and/or 2> includes "Transport channel information elements"; and/or 2> includes "Physical channel information elements"; and 2> if the variable ORDERED_RECONFIGURATION is set to FALSE: 3> set the variable ORDERED_RECONFIGURATION to TRUE. 1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified otherwise in the following: 1> enter a state according to subclause 8.6.3.3 applied on the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message. If the UE after state transition remains in CELL_FACH state, it shall 1> start the timer T305 using its initial value if timer T305 is not running and periodical cell update has been configured by T305 in the IE "UETimers and constants in connected mode" set to any other value than "infinity"; 1> select PRA CH according to TS 25.331 subclause 8.5.17; 1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19; 1> not prohibit periodical status transmission in RLC; 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message: 2> ignore that IE and stop using DRX. If the UE after the state transition remains in CELL_FACH state; and - a C-RNTI is stored in the variable C_RNTI; the UE shall: 1> in case of a cell update procedure: 2> set the IE "RRC transaction identifier" in any response message transmitted below to the value of "RRC transaction identifier" in the entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS; and 2> clear that entry. 1> transmit a response message as specified in TS 25.331 subclause 8.3.1.7; If the CELL UPDATE CONFIRM message: includes the IE "RB information to release list":

the UE shall:

1> transmit a RADIO BEARER RELEASE COMPLETE as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include the IE "RB information to release list"; and
- includes the IE "RB information to reconfigure list"; or
- includes the IE "RB information to be affected list":

the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- includes "Transport channel information elements":

the UE shall:

1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- includes "Physical channel information elements":

the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or
- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI":

the UE shall:

1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and

- does not include "CN information elements"; and
- does not include the IE "Ciphering mode info"; and
- does not include the IE "Integrity protection mode info"; and
- does not include the IE "New C-RNTI": and
- does not include the IE "New U-RNTI":

the UE shall:

1> transmit no response message.

If the new state is CELL_FACH, the response message shall be transmitted using the new configuration after the state transition., and the UE shall:

. . .

1> if the variable PDCP_SN_INFO is empty:

. . .

- 2> if the CELL UPDATE CONFIRM or URA UPDATE CONFIRM message did not contain the IE "Ciphering mode info":
 - 3> when RLC has been requested to transmit the response message,
 - 4> continue with the remainder of the procedure.

. . .

If any or several of the following conditions are true:

...,

- reselection to another UTRA cell (including the previously serving cell) before completion of the cell update or URA update procedure;

the UE shall:

1> stop T302 if it is running;

. . .

1> check whether it is still in "in service area";

. . .

- 1> in case of a cell update procedure:
 - 2> clear any entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS.

If the UE detects "in service area" if it has not entered idle mode, and:

- 1> if V302 is equal to or smaller than N302, the UE shall:
 - 2> if the UE performed cell re-selection:
 - 3> delete its C-RNTI.
 - 2> in case of a cell update procedure:
 - 3> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;
 - 3> submit the CELL UPDATE message for transmission on the uplink CCCH.
 - 2> increment counter V302;

2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.

1> if V302 is greater than N302, the UE shall:

. . .

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.1b.3 Test purpose

- 1. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell.
- 2. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

8.3.1.1b.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active. Each cell configure 3 carriers, one is the primary carrier, the other two are secondary carrier.

Detail in the table follows:

Parameter	Cell 1	Cell 2
UTRARF Channel Number1	Ch. 1	Ch. 2
UTRARF Channel Number1	Ch. 2	Ch.3
UTRARF Channel Number1	Ch.3	Ch.1

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

UE: PS-DCCH+DTCH_FACH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.1.1b

Parameter	Parameter Unit Cell 1		l 1	Cell 2	
		T0	T1	T0	T1
UTRARF Channel Number		Ch	. 1	Ch	. 1
P-CCPCH RSCP (TDD)	dBm	-60	-69	-69	-60

Table 8.3.1.1b illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions. SS switches the power settings repeatedly between columns "T1" and "T0", whenever the description below specifies that the transmission power settings for cell 1 and cell 2 be reversed.

The UE is in the CELL FACH state, camping onto cell 1. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1b. The UE shall find cell 2 to be more suitable for service and hence perform a cell reselection. After the completion of cell reselection, the UE shall transmits a CELL UPDATE message to the SS on the uplink CCCH of cell 2 and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_FACH", to the UE on the downlink DCCH. UE shall verify that IE "New C-RNTI" is not included in the downlink message and shall send a CELL UPDATE message to SS again. SS shall then send a CELL UPDATE CONFIRM message which includes a valid IE "New C-RNTI". SS verifies that the UE send UTRAN MOBILITY INFORMATION CONFIRM message.. UE shall stay in CELL_FACH state. SS configures its downlink transmission power settings according to columns "TO" in table 8.3.1.1b. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS replies with CELL UPDATE CONFIRM message and allocates new C-RNTI and U-RNTI identities to the UE. The IE "RRC State Indicator" is set to "CELL_FACH" in this message. The UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. Following this, SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1b. The UE shall initiate a cell update procedure by transmitting a CELL UPDATE message and stating the cause as 'cell re-selection'. SS replies with a CELL UPDATE CONFIRM message which contains IE "Physical channel information elements" and IE "RRC State Indicator" is set to "CELL DCH". The UE shall move to CELL DCH state and send PHSICAL CHANNEL RECONFIGURATION COMPLETE message. The SS shall transmit PHYSICAL CHANNEL RECONFIGURATION message, asking the UE to move to CELL_FACH state. The UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message after transiting to CELL_FA CH state. Then, SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.1b. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS replies with a CELL UPDATE CONFIRM message which contains IE "Transport channel information elements" and IE "RRC State Indicator" is set to "CELL_DCH". The UE shall move to CELL_DCH state and send TRANSPORT CHANNEL RECONFIGURATION COMPLETE message. The SS shall transmit PHYSICAL CHANNEL RECONFIGURATION message, asking the UE to move to CELL_FACH state. The UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message after transiting to CELL_FACH state. Following this, SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1b. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 2. SS replies with a CELL UPDATE CONFIRM message which contains IE "RB information to be affected list". The UE shall send RADIO BEARER RECONFIGURATION COMPLETE message. Then, SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.1b. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS replies with a CELL UPDATE CONFIRM message which contains IE "RB information to release list". The UE shall send RADIO BEARER RELEASE COMPLETE message. Finally, SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1b. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 2. SS shall not respond to this message but SS configures its downlink transmission power settings according to columns "TO" in table 8.3.1.1b. UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS shall then send CELL UPDATE CONFIRM message to UE. UE shall reply with UTRAN MOBILITY INFORMATION CONFIRM message. SS calls for generic procedure C.2 to check that UE is in CELL FACH state.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction	Message	Comment
1	UE SS		The LIE is in the CELL FACH
'			The UE is in the CELL_FACH state in cell 1
2		Void	SS applies the downlink
2		void	transmission power settings,
			according to the values in
			columns "T1" of table 8.3.1.1b.
			The UE shall find that the cell 2
			is better for service and
			perform a reselection. SS waits
			for the maximum duration
			required for the UE to camp to
			cell 2.
3	\rightarrow	CELL UPDATE	Value "cell reselection" shall be
			indicated in IE "Cell update
			cause"
4	←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set
			to "CELL_FACH".
4a	\rightarrow	CELL UPDATE	Value "cell reselection" shall be
			indicated in IE "Cell update
			cause"
4b	+	CELL UPDATE CONFIRM	See message content.
5	\rightarrow	UTRAN MOBILITY INFORMATION	
		CONFIRM	
6			SS reverses the transmission
			power level of cell 1 and cell 2.
7	\rightarrow	CELL UPDATE	
8	←	CELL UPDATE CONFIRM	New C-RNTI and U-RNTI
			identities are assigned to the
			UE. IE "RRC State Indicator" is
			set to "CELL_FACH".
9	\rightarrow	UTRAN MOBILITY INFORMATION	
		CONFIRM	
10			SS reverses the transmission
			power level of cell 1 and cell 2.
			·
11	\rightarrow	CELL UPDATE	
12		CELL UPDATE CONFIRM	IE "RRC State Indicator" is set
	\rightarrow		to "CELL_DCH".
			IE "Physical channel
			information elements" is
			included in this message
12a		PHYSICAL CHANNEL RECONFIGURATION	
	←	COMPLETE	
13	\rightarrow	PHYSICAL CHANNEL RECONFIGURATION	The UE is in CELL_DCH now.
			The SS shall send PHYSICAL
			CHANNEL
			RECONFIGURATION
			message to the UE asking the
			UE to transit to CELL_FACH
		DINOIO AL OLIANDEL DEGCONECTO DE LE CONTROL DE LA CONTROL	state.
14		PHYSICAL CHANNEL RECONFIGURATION	
4.5	\rightarrow	COMPLETE	The 00 man and the
15			The SS reverses the
			transmission power level of cell
10		CELL LIDDATE	1 and cell 2.
16	\rightarrow	CELL UPDATE	

IE "RRC State Indicator" is se to "CELL_DCH". IE "Transpor channel information elements' is included in this message TRANSPORT CHANNEL RECONFIGURATION RECONFIGURATION The UE is in CELL_DCH now. The SS shall send PHYSICAL CHANNEL RECONFIGURATION RESONFIGURATION R	Step	Direction	Message	Comment
18	17		CELL UPDATE CONFIRM	information elements" is included in this message, and IE "RRC State Indicator" is set to "CELL_DCH". IE "Transport
RECONFIGURATION COMPLETE 19	10		TD ANICDORT CH ANINE!	
The SS shall send PHYSICAL CHANNEL RECONFIGURATION message to the UE asking the UE to transit to CELL_FACH state. 20 → PHYSICAL CHANNEL RECONFIGURATION COMPLETE The SS reverses the transmission power level of ce 1 and cell 2. 22 → CELL UPDATE 23 ← CELL UPDATE CELL UPDATE ONFIRM New C-RNTI identity is assigned to the UE. IE "RRC State Indicator" is se to "CELL_FACH". IE "RB information to reconfigure list" and IE "RB information to to affected list" is included in this message. 24 → RADIO BEARER RECONFIGURATION COMPLETE The SS reverses the transmission power level of ce 1 and cell 2. 25	10	7	RECONFIGURATION COMPLETE	
COMPLETE The SS reverses the transmission power level of ce 1 and cell 2. 22 → CELL UPDATE CELL UPDATE CONFIRM New C-RNTI identity is assigned to the UE. IE "RRC State Indicator" is se to "CELL_FACH". IE "RB information to reconfigure list" and IE "RB information to be affected list" is included in this message. 24 → RADIO BEARER RECONFIGURATION COMPLETE The SS reverses the transmission power level of ce 1 and cell 2. 25	19	←		RECONFIGURATION message to the UE asking the UE to transit to CELL_FACH
transmission power level of ce 1 and cell 2. 22 → CELL UPDATE 23 ← CELL UPDATE CONFIRM New C-RNTI identity is assigned to the UE. IE "RRC State Indicator" is se to "CELL_FACH". IE "RB information to reconfigure list" and IE "RB information to be affected list" is included in this message. 24 → RADIO BEARER RECONFIGURATION COMPLETE The SS reverses the transmission power level of ce 1 and cell 2. 26 → CELL UPDATE CELL UPDATE CELL UPDATE New C-RNTI identity is assigned to the UE.		→		
CELL UPDATE CONFIRM New C-RNTI identity is assigned to the UE. IE "RRC State Indicator" is set to "CELL_FACH". IE "RB information to reconfigure list" and IE "RB information to be affected list" is included in this message. 24 → RADIO BEARER RECONFIGURATION COMPLETE The SS reverses the transmission power level of ce 1 and cell 2. 26 → CELL UPDATE CELL UPDATE CELL UPDATE CONFIRM New C-RNTI identity is assigned to the UE.				transmission power level of cell
assigned to the UE. IE "RRC State Indicator" is se to "CELL_FACH". IE "RB information to reconfigure list" and IE "RB information to be affected list" is included in this message. 24 → RADIO BEARER RECONFIGURATION COMPLETE The SS reverses the transmission power level of ce 1 and cell 2. 26 → CELL UPDATE 27 ← CELL UPDATE CONFIRM New C-RNTI identity is assigned to the UE.				
24 → RADIO BEARER RECONFIGURATION COMPLETE 25 The SS reverses the transmission power level of ce 1 and cell 2. 26 → CELL UPDATE 27 ← CELL UPDATE ONFIRM New C-RNTI identity is assigned to the UE.	23	(CELL UPDATE CONFIRM	assigned to the UE. IE "RRC State Indicator" is set to "CELL_FACH". IE "RB information to reconfigure list" and IE "RB information to be affected list"
transmission power level of ce 1 and cell 2. 26 → CELL UPDATE 27 ← CELL UPDATE CONFIRM New C-RNTI identity is assigned to the UE.	24	→		
27 ← CELL UPDATE CONFIRM New C-RNTI identity is assigned to the UE.	25			transmission power level of cell
assigned to the UE.		\rightarrow		
to "CELL_FACH". IE "RB information to release list" is included in this messag		-		assigned to the UE. IE "RRC State Indicator" is set to "CELL_FACH".
28 → RADIO BEARER RELEASE COMPLETE		\rightarrow	RADIO BEARER RELEASE COMPLETE	
l l		_		SS reverses the transmission power level of cell 1 and cell 2.
30 → CELL UPDATE 31 SS reverses the transmission power level of cell 1 and cell 2		→	ICELL UPDATE	SS reverses the transmission power level of cell 1 and cell 2.
32 → CELL UPDATE	32			
33 ← CELL UPDATE CONFIRM New C-RNTI identity is assigned to the UE.	33	←		
34 → UTRAN MOBILITY INFORMATION CONFIRM	34	→		
35 Syrayaras the transmission	35			SS reverses the transmission power level of cell 1 and cell 2
36 → CELL UPDATE		1		P - 11 - 12 - 12 - 12 - 12 - 12 - 12 - 1

Step	Direction		Message	Comment
	UE	SS		
37	(CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_DCH". IE " Physical channel information elements" and "Freq Info" is included in this message and is indicated on the secondary carrier.
38	-)	•	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE response the message on the DPCH of the secondary carrier.
39	←-)	CALL C.2	If the test result of C.2 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

System Information Block type 1

Use the same message found in TS 34.108, with the exceptions of the following IEs:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

CELL UPDATE (Step 3, 4a, 7, 11, 16, 22, 30 and 32)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI	Check to see if set to '0000 0000 0001' In step 3, 4a and 7 check to see if set to '0000 0000 0000 0000 0001'.
Cell Update Cause	In step 11, 16, 22, 26, 30 and 32, check to see if set to same string in IE "S-RNTI" in IE "New U-RNTI" of CELL UPDATE CONFIRM message in previous assignment Check to see if set to 'Cell Re-selection'

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in TS 34.108, clause 9.

CELL UPDATE CONFIRM (Step 4b)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'
RRC transaction identifier	Selects an arbitrary integer between 0 and 3, but is
	different from that used in step 4.

CELL UPDATE CONFIRM (Step 8)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New U-RNTI	
- SRNC Identity	'0000 0000 0001'
- S-RNTI	An arbitrary 20-bits string which is different from original
	S-RNTI
New C-RNTI	'0000 0000 0000 1111'

CELL UPDATE CONFIRM (Step 12)

Use the same message sub-type found in step 8 and k=0, with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
CHOICE channel requirement	
Uplink DPCH info	Same as the IE in RADIO BEARER SETUP (Packet to
	CELL_DCH from CELL_FACH in PS)
Downlink information common for all radio links	Same as the IE in RADIO BEARER SETUP (Packet to
	CELL_DCH from CELL_FACH in PS)
Downlink information per radio link list	Same as the IE in RADIO BEARER SETUP (Packet to
	CELL_DCH from CELL_FACH in PS)

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 12a)

Use the same message sub-type found in [9] TS 34.108 clause 9.

PHYSICAL CHANNEL RECONFIGURATION (Step 13)

Use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "Packet to CELL_FACH from CELL_DCH in PS":

CELL UPDATE CONFIRM (Step 17)

Use the same message sub-type found in TS 34.108, clause 9 with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
UL Transport channel information for all transport	Same as the IE in RADIO BEARER SETUP (Packet to
channels	CELL_DCH from CELL_FACH in PS)
Added or Reconfigured uplink TrCH information	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
DL Transport channel information for all transport	Same as the IE in RADIO BEARER SETUP (Packet to
channels	CELL_DCH from CELL_FACH in PS)
Added or Reconfigured downlink TrCH information	Same as RADIO BEARER SETUP (Packet to
	CELL_DCH from CELL_FACH in PS)
CHOICE channel requirement	
Uplink DPCH info	Same as the IE in RADIO BEARER SETUP (Packet to
	CELL_DCH from CELL_FACH in PS)
Downlink information common for all radio links	Same as the IE in RADIO BEARER SETUP (Packet to
	CELL_DCH from CELL_FACH in PS)
Downlink information per radio link list	Same as the IE in RADIO BEARER SETUP (Packet to
	CELL_DCH from CELL_FACH in PS)

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 14)

Use the same message sub-type found in [9] TS 34.108 clause 9.

PHYSICAL CHANNEL RECONFIGURATION (Step 19)

Use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "Packet to CELL_FACH from CELL_DCH in PS", with following exception.

Information Element	Value/remark
New C-RNTI	'0000 0000 0000 1111'

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 20)

Use the same message sub-type found in [9] TS 34.108 clause 9.

CELL UPDATE CONFIRM (Step 23)

Use the same message sub-type found in TS 34.108, clause 9 with the following exceptions:

Information Element	Value/remark
RB information to be reconfigure	
New C-RNTI	'1010 1010 1010 1010'
- RB identity	20
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	Not Present
- RB Information Release List	Not Present
 RB Information Reconfiguration List 	Present
- RB Information Affected List	Present

CELL UPDATE CONFIRM (Step 27)

Use the same message sub-type found in TS 34.108, clause 9 with the following exceptions:

Information Element	Value/remark
New C-RNTI	'0000 0000 0000 1111'
RB information to release	
-RB identity	4

CELL UPDATE CONFIRM (Step 33)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'

CELL UPDATE CONFIRM (Step 36)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
CellUpdateConfirm-CCCH-r4-TDD128-add-ext-IEs	
frequencylnfo	The secondary carrier frequency of cell 2

Contents of System Information Block type 3

Use the same message found in TS 34.108, with the following exceptions,

Information Element	Value/remark
Qrxle vmin	-81dBm
Sintrasearch	21db
Sintersearch	21db
-v4b0NonCriticalExtensions	
-sysInfoType3-v4b0ext	
- mapping-LCR	0

8.3.1.1b.5 Test requirement

At step 3 the UE shall reselect to cell 2 and then it shall trans mit a CELL UPDATE message which sets the value "cell reselection" in IE "Cell update cause".

At step 4a the UE shall transmit CELL UPDATE message which sets the value "cell reselection" in IE "Cell update cause".

At step 4b, the SS shall send a CELL UPDATE CONFIRM.

At step 5, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message.

At step 7 the UE shall sent a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

At step 9, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message.

At step 11 the UE shall sent a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

At step 12, the SS shall send a CELL UPDATE CONFIRM taking the UE into CELL_DCH state. In addition, it also specifies the IE "Physical Channel Information elements".

At step 12a, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the new physical channel assigned.

At step 13 and 14, the SS uses PHYSICAL CHANNEL RECONFIGURATION to take the UE into CELL_FACH state.

At step 15, the SS reverses the transmission power level of cell 1 and 2 causing the UE to reselect to a different cell.

At step 16 the UE shall sent a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

At step 17, the SS shall send a CELL UPDATE CONFIRM and take the UE into CELL_DCH state. In addition, it also specifies the IE "Physical Channel Information elements" and "Transport Channel Information elements".

At step 18, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE.

At step 19 and 20, the SS uses PHYSICAL CHANNEL RECONFIGURATION to take the UE into CELL_FACH state.

At step 21, the SS reverses the transmission power level of cell 1 and 2 causing the UE to reselect to a different cell.

At step 22, the UE shall send a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

At step 23, the SS shall send a CELL UPDATE CONFIRM taking the UE into CELL_FACH state. In addition, it also specifies "RB Information Reconfigure List and RB Information Affected List Information".

At step 24, the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE.

At step 25, the SS reverses the transmission power level of cell 1 and 2 causing the UE to reselect to a different cell.

At step 26, the UE shall send a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

At step 27, the SS shall send a CELL UPDATE CONFIRM taking the UE into CELL_FACH state. In addition, it also specifies the IE "RB Information to release list".

At step 28, the UE shall transmit a RADIO BEARER RELEASE COMPLETE.

At step 29, the SS reverses the transmission power level of cell 1 and 2 causing the UE to reselect to a different cell.

At step 30, the UE shall send a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

At step 31, the SS reverses the transmission power level of cell 1 and 2 causing the UE to reselect to a different cell.

At step 32, the UE shall send a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

At step 33, the SS shall send a CELL UPDATE CONFIRM.

At step 34, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message.

At step 38, the UE shall transmit a "PHYSICAL CHANNEL RECONFIGURATION COMPLETE" on the secondary carrier.

8.3.1.1c Cell Update: cell reselection in CELL_FACH (Cells belong to different frequency bands for LCR TDD)

8.3.1.1c.1 Definition

This test case is identical to test case 8.3.1.1b except that the cells belong to different frequency bands.

NOTE: The test case 8.3.1.1b is an intra frequency test.

8.3.1.1c.2 Conformance requirement

Same conformance requirement as clause 8.3.1.1b.2

8.3.1.1c.3 Test purpose

- 1. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell in different frequency band.
- 2. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection

8.3.1.1c.4 Method of test

Initial Condition

Same initial conditions as clause 8.3.1.1b.4 except,

Cell 2 is mapped to cell 4 (inter frequency) of 34.108 clause 6.1 and both cells belong to different frequency bands.

Following updated System information is transmitted in both cells after UE is brought to initial state of PS-DCCH+DTCH_FA CH (state 6-11) in cell 1.

MASTER INFORMATION BLOCK

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark
MIB Value Tag	Set to (Current MIB value tag + 1)
SIB 4 Cell Value tag	Set to (Current SIB4 value tag + 1)
SB 1 Cell Value tag	Set to (Current SIB4 value tag + 1)

SCHEDULING BLOCK 1

Information Element	Value/remark	
SIB 11 Cell Value Tag	Set to (Current SIB 11 value tag + 1)	

System Information Block type 4

Use the same message type found in clause 6.1.0b of TS 34.108, with the following exceptions:

Information Element	Value/Remarks
-Qrxle vmin	-115dBm

System Information Block type 11

Use the same message type found in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length	3
coefficient	
 Inter-frequency FDD measurement indicator 	FALSE
 Inter-frequency TDD 3.84Mcps measurement 	FALSE
indicator	
 Inter-frequency TDD 1.28Mcps measurement 	TRUE
indicator	
 Inter-RAT measurement indicators 	Not Present

SYSTEM INFORMATION CHANGE INDICATION

Information Element	Value/remark
Message Type	
BCCH modification info	
MIB Value tag	Set equal to Value tag sent in modified MIB

Related ICS/IXIT statement(s)

- UE supports multiple bands simultaneously: yes/no

Test Procedure

Same test procedure as clause 8.3.1.1b.4 with the following exception

After step 30, SS shall send CELL UPDATE CONFIRM message to the UE. UE shall reply with UTRAN MOBILITY INFORMATION CONFIRM message.

NOTE: If the UE supports more than 2 frequency bands, the test may be executed for various band combinations.

Expected sequence

Same expected sequence as clause 8.3.1.1b.4 with the following additional test steps:

Step	Direction		Message	Comment
	UE	SS		
30a	+	-		New C-RNTI identity is assigned to the UE.
30b	->		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

Same specific message contents as clause 8.3.1.1b.4. The message content for the additional test steps are given below.

CELL UPDATE CONFIRM (Step 30a)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	00000000000001

8.3.1.1c.5 Test requirement

Same test requirements as clause 8.3.1.1b.5 with the following additional test requirements:

At step 30a, the SS shall send a CELL UPDATE CONFIRM

At step 30b, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message

8.3.1.2 Cell Update: cell reselection in CELL_PCH 8.3.1.2.1 Definition 8.3.1.2.2 Conformance requirement A UE shall initiate the cell update procedure in the following cases: 1> Uplink data transmission: 1> Paging response: 1> Radio link failure: 1> Re-entering service area: 1> RLC unrecoverable error: 1> Cell reselection: 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is 3> if the UE is in CELL_FACH or CELL_PCH state and the UE performs cell re-selection; or 3> if the UE is in CELL_FACH state and the variable C_RNTI is empty: 4> perform cell update using the cause "cell reselection". When initiating cell update procedure, the UE shall: 1> stop timer T305; 1> if the UE is in CELL_DCH state: 1> move to CELL_FACH state, if not already in that state; 1> if the UE performs cell re-selection: 2> clear the variable C_RNTI; and 2> stop using that C_RNTI just cleared from the variable C_RNTI in MAC.

1> in case of a cell update procedure:

1> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;

2> submit the CELL UPDATE message for transmission on the uplink CCCH.

2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;

- 1> set counter V302 to 1;
- 1> start timer T302 when the MAC layer indicates success or failure in transmitting the message.

. . .

In case of cell update procedure the UE shall transmit a CELL UPDATE message.

The UE shall set the IEs in the CELL UPDATE message as follows:

1> set the IE "Cell update cause" corresponding to the cause specified in TS 25.331 subclause 8.3.1.2 that is valid when the CELL UPDATE message is submitted to lower layers for transmission;

NOTE: During the time period starting from when a cell update procedure is initiated by the UE until when the procedure ends, additional CELL UPDATE messages may be transmitted by the UE with different causes

- 1> set the IE "U-RNTI" to the value of the variable U_RNTI;
- 1> if the value of the variable PROTOCOL_ERROR_INDICATOR is TRUE:

...

1> if the value of the variable FAILURE_INDICATOR is TRUE:

...

. . .

When the UE receives a CELL UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or
- if the message is received on DCCH:

the UE shall:

- 1> stop timer T302;
- 1> in case of a cell update procedure and the CELL UPDATE CONFIRM message:

. . .

1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified otherwise in the following:

• •

. . .

1> enter a state according to subclause 8.6.3.3 applied on the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message.

. . .

If the UE after state transition enters CELL_PCH state, it shall:

. . .

- 1> start the timer T305 using its initial value if timer T305 is not running and periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity";
- 1> select Secondary CCPCH according to subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

- 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging Occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2 in CELL_PCH state.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
 - 2> set the variable INVALID CONFIGURATION to TRUE.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- does not include "CN information elements"; and
- does not include the IE "Ciphering mode info"; and
- does not include the IE "Integrity protection mode info"; and
- does not include the IE "New C-RNTI"; and
- does not include the IE "New U-RNTI":

the UE shall:

1> transmit no response message.

Reference

3GPP TS 25.331 clause 8.3.1.

8.3.1.2.3 Test purpose

1. To confirm that the UE, in CELL_PCH state, executes a cell update procedure after the successful reselection of another UTRA cell.

8.3.1.2.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and 2 are active.

UE: CELL_PCH (state 6-12) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is brought to CELL_PCH state and is camped onto cell 1. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1. When the UE detects the presence of cell 2, it moves to CELL_FACH state and transmits a CELL UPDATE message on the uplink CCCH. The value "cell reselection" shall be set in IE "Cell update cause" in CELL UPDATE message. Upon reception of CELL_UPDATE message, SS replies with a CELL UPDATE CONFIRM message with the IE "RRC State Indicator" set to "CELL_PCH". After receiving this message, the UE returns to CELL_PCH state without transmitting any uplink message. SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		•		The UE is brought to
				CELL_PCH state in cell 1
2				SS applies the downlink
				transmission power settings,
				according to the values in
				columns "T1" of table 8.3.1.1.
				The UE shall find that the cell 2
				is better and attempt to perform
				a cell reselection.
3	-	>	CELL UPDATE	The UE moves to CELL_FACH
				state and transmits this
				message with the IE "Cell
				update cause" set to "cell
				reselection"
4	(-	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set
				to "CELL_PCH".
5				The UE is in CELL_PCH state.
6	+	\rightarrow	CALL C.4	If the test result of C.4 indicates
				that UE is in CELL_PCH state,
				the test passes, otherwise it
				fails.

Specific Message Contents

CELL UPDATE (Steps 3)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'Cell Re-selection'

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3

8.3.1.2.5 Test requirement

After step 2 the UE shall reselect to cell 2 and transmit a CELL UPDATE message, containing the IE "Cell update cause" set to "cell reselection".

After step 4, the UE shall enter CELL_PCH state.

8.3.1.3 Cell Update: periodical cell update in CELL_FACH

8.3.1.3.1 Definition

8.3.1.3.2 Conformance requirement

UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

```
1> Paging response:
   1> Radio link failure:
   1> Re-entering service area:
   1> RLC unrecoverable error:
   1> Cell reselection:
   1> Periodical cell update:
       2> if none of the criteria for performing cell update with the causes specified above in the current subclause is
          met; and
       2> if the UE is in CELL_FACH or CELL_PCH state; and
       2> if the timer T305 expires; and
       2> if the criteria for "in service area" as specified in TS 25.331 subclause 8.5.5.2 is fulfilled; and
       2> if periodic updating has been configured by T305 in the IE "UETimers and constants in connected mode" set
          to any other value than "infinity":
          3> perform cell update using the cause "periodical cell update".
When initiating the cell update procedure, the UE shall:
   1> stop timer T305;
   1> move to CELL_FACH state, if not already in that state;
   1> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;
   1> in case of a cell update procedure:
       2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;
       2> submit the CELL UPDATE message for transmission on the uplink CCCH.
   1> set counter V302 to 1;
   1> start timer T302 when the MAC layer indicates success or failure in transmitting the message.
```

In case of cell update procedure the UE shall transmit a CELL UPDATE message.

The UE shall set the IEs in the CELL UPDATE message as follows:

1> set the IE "Cell update cause" corresponding to the cause specified in TS 25.331 subclause 8.3.1.2 that is valid when the CELL UPDATE message is submitted to lower layers for transmission;

NOTE: During the time period starting from when a cell update procedure is initiated by the UE until when the procedure ends, additional CELL UPDATE messages may be transmitted by the UE with different causes.

1> set the IE "U-RNTI" to the value of the variable U_RNTI;

. . .

When the UE receives a CELL UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U RNTI; or
- if the message is received on DCCH:

the UE shall:

1> stop timer T302;

. . .

- 1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified otherwise in the following:
- 1> enter a state according to TS 25.331 subclause 8.6.3.3 applied on the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message.

If the UE after state transition remains in CELL_FACH state, it shall

- 1> start the timer T305 using its initial value if timer T305 is not running and periodical cell update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity";
- 1> select PRA CH according to TS 25.331 subclause 8.5.17;
- 1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;
- 1> not prohibit periodical status transmission in RLC;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> ignore that IE and stop using DRX.

If the UE after the state transition remains in CELL_FACH state; and

- a C-RNTI is stored in the variable C_RNTI;

or

- the UE after the state transition moves to another state than the CELL_FACH state:

the UE shall:

- 1> in case of a cell update procedure:
 - 2> set the IE "RRC transaction identifier" in any response message transmitted below to the value of "RRC transaction identifier" in the entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry.
- 1> transmit a response message as specified in TS 25.331 subclause 8.3.1.7;
- 1> in case of a cell update procedure:
 - 2> clear the entry for the CELL UPDATE CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS.

- 1> set the variable CELL_UPDATE_STARTED to FALSE;
- 1> clear the variable SECURITY_MODIFICATION.

. . .

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or
- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI":

the UE shall:

1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- does not include "CN information elements"; and
- does not include the IE "Ciphering mode info"; and
- does not include the IE "Integrity protection mode info"; and
- does not include the IE "New C-RNTI"; and
- does not include the IE "New U-RNTI":

the UE shall:

1> transmit no response message.

. .

When the UE receives a UTRAN MOBILITY INFORMATION message, it shall:

- 1> act on received information elements as specified in TS 25.331 subclause 8.6;
- 1> if the IE "UE Timers and constants in connected mode" is present:
 - 2> store the values of the IE "UE Timers and constants in connected mode" in the variable TIMERS_AND_CONSTANTS, replacing any previously stored value for each timer and constant; and
 - 2> for each updated timer value:
 - 3> start using the new value next time the timer is started;
 - 2> for each updated constant value:
 - 3> start using the new value directly;

- 1> set the IE "RRC transaction identifier" in the UTRAN MOBILITY INFORMATION CONFIRM message to the value of "RRC transaction identifier" in the entry for the UTRAN MOBILITY INFORMATION message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC;

. . .

Reference

3GPP TS 25.331 clause 8.3.1, 8.3.3.3.

8.3.1.3.3 Test purpose

1. To confirm that the UE executes a periodical cell update procedure following the expiry of timer T305.

8.3.1.3.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_FA CH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.1.3

Parameter	Unit	Cell 1		Cell 2		
		T0	T1	T0	T1	
UTRARF Channel Number		Mid Range Test M		Mid Ran	Mid Range Test	
		Frequency		Frequency		
CPICH Ec (FDD)	dBm/3.84MHz	-60	-69	-69	-60	
P-CCPCH RSCP (TDD)	dBm	-60	-69	-69	-60	

Table 8.3.1.3 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The UE is in CELL_FACH state. When the UE detects the expiry of timer T305 according to the settings in system information, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH with a cause indicating periodical cell updating. SS replies with a CELL UPDATE CONFIRM message, and IE "RRC State Indicator" is set to "CELL_FACH". SS verifies that the UE does not transmit any uplink message. SS then waits for T305 to expire again. The UE shall send another CELL UPDATE message to report periodic cell updating. After the SS receives this message, it transmits a CELL UPDATE CONFIRM message which includes the IEs "new C-RNTI", "new U-RNTI" to the UE on the downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. Next, SS transmits UTRAN MOBILITY INFORMATION message, which includes IE "T305" set to "infinity", to UE. UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.3, causing the UE to enter CELL_FACH state in cell 2 and transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Then SS shall transmit CELL UPDATE CONFIRM. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. SS then monitors the uplink CCCH for a period of 60 minutes (ideally the SS should monitor this up to the maximum possible value for timer T305 (720 minutes), but for practical reasons 60 minutes (twice default timer of 30 minutes) is regarded as being sufficient) and verifies that no CELL UPDATE message is received. After this, the SS transmits UTRAN MOBILITY INFORMATION message, which includes IE "T305" set to '5', to UE. UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. SS configures its downlink transmission power settings according to columns "TO" in table 8.3.1.3, causing the UE to enter CELL FACH state in cell 1 and transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Then SS shall transmit CELL UPDATE CONFIRM. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. UE shall resume periodic cell updating procedure and transmit CELL UPDATE message after T305 (5 minutes) expires.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction UE SS	Message	Comment
1	02 00		The UE is in the CELL_FACH
			state. SS waits until T305 has
			expired.
2	\rightarrow	CELL UPDATE	IE "Cell update cause" shall be set to "periodical cell updating"
3	+	CELL UPDATE CONFIRM	No RNTI identities are given.
			No information on PRACH and S-CCPCH are provided.
4			SS verifies that no uplink
			message is received from UE. SS waits for another period to
			allow T305 to expire.
5	→	CELL UPDATE	Set to "periodical cell update" in
		OLLE OF DATE	IE "Cell update cause" upon
			the expiry of timer T305.
6	+	CELL UPDATE CONFIRM	Including IEs "new C-RNTI",
			"new U-RNTI" and IE "RRC
			State Indicator" is set to
		LITE AND MORE LITE (IN EQUAL TION)	"CELL_FACH"
7	\rightarrow	UTRAN MOBILITY INFORMATION CONFIRM	
		CONFINI	
8	←	UTRAN MOBILITY INFORMATION	IE "T305" is set to Infinity.
9	`	UTRAN MOBILITY INFORMATION	in 1000 is set to illimity.
		CONFIRM	
10			SS applies the downlink
			transmission power settings,
			according to the values in
4.4		OF LUDBATE	columns "T1" of table 8.3.1.3
11	→	CELL UPDATE	IE "Cell update cause" shall be set to "cell reselection".
12	(CELL UPDATE CONFIRM	
12a	→	UTRAN MOBILITY INFORMATION CONFIRM	
13			SS waits for 60 minutes and
			checks that no CELL UPDATE
			message is transmitted on uplink PRACH channel.
14	←	UTRAN MOBILITY INFORMATION	IE "T305" is set to '5.
15	→	UTRAN MOBILITY INFORMATION	
		CONFIRM	
16			SS applies the downlink
			transmission power settings,
			according to the values in columns "T0" of table 8.3.1.3
17	→	CELL UPDATE	IE "Cell update cause" shall be
17	7	OLLE OI DAIL	set to "cell reselection".
18	←	CELL UPDATE CONFIRM	
18a	\rightarrow	UTRAN MOBILITY INFORMATION	
1.5		CONFIRM	
19	\rightarrow	CELL UPDATE	UE shall transmit this message
			with "cell update cause" set to "periodical cell updating" after
			T305 expires.
20	+	CELL UPDATE CONFIRM	
21	←→	CALL C.2	If the test result of C.2 indicates
			that UE is in CELL_FACH
			state, the test passes,
			otherwise it fails.

Specific Message Contents

CELL UPDATE (Step 2 and 5)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark	
U-RNTI		
- SRNC Identity	Check to see if set to '0000 0000 0001'	
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'	
Cell Update Cause	Check to see if set to 'periodical cell updating'	

CELL UPDATE (Step 11 and 17)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark	
U-RNTI		
- SRNC Identity	Check to see if set to '0000 0000 0001'	
	Check to see if set to same bit string as in IE "S-RNTI" in IE "U-RNTI" of the CELL UPDATE CONFIRM message	
	sent in step 6.	
Cell Update Cause	Check to see if set to "cell reselection"	

CELL UPDATE CONFIRM (Step 3 and 20)

Use the same message sub-type found in TS 34.108, clause 9.

CELL UPDATE CONFIRM (Step 6, 12 and 18)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New U-RNTI	
- SRNC Identity	Set to '0000 0000 0001'
- S-RNTI	Set to an arbitrary string different from '0000 0000 0000
	0000 0001'
New C-RNTI	'1010 1010 1010 1010'

CELL UPDATE (Step 19)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark	
U-RNTI		
- SRNC Identity	Check to see if set to '0000 0000 0001'	
	Check to see if set to same bit string as in IE "S-RNTI" in IE "U-RNTI" of the CELL UPDATE CONFIRM message sent in step 6.	
Cell Update Cause	Check to see if set to 'periodical cell updating'	

UTRAN MOBILITY INFORMATION (Step 8)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark	
New U-RNTI	Not Present	
New C-RNTI	Not Present	
UE Timers and constants in connected mode		
- T305	infinity	

UTRAN MOBILITY INFORMATION (Step 14)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New U-RNTI	Not Present
New C-RNTI	Not Present
UE Timers and constants in connected mode - T305	5

8.3.1.3.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305 and then transmits a CELL UPDATE message setting value "periodical cell update" into IE "Cell update cause".

After step 3 the UE shall not send any uplink message as a response to CELL UPDATE CONFIRM message sent in step 3.

After step 4 the UE shall send a CELL UPDATE message, specifying the cell updating cause to be "periodical cell update".

After step 6 the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH.

After step 8, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 10, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "cell reselection" on the uplink CCCH.

After step 12, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

Between step 12a and 14, the UE shall not transmit any CELL UPDATE message.

After step 14, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 16, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "cell reselection" on the uplink CCCH.

After step 18, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 18a, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "periodical cell update" on the uplink CCCH.

8.3.1.3a Cell Update: periodical cell update in CELL_FACH (1.28 Mcps TDD Only)

8.3.1.3a.1 Definition

8.3.1.3a.2 Conformance requirement

UE shall initiate the cell update procedure in the following cases:

...
1> Paging response:
...
1> Radio link failure:

1> Uplink data transmission:

1>	Re-en	tering service area:
1>	RLCı	unrecoverable error:
1>	Cell re	eselection:
	•••	
1>	Period	lical cell update:
		none of the criteria for performing cell update with the causes specified above in the current sub clause is et; and
	2> if t	the UE is in CELL_FACH or CELL_PCH state; and
	2> if t	the timer T305 expires; and
	2> if t	the criteria for "in service area" as specified in TS 25.331 subclause 8.5.5.2 is fulfilled; and
		periodic updating has been configured by T305 in the IE "UETimers and constants in connected mode" set any other value than "infinity":
	3>	perform cell update using the cause "periodical cell update".
When	initiati	ng the cell update procedure, the UE shall:
1>	stop t	imer T305;
1>	move	to CELL_FACH state, if not already in that state;
1>	set CF	FN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;
1>	in cas	e of a cell update procedure:
	2> se	t the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3a;
	2> su	bmit the CELL UPDATE message for transmission on the uplink CCCH.
1>	set co	unter V302 to 1;
1>	start t	imer T302 when the MAC layer indicates success or failure in transmitting the message.
In case	e of cel	ll update procedure the UE shall transmit a CELL UPDATE message.
The U	Eshall	set the IEs in the CELL UPDATE message as follows:
1>		e IE "Cell update cause" corresponding to the cause specified in TS 25.331 subclause 8.3.1.2 that is valid the CELL UPDATE message is submitted to lower layers for transmission;
NO	ОТЕ:	During the time period starting from when a cell update procedure is initiated by the UE until when the procedure ends, additional CELL UPDATE messages may be transmitted by the UE with different causes.
1>	set the	e IE "U-RNTI" to the value of the variable U_RNTI;
When	the UI	Ereceives a CELL UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U RNTI; or
- if the message is received on DCCH:

the UE shall:

1> stop timer T302;

. . .

- 1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified otherwise in the following:
- 1> enter a state according to TS 25.331 subclause 8.6.3.3 applied on the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message.

If the UE after state transition remains in CELL_FACH state, it shall

- 1> start the timer T305 using its initial value if timer T305 is not running and periodical cell update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity";
- 1> select PRA CH according to TS 25.331 subclause 8.5.17;
- 1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;
- 1> not prohibit periodical status transmission in RLC;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> ignore that IE and stop using DRX.

If the UE after the state transition remains in CELL_FACH state; and

- a C-RNTI is stored in the variable C_RNTI;

or

- the UE after the state transition moves to another state than the CELL_FACH state:

the UE shall:

- 1> in case of a cell update procedure:
 - 2> set the IE "RRC transaction identifier" in any response message transmitted below to the value of "RRC transaction identifier" in the entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry.
- 1> transmit a response message as specified in TS 25.331 subclause 8.3.1.7;
- 1> in case of a cell update procedure:
 - 2> clear the entry for the CELL UPDATE CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS.
- 1> set the variable CELL_UPDATE_STARTED to FALSE;
- 1> clear the variable SECURITY_MODIFICATION.

. . .

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and

- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or
- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI":

the UE shall:

1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- does not include "CN information elements"; and
- does not include the IE "Ciphering mode info"; and
- does not include the IE "Integrity protection mode info"; and
- does not include the IE "New C-RNTI"; and
- does not include the IE "New U-RNTI":

the UE shall:

1> transmit no response message.

. .

When the UE receives a UTRAN MOBILITY INFORMATION message, it shall:

- 1> act on received information elements as specified in TS 25.331 subclause 8.6;
- 1> if the IE "UE Timers and constants in connected mode" is present:
 - 2> store the values of the IE "UE Timers and constants in connected mode" in the variable TIM ERS_AND_CONSTANTS, replacing any previously stored value for each timer and constant; and
 - 2> for each updated timer value:
 - 3> start using the new value next time the timer is started;
 - 2> for each updated constant value:
 - 3> start using the new value directly;
- 1> set the IE "RRC transaction identifier" in the UTRAN MOBILITY INFORMATION CONFIRM message to the value of "RRC transaction identifier" in the entry for the UTRAN MOBILITY INFORMATION message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC;

. .

Reference

3GPP TS 25.331 clause 8.3.1, 8.3.3.3.

8.3.1.3a.3 Test purpose

- 1. To confirm that the UE executes a periodical cell update procedure following the expiry of timer T305.
- 2. To confirm that the UE can indicate the UpPCH shifting position according to a CELL UPDATE CONFIRM message received from the SS and complete the process.

8.3.1.3a.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_FA CH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.1.3a

Parameter	Unit	Cell 1		Cell 2		
		T0	T1	T0	T1	
UTRARF Channel Number		Mid Range Test N		Mid Ran	Mid Range Test	
		Frequency		Frequency		
CPICH Ec (FDD)	dBm/3.84MHz	-60	-69	-69	-60	
P-CCPCH RSCP (TDD)	dBm	-60	-69	-69	-60	

Table 8.3.1.3a illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The UE is in CELL_FACH state. When the UE detects the expiry of timer T305 according to the settings in system information, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH with a cause indicating periodical cell updating. SS replies with a CELL UPDATE CONFIRM message, and IE "RRC State Indicator" is set to "CELL_FACH". SS verifies that the UE does not transmit any uplink message. SS then waits for T305 to expire again. The UE shall send another CELL UPDATE message to report periodic cell updating. After the SS receives this message, it transmits a CELL UPDATE CONFIRM message which includes the IEs "new C-RNTI", "new U-RNTI" to the UE on the downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. Next, SS transmits UTRAN MOBILITY INFORMATION message, which includes IE "T305" set to "infinity", to UE. UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.3a, causing the UE to enter CELL FACH state in cell 2 and transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Then SS shall transmit CELL UPDATE CONFIRM. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. SS then monitors the uplink CCCH for a period of 60 minutes (ideally the SS should monitor this up to the maximum possible value for timer T305 (720 minutes), but for practical reasons 60 minutes (twice default timer of 30 minutes) is regarded as being sufficient) and verifies that no CELL UPDATE message is received. After this, the SS transmits UTRAN MOBILITY INFORMATION message, which includes IE "T305" set to '5', to UE. UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.3a, causing the UE to enter CELL FACH state in cell 1 and transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Then SS shall transmit CELL UPDATE CONFIRM. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. UE shall resume periodic cell updating procedure and transmit CELL UPDATE message after T305 (5 minutes) expires. SS should transmit CELL UPDATE CONFIRM. If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails. After T305 (5 minutes) expires, UE transmits CELL UPDATE at CELL1. SS indicates that UE is in CELL DCH state and changes the carrier and UpPCH shifting position. UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction UE SS	Message	Comment	
1	02 00		The UE is in the CELL_FACH state. SS waits until T305 has	
2	→	CELL UPDATE	expired. IE "Cell update cause" shall be	
3		CELL UPDATE CONFIRM	set to "periodical cell updating" No RNTI identities are given. No information on PRACH and S-CCPCH are provided.	
4			SS verifies that no uplink message is received from UE. SS waits for another period to allow T305 to expire.	
5	→	CELL UPDATE	Set to "periodical cell update" in IE "Cell update cause" upon the expiry of timer T305.	
6	+	CELL UPDATE CONFIRM	Including IEs "new C-RNTI", "new U-RNTI" and IE "RRC State Indicator" is set to "CELL_FACH"	
7	→	UTRAN MOBILITY INFORMATION CONFIRM	_	
8	←	UTRAN MOBILITY INFORMATION	IE "T305" is set to Infinity.	
9	→	UTRAN MOBILITY INFORMATION CONFIRM		
10			SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.3a	
11	→	CELL UPDATE	IE "Cell update cause" shall be set to "cell reselection".	
12	←	CELL UPDATE CONFIRM		
12a	→	UTRAN MOBILITY INFORMATION CONFIRM		
13			SS waits for 60 minutes and checks that no CELL UPDATE message is transmitted on uplink PRACH channel.	
14	←	UTRAN MOBILITY INFORMATION	IE "T305" is set to '5.	
15	→	UTRAN MOBILITY INFORMATION CONFIRM		
16			SS applies the downlink transmission power settings, according to the values in columns "T0" of table 8.3.1.3a	
17	→	CELL UPDATE	IE "Cell update cause" shall be set to "cell reselection".	
18	←	CELL UPDATE CONFIRM		
18a	→	UTRAN MOBILITY INFORMATION CONFIRM		
19	→	CELL UPDATE	UE shall transmit this message with "cell update cause" set to "periodical cell updating" after T305 expires.	
20	+	CELL UPDATE CONFIRM		
21		Void		
22	→	CELL UPDATE	IE "Cell update cause" shall be set to "periodical cell updating"	
23	+	CELL UPDATE CONFIRM	UE is in CELL_DCCH state at cell1 and specify the frequency info and UpPCH shifting position.	

24	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE transmits the message on DPCH channel.
25	←→	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

System Information Block type 3(TDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark	
Qrxle vmin	- 81dBm	
Sintrasearch	21db	
Sintersearch	21db	
-v4b0NonCriticalExtensions		
-sysInfoType3-v4b0ext		
- mapping-LCR		
- MappingFunctionParameterList		
- MappingFunctionParameter		
- mapParameter1	22	

CELL UPDATE (Step 2 and 5)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark	
U-RNTI		
- SRNC Identity	Check to see if set to '0000 0000 0001'	
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'	
Cell Update Cause	Check to see if set to 'periodical cell updating'	

CELL UPDATE (Step 11 and 17)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to same bit string as in IE "S-RNTI" in
	IE "U-RNTI" of the CELL UPDATE CONFIRM message
	sent in step 6.
Cell Update Cause	Check to see if set to "cell reselection"

CELL UPDATE CONFIRM (Step 3 and 20)

Use the same message sub-type found in TS 34.108, clause 9.

CELL UPDATE CONFIRM (Step 6, 12 and 18)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark	
New U-RNTI		
- SRNC Identity	Set to '0000 0000 0001'	
- S-RNTI	Set to an arbitrary string different from '0000 0000 0000	
	0000 0001'	
New C-RNTI	'1010 1010 1010 1010'	

CELL UPDATE (Step 19)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to same bit string as in IE "S-RNTI" in
	IE "U-RNTI" of the CELL UPDATE CONFIRM message
	sent in step 6.
Cell Update Cause	Check to see if set to 'periodical cell updating'

UTRAN MOBILITY INFORMATION (Step 8)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New U-RNTI	Not Present
New C-RNTI	Not Present
UE Timers and constants in connected mode	
- T305	infinity

UTRAN MOBILITY INFORMATION (Step 14)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New U-RNTI	Not Present
New C-RNTI	Not Present
UE Timers and constants in connected mode	
- T305	5

CELL UPDATE CONFIRM (Step23)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
PhysicalChannelReconfigurationn-r4-TDD128-add-ext-IEs	
PhysicalChannelReconfiguration -r4-TDD128-add-ext	
UpPCHpositionInfo	22

8.3.1.3a.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305 and then transmits a CELL UPDATE message setting value "periodical cell update" into IE "Cell update cause".

After step 3 the UE shall not send any uplink message as a response to CELL UPDATE CONFIRM message sent in step 3.

After step 4 the UE shall send a CELL UPDATE message, specifying the cell updating cause to be "periodical cell update".

After step 6 the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH.

After step 8, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 10, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "cell reselection" on the uplink CCCH.

After step 12, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

Between step 12a and 14, the UE shall not transmit any CELL UPDATE message.

After step 14, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 16, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "cell reselection" on the uplink CCCH.

After step 18, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 18a, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "periodical cell update" on the uplink CCCH.

8.3.1.4 Cell Update: periodical cell update in CELL_PCH

8.3.1.4.1 Definition

8.3.1.4.2 Conformance requirement

UE shall initiate the cell update procedure in the following cases:

1>	Uplink data transmission:
1>	Paging response:
1>	Radio link failure:
1>	Re-entering service area:
1>	RLC unrecoverable error:
1>	Cell reselection:

- 1> Periodical cell update:
 - 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met; and
 - 2> if the UE is in CELL_FACH or CELL_PCH state; and
 - 2> if the timer T305 expires; and
 - 2> if the criteria for "in service area" as specified in TS 25.331 subclause 8.5.5.2 is fulfilled; and
 - 2> if periodic updating has been configured by T305 in the IE "UETimers and constants in connected mode" set to any other value than "infinity":

3> perform cell update using the cause "periodical cell update".

When the UE receives a UTRAN MOBILITY INFORMATION message, it shall:

- 1> act on received information elements as specified in TS 25.331 subclause 8.6;
- 1> if the IE "UE Timers and constants in connected mode" is present:
 - 2> store the values of the IE "UE Timers and constants in connected mode" in the variable TIMERS_AND_CONSTANTS, replacing any previously stored value for each timer and constant; and
 - 2> for each updated timer value:
 - 3> start using the new value next time the timer is started;
 - 2> for each updated constant value:
 - 3> start using the new value directly;
- 1> set the IE "RRC transaction identifier" in the UTRAN MOBILITY INFORMATION CONFIRM message to the value of "RRC transaction identifier" in the entry for the UTRAN MOBILITY INFORMATION message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC;

. . .

Reference

3GPP TS 25.331 clause 8.3.1, 8.3.3.3.

8.3.1.4.3 Test purpose

1. To confirm that the UE, in CELL_PCH state, executes a cell update procedure after the expiry of timer T305.

8.3.1.4.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and 2 are active.

UE: CELL_PCH (state 6-12) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.1.4

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRARF Channel Number		Mid Range Test		Mid Range Test	
		Frequency Frequency		iency	
CPICH Ec (FDD)	dBm/3.84MHz	-60	-69	-69	-60
P-CCPCH RSCP (TDD)	dBm	-60	-69	-69	-60

Table 8.3.1.4 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The UE starts from CELL PCH state. When the UE detects the expiry of periodic cell updating timer T305 according to the system in formation, the UE moves to CELL FACH state. It shall transmit a CELL UPDATE message on the uplink CCCH and set the value "periodical cell update" into IE "Cell update cause". SS answers with a CELL UPDATE CONFIRM message on the downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. SS transmits UTRAN MOBILITY INFORMATION message, which includes IE "T305" set to "infinity", to UE. UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.4, causing the UE to enter CELL FACH state in cell 2 and transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Then SS shall transmit CELL UPDATE CONFIRM with IE "RRC state indicator" set to "CELL_PCH" on the downlink CCCH. Then UE shall enter CELL PCH state. SS then monitors the uplink CCCH for a period of 60 minutes (ideally the SS should monitor this up to the maximum possible value for timer T305 (720 minutes), but for practical reasons 60 minutes (twice default timer of 30 minutes) is regarded as being sufficient) and verifies that no CELL_UPDATE message is received. SS then configures its downlink transmission power settings according to columns "T0" in table 8.3.1.4, causing the UE to enter CELL_FA CH state in cell 1 and transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Then SS shall transmit CELL UPDATE CONFIRM on the downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. Next, SS transmits UTRAN MOBILITY INFORMATION message, which includes IE "T305" set to "5", to UE. UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.4, causing the UE to enter CELL_FA CH state in cell 2 and transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Then SS shall transmit CELL UPDATE CONFIRM with IE "RRC state indicator" set to "CELL_PCH" on the downlink CCCH. Then UE shall enter CELL_PCH state. After T305 expires, UE shall transmit CELL UPDATE message with IE "cell update cause" set to "periodical cell update". SS shall transmit CELL UPDATE CONFIRM message on the downlink CCCH to end the procedure.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS	1	
1				The UE is in the CELL_PCH state. SS waits until T305 has expired. Wait for CELL UPDATE message and then verify that the time of arrival of this message is in the range of T305 value +/- 10 % after it entered CELL_PCH state
2	=	>	CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "periodical cell update".
3	+		CELL UPDATE CONFIRM	
3a	-	>	UTRAN MOBILITY INFORMATION CONFIRM	
4	+		UTRAN MOBILITY INFORMATION	IE "T305" is set to 'infinity'.
5	-	>	UTRAN MOBILITY INFORMATION CONFIRM	
6				SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.4.
7	=	>	CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection".
8	•		CELL UPDATE CONFIRM	UE enters CELL_PCH state after receiving this message.

Step	Direction	Message	Comment
	UE SS		
9			SS waits for 60 minutes and checks that no CELL UPDATE message is transmitted on
10			uplink PRACH channel. SS applies the downlink
			transmission power settings, according to the values in columns "T0" of table 8.3.1.4.
11	→	CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection".
12	+	CELL UPDATE CONFIRM	
12a	→	UTRAN MOBILITY INFORMATION CONFIRM	
13	+	UTRAN MOBILITY INFORMATION	IE "T305" is set to '5'.
14	→	UTRAN MOBILITY INFORMATION CONFIRM	
15			SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.4.
16	→	CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection".
17	+	CELL UPDATE CONFIRM	UE enters CELL_PCH state after receiving this message.
18			SS wait for T305 timer to expire
19	→	CELL UPDATE	IE "Cell update cause" shall be set to "periodical cell update".
20	+	CELL UPDATE CONFIRM	
21	←→	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

CELL UPDATE (Step 2 and 19)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'periodical cell update'

CELL UPDATE (Step 7, 11 and 16)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to "cell reselection"

CELL UPDATE CONFIRM (Step 3 and 12)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'

CELL UPDATE CONFIRM (Step 8, 17 and 20)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC state indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3

UTRAN MOBILITY INFORMATION (Step 4 and 13)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New U-RNTI	Not Present
New C-RNTI	Not Present
UE Timers and constants in connected mode	
- T305	Set to 'infinity' in step 4 and '5' in step 13

8.3.1.4.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305, it shall then move to CELL_FACH state and transmits a CELL UPDATE message with the IE "Cell update cause" set to "periodical cell update".

After step 3, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 4, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 6, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "cell reselection" on the uplink CCCH.

After step 8 and before step 10, the UE shall not transmit any CELL UPDATE messages.

After step 10, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "cell reselection" on the uplink CCCH.

After step 12, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 13, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 15, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "cell reselection" on the uplink CCCH.

After step 18 the UE shall trans mit a CELL UPDATE message stating the cell update cause to be periodic updating.

8.3.1.5 Cell Update: UL data transmission in URA PCH

8.3.1.5.1 Definition

8.3.1.5.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

- 1> Uplink data transmission:
 - 2> if the UE is in URA_PCH or CELL_PCH state; and
 - 2> if the UE has uplink RLC data PDU or uplink RLC control PDU on RB1 or upwards to transmit:
 - 3> perform cell update using the cause "uplink data transmission".

. . .

Reference

3GPP TS 25.331 clause 8.3.1 and 8.1.2

8.3.1.5.3 Test purpose

1. To confirm that the UE executes a cell update procedure when the UE transmits uplink data if the UE is in URA_PCH state.

8.3.1.5.4 Method of test

Initial Condition

System Simulator: 1cell

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

The UE has been registered in both CS and PS do mains.

Test Procedure

The SS trans mits a PHYSICAL CHANNEL RECONFIGURATION message with IE "RRC State Indicator" set to "URA_PCH". The UE shall reply with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and move to URA_PCH state. The SS transmits a PAGING TYPE 1 message which includes a matched U-RNTI and the optional IE "CN originated page to connected mode UE". The UE then moves to CELL_FACH state and transmits a CELL UPDATE message to the SS on the uplink CCCH, with the IE "Cell update cause" set to value "uplink data transmission". After receiving such a message, SS transmits CELL UPDATE CONFIRM message on downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. The UE shall stay in CELL_FACH state and transmit an INITIAL DIRECT TRANSFER message using AM RLC on DCCH.

Expected sequence

Step	Direc		Message	Comment
	UE	SS		
1				The UE is brought to
				CELL_FACH state.
2			Void	
3			Void	
4	←	-	PHYSICAL CHANNEL RECONFIGURATION	IE "RRC State Indicator" set to "URA_PCH"
5	-)	>	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE moves to URA_PCH state.
5a	←	-	PAGING TYPE 1	Includes Matched identifier and optional IE "CN originated page to connected mode UE"
6)	•	CELL UPDATE	The UE shall move to CELL FACH state with the message set to "uplink data transmission" in IE "Cell update cause".
7	+	-	CELL UPDATE CONFIRM	See message content.
7a	->	•	UTRAN MOBILITY INFORMATION CONFIRM	
8	-)	>	INITIAL DIRECT TRANSFER	Response to the paging
				message sent in step 5a
9	←	\rightarrow	CALL C.2	If the test result of C.2 indicates
				that UE is in CELL_FACH
				state, the test passes,
				otherwise it fails.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the same message sub-type found in TS 34.108 clause 9, which is entitled "Packet to CELL_FACH from CELL_FACH in PS", with the following exceptions:

Information Element	Value/remark
New C-RNTI	Not Present
RRC State Indicator	URA_PCH
URAidentity	0000 0000 0000 0001B
UTRAN DRX cycle length coefficient	3

PAGING TYPE 1 (Step 5a)

Information Element	Value/remark
Message Type	
Paging record list	Only 1 entry
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	
- SRNC Identity	Set to the previously assigned SRNC identity
- S-RNTI	Set to previously assigned S-RNTI
- CN originated page to connected mode UE	
-Paging cause	Terminating Call supported by the UE in the CS
	domain
-CN domain identity	CS Domain
-Paging record type identifier	Set to "IMSI (GSM-MAP)" for UEs supporting GSM-
	MAP core network type or "IMSI (DS-41)" for UEs
	supporting ANSI-41 core network type.
BCCH modification info	Not Present

CELL UPDATE (Step 6)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'uplink data transmission'

CELL UPDATE CONFIRM (Step 7)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	Set to an arbitrary string different from '1010 1010 1010 1010'

INITIAL DIRECT TRANSFER (Step 8) - for UEs supporting GSM-MAP core networks

Check to see if the same message type found in TS 34.108 clause 9 is received, with the following exceptions:

Information Element	Value/remark
CN domain identity	CS domain
Intra Domain NAS Node Selector	
- CHOICE version	R99
CHOICE CN type	GSM
CHOICE Routing basis	Local(P)TMSI
Routing parameter	This bit string is set to bits b14 through b23 of the TMSI.
	The TMSI consists of 4 octets (32bits). This can be
	represented by a string of bits numbered from b0 to b31,
	with bit b0 being the least significant
	The "Routing parameter" bit string consists of bits b14
	through b23 of the TMSI.
	The first/ leftmost/ most significant bit of the bit string
	contains bit b23 of the TMSI
Entered parameter	Not checked
NAS message	Not checked

INITIAL DIRECT TRANSFER (Step 8) - for UEs supporting ANSI-41 core networks

Information Element	Value/remark
CN domain identity	CS Domain
Intra Domain NAS Node Selector	
- CHOICE version	ANSI-41: Bitstring(14), all bits set to 0
NAS message	Not checked
START	Not checked
Measured results on RACH	Not checked

8.3.1.5.5 Test requirement

After step 4, UE shall trans mit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and move to URA_PCH state.

After step 5a, the UE shall move to CELL_FACH state to initiate a cell update procedure and transmits a CELL UPDATE message which is set to "uplink data transmission" in IE "Cell update cause".

After step 7, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 7a, UE shall trans mit INITIAL DIRECT TRANSFER message to SS using AM RLC on DCCH.

8.3.1.6 Cell Update: UL data transmission in CELL PCH

8.3.1.6.1 Definition

8.3.1.6.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

- 1> Uplink data transmission:
 - 2> if the UE is in URA_PCH or CELL_PCH state; and
 - 2> if the UE has uplink RLC data PDU or uplink RLC control PDU on RB1 or upwards to transmit:
 - 3> perform cell update using the cause "uplink data transmission".

. . .

Reference

3GPP TS 25.331 clause 8.3.1 and 8.1.2

8.3.1.6.3 Test purpose

1. To confirm that the UE executes a cell update procedure when the UE transmits uplink data if the UE is in CELL_PCH state.

8.3.1.6.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

The UE is registered in both CS and PS domains.

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message with IE "RRC State Indicator" set to "CELL_PCH". The UE shall reply with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and move to CELL_PCH state. The SS transmits a PAGING TYPE 1 message which includes a matched U-RNTI and the optional IE "CN originated page to connected mode UE". The UE then moves to CELL_FACH state and transmits a CELL UPDATE message to the SS on the uplink CCCH, with the IE "Cell update cause" set to value "uplink data transmission". After receiving such a message, SS transmits a CELL UPDATE CONFIRM message on downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. The UE shall stay in CELL_FACH state and transmit an INITIAL DIRECT TRANSFER message using AM RLC on DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to
				CELL_FACH state.
2			Void	
3			Void	
4	+	-	PHYSICAL CHANNEL RECONFIGURATION	IE "RRC State Indicator" set to "CELL_PCH"
5	-)	•	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE moves to CELL_PCH state.
5a	←	-	PAGING TYPE 1	Includes Matched identifier and optional IE "CN originated page to connected mode UE"
6)	•	CELL UPDATE	The UE moves to CELL FACH state and transmit this message which is set to "uplink data transmission" in IE "Cell update cause".
7	+	-	CELL UPDATE CONFIRM	See message content.
7a	7)	UTRAN MOBILITY INFORMATION CONFIRM	
8	-	>	INITIAL DIRECT TRANSFER	Response to the paging
				message sent in step 5a
9	← ·	→	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH
				state, the test passes, otherwise it fails.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the same message sub-type found in TS 34.108 clause 9, which is entitled "Packet to CELL_FA CH from CELL_FA CH in PS", with the following exceptions:

Information Element	Value/remark
New C-RNTI	Not Present
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3

PAGING TYPE 1 (Step 5a)

Information Element	Value/remark
Message Type	
Paging record list	Only 1 entry
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	
- SRNC Identity	Set to the previously assigned SRNC identity
- S-RNTI	Set to previously assigned S-RNTI
- CN originated page to connected mode UE	
-Paging cause	Terminating Call supported by the UE in the CS
	domain
-CN domain identity	CS Domain
-Paging record type identifier	Set to "IMSI (GSM-MAP)" for UEs supporting GSM-
	MAP core network type or "IMSI (DS-41)" for UEs
	supporting ANSI-41 core network type.
BCCH modification info	Not Present

CELL UPDATE (Step 6)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark	
U-RNTI		
- SRNC Identity	Check to see if set to '0000 0000 0001'	
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'	
Cell Update Cause	Check to see if set to 'uplink data transmission'	

CELL UPDATE CONFIRM (Step 7)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark	
New C-RNTI	Set to an arbitrary string different from '1010 1010 1010 1010'	

INITIAL DIRECT TRANSFER (Step 8) - for UEs supporting GSM-MAP core networks

Check to see if the same message type found in TS 34.108 clause 9 is received, with the following exceptions:

Information Element	Value/remark
CN domain identity	CS domain
Intra Domain NAS Node Selector	
- CHOICE version	R99
CHOICE CN type	GSM
CHOICE Routing basis	Local(P)TMSI
Routing parameter	This bit string is set to bits b14 through b23 of the TMSI.
	The TMSI consists of 4 octets (32bits). This can be
	represented by a string of bits numbered from b0 to b31,
	with bit b0 being the least significant
	The "Routing parameter" bit string consists of bits b14
	through b23 of the TMSI.
	The first/ leftmost/ most significant bit of the bit string
	contains bit b23 of the TMSI
Entered parameter	Not checked
NAS message	Not checked

INITIAL DIRECT TRANSFER (Step 8) - for UEs supporting ANSI-41 core networks

Information Element	Value/remark
CN domain identity	CS Domain
Intra Domain NAS Node Selector	
- CHOICE version	ANSI-41 : Bitstring(14), all bits set to 0
NAS message	Not checked
START	Not checked
Measured results on RACH	Not checked

8.3.1.6.5 Test requirement

 $After step \ 4, UE \ shall \ trans \ mit \ a \ PHYSICAL \ CHANNEL \ RECONFIGURATION \ COMPLETE \ message \ and \ move \ to \ CELL_PCH \ state.$

After step 5, the UE shall move to CELL_FACH state to initiate a cell update procedure and transmits a CELL UPDATE message which is set to "uplink data transmission" in IE "Cell update cause".

After step 7, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 7a, UE shall trans mit a INITIAL DIRECT TRANSFER message to SS using AM RLC on DCCH.

8.3.1.7	Void
8.3.1.8	Void
8.3.1.9	Cell Update: re-entering of service area after T305 expiry and being out of service area
8.3.1.9.1	Definition
8.3.1.9.2	Conformance requirement
A UE shall in itia	te the cell update procedure in the following cases:
1> Uplink da	ata transmission:
1> Paging re	sponse:
1> Radio lin	k failure:
1> Re-enterin	ng service area:
2> if non- met; a	e of the criteria for performing cell update with the causes specified above in the current subclause is nd
2> if the	UE is in CELL_FACH or CELL_PCH state; and
2> if the	UE has been out of service area and re-enters service area before T307 or T317 expires:
3> pe	rform cell update using the cause "re-entering service area".
When the T305 ethe UE shall	expires and the UE detects that it is "out of service area" as specified in TS 25.331 subclause 8.5.5.1,
1> start time	r T307;
If the UE detects shall:	"in service area" according to TS 25.331 subclause 8.5.5.2 and timer T307 or T317 is running, the UE
1> check the	value of V302; and
1> if V302 is	equal to or smaller than N302:
2> in cas	e of a cell update procedure:
3> se	t the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;
3> su	bmit the CELL UPDATE message for transmission on the uplink CCCH.
2> incren	nent counter V302;
2> restar	t timer T302 when the MAC layer indicates success or failure to transmit the message.
1> if V302 is	greater than N302:

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.9.3 Test purpose

- 1. To confirm that the UE performs a cell search after experiencing an "out of service area" condition.
- 2. To confirm that the UE initiates cell updating procedure if it manages to re-enter the service area.

8.3.1.9.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108, using the specific message contents as specified below.

Specific Message Contents

SYSTEM INFORMATION BLOCK TYPE 1

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark
	5 minutes
T307	50 seconds
T317	600 seconds

Specific timer tolerances

Use the same timer tolerances found in subclause 4.2.3 of TS 34.108, with the following exceptions.

T305: +/- 10 s

T307: +/- 2 s

Test Procedure

Table 8.3.1.9

Parameter	Unit	Cell 1	
		T0	T1
UTRARF Channel Number		Mid Rang	
		Frequ	ency
CPICH Ec (FDD)	dBm/3.84MHz	-60	-80
P-CCPCH RSCP (TDD)	dBm	-60	-80

Table 8.3.1.9 illustrates the downlink power to be applied at various time instants of the test execution. Columns marked "T0" denote the initial conditions.

The UE is in the CELL_FACH state. The content of the SYSTEM INFORMATION BLOCK TYPE 3 and 4 is modified. SS configures its downlink trans mission power settings according to columns "T1" in table 8.3.1.9 so that S<0. The UE shall detect that it is out of service area. Following the expiry of periodic cell updating timer T305 according to the system information, and within the time interval equivalent to T307 timer value, SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.9 so that S>0. The UE shall find that it is back in service area, and transmit a CELL UPDATE message to the SS on the uplink CCCH. In this message, the IE "Cell update cause" shall be set to "re-entered service area". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message with the IE "RRC State Indicator" set "CELL_PCH" on the downlink DCCH. The UE shall enter CELL_PCH state. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.9 so that S<0. Following the expiry of periodic cell updating timer T305 according to the system information, the UE shall detect that it is out of service area. Within the time interval equivalent to T307 timer value, SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.9 so that S>0. The UE shall find that it is back in service area, move to CELL_FACH and transmits a CELL UPDATE message to the SS on the uplink CCCH. In this message, the IE "Cell update cause" shall be set to "re-entered service area". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message on the downlink DCC H.

Expected sequence

Step	Direction		Direction Message	Comment	
Otop	UE	SS		Comment	
1	-			The UE is in the CELL_FACH	
				state of cell 1.	
1a	+	_	MASTER INFORMATION BLOCK	SS changes the contents of	
	-		SYSTEM INFORMATION BLOCK TYPE 3	MASTER INFORMATION	
			and 4	BLOCK and SYSTEM	
				INFORMATION BLOCK (see	
				specific message contents).	
1b	-	_	SYSTEM INFORMATION CHANGE		
			INDICATION		
2				SS configures its downlink	
				transmission power settings	
				according to columns "T1" in	
				table 8.3.1.9 so that its S value	
				falls below 0.	
3				The UE shall detect an "out of	
				service" condition and it shall	
				search for other cells to camp	
				on. Upon expiry of timer T305,	
				UE starts T307 timer	
4				SS configures its downlink	
				transmission power settings	
				according to columns "T0" in	
				table 8.3.1.9.	
5	-	>	CELL UPDATE	The value "re-entered service	
				area" shall be found in IE "Cell	
				update cause" in this message	
6	←	-	CELL UPDATE CONFIRM	"RRC State Indicator" is set to	
				"CELL_PCH"	
7				SS configures its downlink	
				transmission power settings	
				according to columns "T1" in	
				table 8.3.1.9 so that its S value	
				falls below 0 and waits 5	
				minutes and 10 seconds until	
0				T305 has expired.	
8				SS configures its downlink	
				transmission power settings	
				according to columns "T0" in table 8.3.1.9.	
0	ļ ,		CELL UPDATE	UE shall move to CELL FACH.	
9	-	7	CELL UPDATE		
				It shall transmit this message	
				with cell update cause set to "re-entered service area"	
10	(_	CELL UPDATE CONFIRM	16-entered service area	
10		_	CELL OFDATE CONFIKIVI		

11	$\leftarrow \rightarrow$	CALL C.4	If the test result of C.4 indicates
			that UE is in CELL_PCH state,
			the test passes, otherwise it
			fails.

Specific Message Contents

MASTER INFORMATION BLOCK (Step 1a)

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark	
	A valid MIB value tag as defined in TS 25.331 that is different from the previous value.	
SIB 3 Cell Value tag	Set to (Current SIB3 value tag + 1)	
SIB 4 Cell Value tag	Set to (Current SIB4 value tag + 1)	

SYSTEM INFORMATION BLOCK TYPE 3 and 4 (Step 1a)

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark	
Qrxle vmin	-35 (-69 dBm)	

SYSTEM INFORMATION CHANGE INDICATION (Step 1b)

Information Element	Value/remark	
Message Type		
BCCH modification info		
MIB Value tag	Set equal to Value tag sent in modified MIB in step 1a.	

CELL UPDATE (Step 5 and 9)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark	
U-RNTI		
- SRNC Identity	Check to see if set to '0000 0000 0001'	
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'	
Cell Update Cause	Check to see if set to 're-entered service area'	

CELL UPDATE CONFIRM (Step 6 and 10)

Use the same message sub-type found in TS 34.108 clause 9, with the following exception.

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3

8.3.1.9.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message in which the IE "Cell update cause" is set to the value "reentered service area".

After step 8 the UE shall move to CELL_FACH and then transmit a CELL UPDATE message, with the IE "Cell Update Cause" set to "re-entered service area".

8.3.1.10 Cell Update: expiry of T307 after T305 expiry and being out of service area

8.3.1.10.1 Definition

8.3.1.10.2 Conformance requirement

When the T307 expires, the UE shall:

- 1> move to idle mode:
- 1> release all dedicated resources;
- 1> perform other actions when entering idle mode from connected mode as specified in TS 25.331 subclause 8.5.2;
- 1> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.10.3 Test purpose

1 To confirm that the UE moves to idle mode after the expiry of T307, indicating that it is out of service area when attempting to perform a periodic cell updating procedure.

8.3.1.10.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Timer T305 is set to 5min.

Test Procedure

Table 8.3.1.10

Parameter	Unit	Cell 1	
		T0	T1
UTRARF Channel Number		Mid Range Test Frequency	
CPICH Ec (FDD)	dBm/3.84MHz	-60	-80
P-CCPCH RSCP (TDD)	dBm	-60	-80

Table 8.3.1.10 illustrates the downlink power to be applied at various time instants of the test execution. Columns marked "T0" denote the initial conditions.

The UE is in CELL_FACH state at the start of the test. Before the expiry of periodic cell updating timer T305, the content of the SYSTEM INFORMATION BLOCK TYPE 3 and 4 is modified. After T305 expires, UE shall transmit CELL UPDATE message with IE "cell update cause" set to "periodical cell update". SS shall transmit CELL UPDATE CONFIRM message. Now the UE and SS are synchronized. Immediately after the cell update procedure is finalized, the SS starts a delay timer T_{delay} (see below for limits on the timer value). When T_{delay} expires the SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.10 so that S<0 and this results in a "out of service area" condition. The SS continues to listen to the uplink channel to detect possible attempts to perform a cell updating procedure. The UE shall not send any CELL UPDATE message on the uplink CCCH, instead it triggers timer T307 after expiry of T305. After the expiry of timer T305+T307+10% marg in since completion of the cell update procedure, SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.10 so that S>0, the UE shall enter idle state. SS waits for 60s and then calls for generic procedure C.1 to check that UE is in idle mode state.

NOTE 1: The value chosen for Tdelay should be midway between the following logical minimum and maximum values:

Minimum > T305 + T307 - T317

Maximum < T305

NOTE 2: TS 25.331 (from June 2003) specifies that the UE should treat any value of T317 received from UTRAN as though it is equal to infinity. Nevertheless, the value of T317 used in Note 1 should be the value broadcast in SIB1 by the SS (or the implied default value if none is broadcast).

Expected sequence

Step	Direction		Message	Comment	
	UE SS				
1				The UE is brought to CELL_FACH state.	
1a	1a ←		MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 3 and 4	SS changes the contents of MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK (see	
1b	1b ←		SYSTEM INFORMATION CHANGE INDICATION	specific message contents).	
1c	-)	CELL UPDATE	IE "Cell update cause" shall be set to "periodical cell update".	
1d	•	(CELL UPDATE CONFIRM		
1e				SS waits T _{delay} (see above)	
2a				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.10 so that the cell is no longer suitable for camping. The UE shall detect that it is out of service area and refrains from transmitting CELL UPDATE message due to periodic cell updating.	
2b				SS waits a further (T305+T307- T _{delay}) +10% for UE to enter idle mode.	
3				The UE detects the expiry of timer T305 and it searches for other cells to camp on. After the expiry of timer T307, the UE shall enter idle mode. SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.10 so that the cell is suitable for camping. SS waits for 60s.	
4	idi		CALL C.1	If the test result of C.1 indicates that UE is in idle mode state, the test passes, otherwise it fails.	

Specific Message Contents

MASTER INFORMATION BLOCK (Step 1a)

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark	
MIB Value Tag	A valid MIB value tag as defined in TS 25.331 that is	
	different from the previous value.	
SIB 3 Cell Value tag	Set to (Current SIB3 value tag + 1)	
SIB 4 Cell Value tag	Set to (Current SIB4 value tag + 1)	

SYSTEM INFORMATION BLOCK TYPE 3 and 4 (Step 1a)

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark	
Qrxle vmin	-35 (-69 dBm)	

SYSTEM INFORMATION CHANGE INDICATION (Step 1b)

Information Element	Value/remark	
Message Type		
BCCH modification info		
MIB Value tag	Set equal to Value tag sent in modified MIB in step 1a.	

CELL UPDATE (Step 1c)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark	
U-RNTI		
- SRNC Identity	Check to see if set to '0000 0000 0001'	
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'	
Cell Update Cause	Check to see if set to 'periodical cell updating'	

8.3.1.10.5 Test requirement

After step 3 the UE shall move to idle mode.

8.3.1.11 Cell Update: Success after T302 time-out

8.3.1.11.1 Definition

8.3.1.11.2 Conformance requirement

If any or several of the following conditions are true:

- expiry of timer T302;

. . .

the UE shall:

- 1> check whether it is still in "in service area";
- 1> in case of a cell update procedure:
 - 2> clear any entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS.

If the UE detects "in service area" if it has not entered idle mode, and:

- 1> if V302 is equal to or smaller than N302, the UE shall:
 - 2> in case of a cell update procedure:
 - 3> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;
 - 3> submit the CELL UPDATE message for transmission on the uplink CCCH.
 - 2> increment counter V302;
 - 2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.
- 1> if V302 is greater than N302, the UE shall:

. . .

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.11.3 Test purpose

1. To confirm that the UE repeats the transmission of CELL UPDATE message after failing to receive any response from the SS before T302 timer expires.

8.3.1.11.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

At the start of the test, the UE is brought to CELL_FACH state. When the UE detects the expiry of periodic cell updating timer T305 according to the system information, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH. The IE "Cell update cause" in this message shall be set to "periodical cell update". SS ignores this message, and the UE shall then re-transmit a CELL UPDATE message after the expiry of timer T302. When the SS has received (N302+1) such messages, it transmits a CELL UPDATE CONFIRM message with new values for "C-RNTI" to the UE. Finally, the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH. SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1			The UE starts from CELL_FACH state. SS initializes its internal counter K to 0 and waits until the expiry of T305 timer.
2	→	CELL UPDATE	The value "periodical cell update" shall be set in IE "Cell update cause".
3			If K is equal to N302 then proceeds to step 5.
4			SS increments counter K, transmits no response to the UE and waits for an additional period equal to the value of timer T302. The next step is step 2.
5	←	CELL UPDATE CONFIRM	The message includes IEs "new C-RNTI". The IE "RRC State Indicator" is set to "CELL_FACH".
6	→	UTRAN MOBILITY INFORMATION CONFIRM	
7	←→	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

CELL UPDATE (Step 2)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'Periodic cell updating'

CELL UPDATE CONFIRM (Step 5)

Use the same message sub-type found in TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
New C-RNTI	Set to an arbitrary string different from '1010 1010 1010 1010'

8.3.1.11.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305 then transmit a CELL UPDATE message on the uplink CCCH, setting "periodical cell update" into IE "Cell update cause".

After step 2 the UE shall re-transmits a CELL UPDATE message after the expiry of timer T302. A total of (N302+1) transmissions of CELL UPDATE message shall be detected in SS.

After step 5 the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH and stay at CELL_FACH state.

8.3.1.12 Cell Update: Failure (After Maximum Re-transmissions)

8.3.1.12.1 Definition

8.3.1.12.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

...

1> Periodical cell update:

. . .

- $2\!\!>$ if the UE is in CELL_FACH or CELL_PCH state; and
- 2> if the timer T305 expires; and
- 2> if the criteria for "in service area" as specified in subclause 8.5.5.2 in TS 25.331 is fulfilled; and
- 2> if periodic updating has been configured by T305 in the IE "UETimers and constants in connected mode" set to any other value than "infinity":
 - 3> perform cell update using the cause "periodical cell update".

. . .

In case of cell update procedure the UE shall transmit a CELL UPDATE message.

. . .

The UE shall set the IEs in the CELL UPDATE message as follows:

1> set the IE "Cell update cause" corresponding to the cause specified in subclause 8.3.1.2 in TS 25.331 that is valid when the CELL UPDATE message is submitted to lower layers for transmission;

If any or several of the following conditions are true:

```
expiry of timer T302;
the UE shall:
   1> stop T302 if it is running;
   1> check whether it is still in "in service area" (see subclause 8.5.5.2) in TS 25.331;
   1> in case of a cell update procedure:
       2> clear any entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the
          variable TRANSACTIONS.
If the UE detects "in service area" if it has not entered idle mode, and:
   1> if V302 is equal to or smaller than N302, the UE shall:
   1> if V302 is greater than N302, the UE shall:
       2> in case of a cell update procedure:
          3> clear the entry for the CELL UPDATE CONFIRM message in the table "Rejected transactions" in the
              variable TRANSACTIONS.
       2> release all its radio resources;
       2> enter idle mode;
       2> other actions the UE shall perform when entering idle mode from connected mode are specified in TS
          25.331subclause 8.5.2;
       2> and the procedure ends.
Reference
3GPP TS 25.331 clause 8.3.1.2, 8.3.1.3, 8.3.1.1.2.
8.3.1.12.3
                        Test purpose
   1. To confirm that the UE repeats the cell update procedure upon the expiry of timer T302 and moves to idle state
       when its internal counter V302 is greater than N302.
8.3.1.12.4
                        Method of test
```

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_FACH (state 6-11)as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is initially in CELL_FACH state. When the UE detects the expiry of periodic cell updating timer T305, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH to perform a periodic cell updating procedure. The

SS ignores this message, and the UE shall attempt to re-transmit a CELL UPDATE message up to a maximum of (N302) times after the expiry of timer T302. After (N302) attempts of retransmission, the UE shall return to idle state. SS waits for 5s and then calls for generic procedure C.1 to check that UE is in idle mode state.

Expected sequence

Step	Direc	tion	Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state. SS
				sets its internal counter K=0 and waits
				for a period equals to timer value T305.
2	7	•	CELL UPDATE	The value "periodical cell update" shall be set in IE "Cell update cause".
3				SS transmits no response to the UE and
				increments counter K with 1.
4				SS waits for an additional period equal
				to T302 timer and if K is not greater than
				N302, then next step is step 2. Else the
				next step is step 5.
5				The UE shall enter idle mode state.
6	-	\rightarrow	CALL C.1	If the test result of C.1 indicates that UE
				is in idle mode state, the test passes,
				otherwise it fails.

Specific Message Contents

CELL UPDATE (Step 2)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'Periodical cell update'

8.3.1.12.5 Test requirement

After step 1 the UE shall transmit a CELL UPDATE message on the uplink CCCH and set value "periodical cell update" into IE "Cell update cause".

After step 3 and if K is not greater than N302, the UE shall retry to transmit a CELL UPDATE message.

After step 3 and if K is greater than N302, the UE shall stop transmitting CELL UPDATE message and then enters idle state.

8.3.1.13 Cell Update: Reception of Invalid CELL UPDATE CONFIRM Message

8.3.1.13.1 Definition

8.3.1.13.2 Conformance Requirement

If the UE receives an CELL UPDATE CONFIRM message, which contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows:

- 1> If V302 is equal to or smaller than N302, the UE shall:
 - 2> set the variable PROTOCOL_ERROR_INDICATOR to TRUE;
 - 2> in case of a cell update procedure:
 - 3> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;

3> submit the CELL UPDATE message for transmission on the uplink CCCH.

. . .

- 2> increment counter V302;
- 2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.
- 1> if V302 is greater than N302, the UE shall:

. . .

- 2> release all its radio resources;
- 2> enter idle mode;
- 2> Other actions the UE shall perform when entering idle mode from connected mode are specified in TS 25.331 subclause 8.5.2;
- 2> the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.1.11.

8.3.1.13.3 Test Purpose

1. To confirm that the UE retransmits a CELL UPDATE message when it receives an invalid CELL UPDATE CONFIRM message, before the number of retransmissions has reached the maximum allowed value.

8.3.1.13.4 Method of Test

Initial Condition

System Simulator: 1 cell

UE: CELL_PCH (state 6-12) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is brought to CELL_PCH state at the beginning of the test. SS pages the UE by sending a PAGING TYPE 1 message using the U-RNTI identity assigned during RRC connection establishment procedure. The UE shall transmit a CELL UPDATE message on the uplink CCCH. Upon receiving such a message, the SS replies with an invalid CELL UPDATE CONFIRM message on downlink DCCH using UM RLC. The UE shall detect the protocol error and retransmit a CELL UPDATE message up to a maximum of N302 times. SS then transmit a valid CELL UPDATE CONFIRM message. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities.

Expected Sequence

Step	Direc	tion	Message	Comment
	UE	SS		
1	(PAGING TYPE 1	The UE is in the CELL_PCH state. SS pages for the UE using the allocated connected mode identity (U-RNTI).
2	7		CELL UPDATE	Check that the value "paging response" is set in IE "Cell update cause".
3	-	-	CELL UPDATE CONFIRM	See specific message content.
4	-)		CELL UPDATE	Check that the value "paging response" is set in IE "Cell update cause", the value "protocol error" is set in IE "failure cause" and the value "Message extension not comprehended" is set in IE "Protocol error information".
5	+	-	CELL UPDATE CONFIRM	See message content.
6)	•	UTRAN MOBILITY INFORMATION CONFIRM	-

Specific Message Content

CELL UPDATE (Step 2)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'Paging Response'

CELL UPDATE CONFIRM (Step 3)

Use the CELL UPDATE CONFIRM message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Critical extensions	'FF'H

CELL UPDATE (Step 4)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'Paging Response'
Failure cause	Check to see if it is set to 'protocol error'
-Protocol error information	Check to see if it is set to "Message extension not comprehended"

PAGING TYPE 1 (Step 1)

Use the same message sub-type titled "TM (Packet in PS)" in default message content of TS 34.108 with following exceptions:

Information Element	Value/remark
Page record list	
- Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	•
- SRNC Identity	'0000 0000 0001'
- S-RNTI	'0000 0000 0000 0000 0001'

CELL UPDATE CONFIRM (Step 5)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

	Information Element	Value/remark
New C-RNTI		'1010 1010 1010 1010'

8.3.1.13.5 Test Requirement

After step 1 the UE shall transmit a CELL UPDATE message on the uplink CCCH, setting "paging response" into IE "Cell update cause".

After step 3 the UE shall transmit a CELL UPDATE message on the uplink CCCH, setting "paging response" into IE "Cell update cause", "protocol error" into IE "failure cause" and "Message extension not comprehended" into IE "Protocol error information".

After step 5, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

8.3.1.14 Cell Update: Incompatible simultaneous reconfiguration

8.3.1.14.1 Definition

8.3.1.14.2 Conformance Requirement

In case of a cell update procedure and if the received CELL UPDATE CONFIRM message

- includes "RB information elements"; and/or
- includes "Transport channel information elements"; and/or
- includes "Physical channel information elements"; and
- the variable ORDERED_RECONFIGURATION is set to TRUE because of an ongoing Reconfiguration procedure; and/or
- if the variable INCOMPATIBLE_SECURITY_RECONFIGURATION becomes set to TRUE of the received CELL UPDATE CONFIRM message:

the UE shall:

- 1> if V302 is equal to or smaller than N302:
 - 2> if, caused by the received CELL UPDATE CONFIRM message

- 3> if the variable ORDERED_RECONFIGURATION is set to TRUE caused by the received CELL UPDATE CONFIRM message in case of a cell update procedure:
 - 4> set the variable ORDERED_RECONFIGURATION to FALSE.
- 2> set the variable FAILURE_INDICATOR to TRUE;
- 2> set the variable FAILURE_CAUSE to "Incompatible simultaneous reconfiguration";

- 2> set the content of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;
- 2> submit the CELL UPDATE message for transmission on the uplink CCCH;
- 2> increment counter V302:
- 2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.
- 1> if V302 is greater than N302:

...

Reference

3GPP TS 25.331 clause 8.3.1.9a

8.3.1.14.3 Test Purpose

To confirm that the UE retransmits a CELL UPDATE message when it receives a CELL UPDATE CONFIRM
message that includes "Physical channel information elements" and UE's variable
ORDERED_RECONFIGURATION is set to TRUE because of an ongoing Reconfiguration procedure, before
the number of retransmissions has reached the maximum allowed value.

8.3.1.14.4 Method of Test

Initial Condition

System Simulator: 1 cell

UE: CELL_PCH (state 6-12) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is brought to CELL_PCH state at the beginning of the test. SS pages the UE by sending a PAGING TYPE 1 message using the U-RNTI identity assigned during RRC connection establishment procedure. The UE shall transmit a CELL UPDATE message on the uplink CCCH. Upon receiving such a message, the SS replies with a CELL UPDATE CONFIRM message contains IE "Physical channel information elements". Following that, SS immediately transmits another CELL UPDATE CONFIRM message contains IE "Physical channel information elements" before the "activation time" indicated in the previous CELL UPDATE CONFIRM message expires. The UE shall re-transmit a CELL UPDATE message with the same cause as the previous CELL UPDATE message and failure cause as "Incompatible simultaneous reconfiguration". SS then transmits a CELL UPDATE CONFIRM message to end the procedure.

Expected Sequence

Step	Direc	tion	Message	Comment
	UE	SS		
1	+	-	PAGING TYPE 1	
2	7	•	CELL UPDATE	
3	+	-	CELL UPDATE CONFIRM	SS transmits this message including IE "Physical channel information elements".
4	+	=	CELL UPDATE CONFIRM	Sent before the activation time specified in the message in step 3 has elapsed.
5	->	>	CELL UPDATE	
6	+	-	CELL UPDATE CONFIRM	

Specific Message Content

CELL UPDATE (Step 2)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'Paging Response'

CELL UPDATE (Step 5)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'Paging Response'
Failure cause	Check to see if set to 'Incompatible simultaneous reconfiguration'

CELL UPDATE CONFIRM (Step 3)

Use the same message sub-type found in TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]
Maximum allowed UL TX power	30 dBm

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]
Maximum allowed UL TX power	25 dBm

PAGING TYPE 1 (Step 1)

Use the same message sub-type titled "TM (Packet in PS)" in default message content of TS 34.108 with following exceptions:

Information Element	Value/remark
Page record list	
- Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	·
- SRNC Identity	'0000 0000 0001'
- S-RNTI	'0000 0000 0000 0000 0001'

8.3.1.14.5 Test Requirement

After step 1, UE shall trans mit a CELL UPDATE message.

After step 4 the UE shall re-transmit a CELL UPDATE message with failure cause set to "Incompatible simultaneous reconfiguration".

8.3.1.15 Cell Update: Unrecoverable error in Acknowledged Mode RLC SRB

8.3.1.15.1 Definition

8.3.1.15.2 Conformance Requirement

A UE shall initiate the cell update procedure in the following cases:

...

1> RLC unrecoverable error:

. . .

- 2> if the UE detects RLC unrecoverable error in an AM RLC entity:
 - 3> perform cell update using the cause "RLC unrecoverable error".

..

In case of cell update procedure the UE shall transmit a CELL UPDATE message.

. .

The UE shall set the IEs in the CELL UPDATE message as follows:

...

- 1> if an unrecoverable error in any of the AM RLC entities for the signalling radio bearers RB2, RB3 or RB4 is detected:
 - 2> set the IE "AM_RLC error indication (RB2, RB3 or RB4)" to TRUE.
- 1> otherwise:
 - 2> set the IE "AM_RLC error indication (RB2, RB3 or RB4)" to FA LSE.

. . .

When the UTRAN receives a CELL UPDATE/URA UPDATE message, the UTRAN should:

. . .

- 1> initiate an RRC connection release procedure (see subclause 8.1.4 in TS 25.331) by transmitting an RRC CONNECTION RELEASE message on the downlink CCCH. In particular UT RAN should:
 - 2> if the CELL UPDATE message was sent because of an unrecoverable error in RB2, RB3 or RB4:
 - 3> initiate an RRC connection release procedure by transmitting an RRC CONNECTION RELEASE message on the downlink CCCH.

Reference

3GPP TS 25.331 clause 8.3.1.2, 8.3.1.3, 8.3.1.5

8.3.1.15.3 Test Purpose

- To confirm that the UE reports the occurrence of an unrecoverable error in a C-plane AM RLC entity by initiating cell update procedure.
- To confirm that UE enters idle mode state after receiving RRC CONNECTION RELEASE message on the downlink CCCH.

8.3.1.15.4 Method of Test

Initial Condition

System Simulator: 1 cell

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN do main supported by the UE

The RRC CONNECTION SETUP message used in the initial setup should be as shown under Specific Message Contents below.

Test Procedure

The UE is initially in CELL_DCH state. SS sends a UE CAPA BILITY ENQUIRY message on the DCCH using AM mode. The UE shall reply with a UE CAPA BILITY INFORMATION message, sent using AM RLC on the DCCH.

SS does not acknowledge the AM PDUs carrying this message. The UE shall continue to re-transmit the AM PDU carrying UE CAPABILITY INFORMATION message until the maximum re-transmission count is reached.

Thereafter, the UE shall start sending RESET PDUs to request that the AM RLC entity for RRC signalling be reinitialized. SS ignores all RESET PDUs from the UE.

At this point, the UE shall initiate a cell update procedure by transmitting a CELL UPDATE message on the uplink CCCH. The CELL UPDATE message shall specify the value "TRUE" in IE "AM_RLC error indicator (RB2, RB3 or RB4)" and "RLC unrecoverable error" as the cell update cause.

SS sends RRC CONNECTION RELEASE message on the downlink CCCH to UE. SS waits for 5 s and then calls for generic procedure C.1 to check that UE is in idle mode state.

Expected Sequence

Step	Direction	Message	Comment
	UE SS		
1			The UE is initially in
			CELL_DCH state.
2	←	UE CAPABILITY ENQUIRY	
3	→	UE CAPABILITY INFORMATION	SS does not acknowledge any of the AM PDUs carrying the UE CAPABILITY INFORMATION message. The UE shall re-transmit these AM PDUs until the maximum number has been reached.
4			UE shall start to transmit a RESET PDU. SS does not respond to any RESET PDU frames originated from the UE.
5	\rightarrow	CELL UPDATE	IE "AM_RLC Error Indication (RB2, RB3 or RB4)" shall be set to 'TRUE'
6	+	RRC CONNECTION RELEASE	Sends this message on the downlink CCCH and includes UE's UTRAN identity. After SS sent this message, SS waits for 5s.
7	←→	CALL C.1	If the test result of C.1 indicates that UE is in idle mode state, the test passes, otherwise it fails.

Specific Message Contents

RRC CONNECTION SETUP (message used in the initial setup)

Use the same message type found in clause 9 of TS 34.108 with the following exception:

Information Element	Value/remark
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	Not Present
- CHOICE RLC info type	
- RLC info	UMRLC
- CHOICE Uplink RLC mode - Transmission RLC discard	Not Present
- CHOICE Downlink RLC mode	UMRLC
	OWRLC
- RB mapping info	2 PPMw/Ontions
Information for each multiplexing option RLC logical channel mapping indicator	2 RBMuxOptions Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	1
- CHOICE RLC size list	Configured
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	1
- CHOICE RLC size list	Explicit List
- RLC size index	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6
	kbps signalling radio bearer)
 MAC logical channel priority 	1
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
 Downlink transport channel type 	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	Not Present
- CHOICE RLC info type - RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	AWINEO
- SDU discard mode	No discard
- MAX_DAT	4
- Transmission window size	32
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99 Not Present
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC TRUE
- In-sequence delivery - Receiving window size	32
- Neceiving window size - Downlink RLC status info	02
- Timer_status_prohibit	200
- Timer_Status_prombit	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
1 2 3 1 1 2	•

Information Element	Value/remark
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	2
- CHOICE RLC size list	Configure
MAC logical channel priority Downlink RLC logical channel info	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
RLC logical channel mapping indicator Number of RLC logical channels	Not Present
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	2
- CHOICE RLC size list	Explicit List
- RLC size index	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6
MAC logical about a rice it.	kbps signalling radio bearer)
MAC logical channel priority Downlink RLC logical channel info	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
Signalling RB information to setup - RB identity	(AM DCCH for NAS_DT High priority) Not Present
- CHOICE RLC info type	Not i lesent
- RLC info	
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	L
- SDU discard mode	No discard
- MAX_DAT - Transmission window size	4 32
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	Not propert
- Poll_PDU - Poll_SDU	Not present
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- In-sequence delivery - Receiving window size	TRUE 32
- Downlink RLC status info	\(\frac{1}{2}\)
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info - Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	3
- CHOICE RLC size list - MAC logical channel priority	Configured 3
- MAC logical channel phonty - Downlink RLC logical channel info	
- Number of RLC logical channels	1
· ~	•

Information Element	Value/remark
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	3
- CHOICE RLC size list	Explicit List
- RLC size index	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
DL DSCH Transport channel identity Logical channel identity	Not Present
Signalling RB information to setup	3 (AM DCCH for NAS_DT Low priority)
- RB identity	Not Present
- CHOICE RLC info type	THOU TOUGHT
- RLC info	
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	
- SDU discard mode	No dis card
- MAX_DAT	4
- Transmission window size	32
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99 Not Present
- Timer_poll_periodic - CHOICE Downlink RLC mode	Not Present AM RLC
- In-sequence delivery	TRUE
- Receiving window size	32
- Downlink RLC status info	02
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
 Information for each multiplexing option 	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	4 Configured
- CHOICE RLC size list	Configured
- MAC logical channel priority	"
Downlink RLC logical channel info Number of RLC logical channels	1
- Number of RLC logical channels - Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	4
,	ı

Information Element	Value/remark
- CHOICE RLC size list	Explicit List
- RLC size index	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6
	kbps signalling radio bearer)
 MAC logical channel priority 	4
 Downlink RLC logical channel info 	
 Number of RLC logical channels 	1
 Downlink transport channel type 	FACH
 DL DCH Transport channel identity 	Not Present
 DL DSCH Transport channel identity 	Not Present
 Logical channel identity 	4

UE CAPABILITY ENQUIRY (Step 2)

Use the same message found in TS 34.108 clause 9.

UE CAPABILITY INFORMATION (Step 3)

Only the message type IE is checked for this message.

CELL UPDATE (Step 5)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
AM_RLC error indicator (RB2, RB3 or RB4)	Check to see if set to 'TRUE'
Cell update cause	Check to see if set to 'RLC unrecoverable error'

RRC CONNECTION RELEASE (Step 6)

Use the same message found in TS 34.108 clause 9.

8.3.1.15.5 Test Requirement

After step 4 the UE shall transmit a CELL UPDATE message on the uplink CCCH to report the occurrence of an unrecoverable error in AM RLC entity for RB2, RB3 or RB4 data as well as cell update cause set to "RLC unrecoverable error".

8.3.1.16 Void

8.3.1.17 Cell Update: Failure (UTRAN initiate an RRC connection release procedure on CCCH)

8.3.1.17.1 Definition

8.3.1.17.2 Conformance requirement

When the UTRAN receives a CELL UPDATE/URA UPDATE message, the UTRAN should:

1> ... or

1> initiate an RRC connection release procedure (see subclause 8.1.4 in TS 25.331) by transmitting an RRC CONNECTION RELEASE message on the downlink CCCH.

. . .

The UE shall receive and act on an RRC CONNECTION RELEASE message in states CELL_DCH and CELL_FACH. Furthermore this procedure can interrupt any ongoing procedures with the UE in the above listed states.

When the UE receives the first RRC CONNECTION RELEASE message; and

- 1> if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or
- 1> if the message is received on DCCH:

the UE shall:

. . .

1> in state CELL_FACH:

. . .

2> if the RRC CONNECTION RELEASE message was received on the CCCH:

3> ...

3> enter idle mode;

Reference

3GPP TS 25.331 clause 8.3.1.5, 8.1.4.3

8.3.1.17.3 Test purpose

To confirm that the UE moves to idle state upon the reception of a RRC CONNECTION RELEASE message on CCCH.

8.3.1.17.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_FACH (state 6-11)

Test Procedure

The UE is initially in CELL_FACH state. When the UE detects the expiry of periodic cell updating timer T305, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH to perform a periodical cell updating procedure. The SS transmits a RRC CONNECTION RELEASE message on downlink CCCH. The UE shall return to idle mode after release of all current signalling flows and radio access bearers. SS calls for generic procedure C.1 to check that UE is in Idle Mode state.

Expected sequence

Step	Direction Message		Comment	
	UE SS			
1	→	CELL UPDATE	The value "periodical cell update" shall be set in IE "Cell update cause" and this message shall be sent upon expiry of timer T305.	
2	+	RRC CONNECTION RELEASE	SS transmits a RRC CONNECTION RELEASE message to the UE. After SS sent this message SS waits for 5 seconds.	
3		Void		
4		Void		
5			The UE shall enter idle mode state.	
6	←→	CALL C.1	If the test result of C.1 indicates that UE is in idle mode state, the test passes, otherwise it fails.	

Specific Message Contents

CELL UPDATE (Step 1)

The same message found in Clause 9 of TS 34.108 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'Periodical cell update'

RRC CONNECTION RELEASE (Step 2)

Use the same message sub-type found in Clause 9 of TS 34.108.

8.3.1.17.5 Test requirement

In step 1 the UE shall transmit a CELL UPDATE message on the uplink CCCH and set value "periodical cell update" into IE "Cell update cause".

After step 4 the UE shall enter idle mode.

8.3.1.18 Cell Update: Radio Link Failure (T314>0, T315=0), CS RAB established

8.3.1.18.1 Definition

8.3.1.18.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

1> Paging response:

..

- 1> Radio link failure:
 - 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:
 - 2> if the UE is in CELL_DCH state and the criteria for radio link failure is met as specified in TS 25.331 subclause 8.5.6:
 - 3> perform cell update using the cause "radio link failure".

. .

When initiating the cell update procedure, the UE shall:

- 1> stop timer T305;
- 1> if the UE is in CELL_DCH state:
 - 2> in the variable RB_TIMER_INDICATOR, set the IE "T314 expired" and the IE "T315 expired" to FALSE;
 - 2> if the stored values of the timer T314 and timer T315 are both equal to zero; or
 - 2> if the stored value of the timer T314 is equal to zero and there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315":

...

2> if the stored value of the timer T314 is equal to zero:

. . .

- 2> if the stored value of the timer T315 is equal to zero:
 - 3> release all radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315";
 - 3> in the variable RB_TIMER_INDICATOR set the IE "T315 expired" to TRUE.
- 2> if the stored value of the timer T314 is greater than zero:
 - 3> if there are radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314":
 - 4> start timer T314.
 - 3> if there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314" or "useT315":
 - 4> start timer T314.
- 2> if the stored value of the timer T315 is greater than zero:

...

- 2> for the released radio bearer(s):
 - 3> delete the information about the radio bearer from the variable ESTABLISHED_RABS;
 - 3> when all radio bearers belonging to the same radio access bearer have been released:
 - 4> indicate local end release of the radio access bearer to upper layers using the CN domain identity together with the RAB identity stored in the variable ESTABLISHED_RABS;
 - 4> delete all information about the radio access bearer from the variable ESTA BLISHED_RABS.
- 2> select a suitable UTRA cell according to TS 25.304;
- 2> set the variable ORDERED_RECONFIGURATION to FALSE.
- 1> set the variables PROTOCOL_ERROR_INDICATOR, FAILURE_INDICATOR, UNSUPPORTED_CONFIGURATION and INVALID_CONFIGURATION to FALSE;
- 1> set the variable CELL_UPDATE_STARTED to TRUE;
- 1> if the UE is not already in CELL_FACH state:
 - 2> move to CELL_FACH state;
 - 2> select PRA CH according to TS 25.331 subclause 8.5.17;
 - 2> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;
 - 2> use the transport format set given in system information as specified in TS 25.331 subclause 8.6.5.1.
- 1> if the UE performs cell re-selection:
 - 2> clear the variable C_RNTI; and
 - 2> stop using that C_RNTI just cleared from the variable C_RNTI in MAC.
- 1> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;
- 1> in case of a cell update procedure:

- 2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;
- 2> submit the CELL UPDATE message for transmission on the uplink CCCH.
- 1> set counter V302 to 1;
- 1> start timer T302 when the MAC layer indicates success or failure in transmitting the message.

. .

If the received CELL UPDATE CONFIRM message would cause the UE to transit to CELL_DCH state:

1> if the UE failed to establish the physical channel(s) indicated in the received CELL UPDATE CONFIRM message according to the criteria defined in subclause 8.5.4 in TS 25.331are not fulfilled; or

...

the UE shall:

. . .

- 1> if the variable ORDERED_RECONFIGURATION is set to TRUE caused by the received CELL UPDATE CONFIRM message in case of a cell update procedure:
 - 2> set the variable ORDERED_RECONFIGURATION to FALSE.
- 1> if V302 is equal to or smaller than N302:
 - 2> select a suitable UTRA cell according to TS 25.304;
 - 2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3, except for the IE "Cell update cause" which shall be set to "Radio link failure";
 - 2> submit the CELL UPDATE message for transmission on the uplink CCCH;
 - 2> increment counter V302;
 - 2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.
- 1> if V302 is greater than N302:

. . .

If the IE "Downlink DPCH info common for all RL" is included in a message used to perform a Timing re-initialised hard handover or the IE "Downlink DPCH info common for all RL" is included in a message other than RB SETUP used to transfer the UE from a state different from Cell_DCH to Cell_DCH, and ciphering is active for any radio bearer using RLC-TM, the UE shall, after having activated the dedicated physical channels indicated by that IE:

. . .

1> include the calculated START values for each CN do main in the IE "START list" in the IE "Uplink counter synchronisation info" in the response message;"

..

Reference

3GPP TS 25.331 clauses 8.3.1.2, 8.3.1.7a, 8.6.6.28.

8.3.1.18.3 Test purpose

- 1. To confirm that the UE shall try to find a new cell after detecting that a radio link failure has occurred.
- 2. To confirm that the UE performs a cell selection procedure when it fails to configure the physical channel(s) indicated in the CELL UPDATE CONFIRM message.

8.3.1.18.4 Method of test

Initial Condition

System Simulator: 2 cells (Cell 1 and cell 2 are active).

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

UE: CS_DCCH+DTCH_DCH (state 6-9).

Test Procedure

Table 8.3.1.18

Parameter	Unit	Cell 1			Cell 2		
		T0	T1	T2	T0	T1	T2
UTRARF Channel Number		Mid Rang	e Test Fre	equency		d Range 1 Frequenc	
CPICH Ec (FDD)	dBm/3.84MHz	-60	OFF	-60	-75	-60	-85
P-CCPCH RSCP (TDD)	dBm	-60	OFF	-60	-75	-60	-85

Table 8.3.1.18 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked "T0" denote the initial conditions.

The UE is brought to CELL_DCH state in a cell 1 after making a successful outgoing call attempt. After the call has been established, SS configures its downlink transmission power settings according to column "T1" in table 8.3.1.18. The UE shall detect a radio link failure in cell 1.

Then it shall attempt to re-select to cell 2. After that, it shall transmit CELL UPDATE on the uplink CCCH to SS. The SS transmits CELL UPDATE CONFIRM message which includes dedicated transport and physical channel parameters on downlink DCCH. SS shall not configure according to this message. Instead, SS configures its downlink transmission power settings according to column "T2" in table 8.3.1.18. UE shall fail to establish the dedicated channel in cell 2.

UE shall re-select to cell 1 and transmit a CELL UPDATE message with IE "Cell update cause" set to "Radio link failure". Then SS responds with a CELL UPDATE CONFIRM message on downlink DCCH. Then the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0		•	Void	
1			Void	
2			Void	
3			Void	
4				SS configures cell 1 and 2 according to column "T1" in table 8.3.1.18. SS starts to listen to the uplink CCCH of cell 2.
5			Void	
6				The UE detects the radio link failure.
7)	•	CELL UPDATE	The UE shall find a new cell 2 and the value "radio link failure" shall be set in IE "Cell update cause".
8	+	-	CELL UPDATE CONFIRM	Including dedicated physical channel parameters.
9				SS does not configure according to the message in step 8. SS configures cell 1 and 2 according to column "T2" in table 8.3.1.18.
10	7	→	CELL UPDATE	UE shall select cell 1 and transmit this message
11	+	-	CELL UPDATE CONFIRM	See message content.
12)	>	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108 titled "System Information Block type 1 (supported PLMN type is GSM-MAP)", with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2
- T313	2
- T315	0

CELL UPDATE (Step 7)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
-SRNC Identity	Check to see if set to value assigned in cell 1.
- S-RNTI	Check to see if set to value assigned in cell 1.
AM_RLC error indication (RB2, RB3 or RB4)	Not checked
Cell Update Cause	Check to see if set to 'radio link failure'
RB timer indicator	
- T314 expired	FALSE
- T315 expired	TRUE

CELL UPDATE CONFIRM (Step 8 and 11)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
RRC transaction identifier	Selects an arbitrary integer between 0 to 3, but different values should be used for step 8 and 11.
UL Transport channel information common for all transport channels	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.
Added or Reconfigured TrCH information list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.
DL Transport channel information common for all transport channels	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.
Added or Reconfigured TrCH information list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.
CHOICE channel requirement	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.
Downlink information common for all radio links	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.
Downlink information per radio link list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.

CELL UPDATE (Step 10)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
-SRNC Identity	Check to see if set to value assigned in cell 1.
- S-RNTI	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to 'radio link failure'
Failure cause	This IE is not Checked.
RB timer indicator	
- T314 expired	FALSE
- T315 expired	TRUE

TRANSPORT CHANNEL RECONFIGURATION COMPLETE (Step 12)

Use the same message found in TS 34.108 clause 9, with the exceptions of the following IEs:

Information Element	Value/remark	
Uplink counter synchronisation info	This IE is checked to see if it is present in the case	
	ciphering is activated.	

8.3.1.18.5 Test requirement

After step 6, the UE shall detect the presence of cell 2, perform cell re-selection and transmit a CELL UPDATE message.

After step 9, the UE shall transmit a CELL UPDATE message with IE "Cell update cause" set to "Radio link failure".

After step 11, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC with IE "Uplink counter synchronisation info" as present in case ciphering is activated.

- 8.3.1.19 Void
- 8.3.1.20 Cell Update: Reception of CELL UPDATE CONFIRM Message that causes invalid configuration
- 8.3.1.20.1 Definition
- 8.3.1.20.2 Conformance Requirement

If the variable INVALID_CONFIGURATION is set to TRUE, the UE shall:

- 1> if V302 is equal to or smaller than N302:
 - 2> if, caused by the received CELL UPDATE CONFIRM message
 - 3> if the variable ORDERED_RECONFIGURATION is set to TRUE caused by the received CELL UPDATE CONFIRM message in case of a cell update procedure:
 - 4> set the variable ORDERED_RECONFIGURATION to FALSE.
 - 2> in case of a cell update procedure:
 - 3> set the variable FAILURE_INDICATOR to TRUE;
 - 3> set the variable FAILURE_CAUSE to "Invalid configuration";
 - 3> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;
 - 3> submit the CELL UPDATE message for transmission on the uplink CCCH.
 - 2> increment counter V302;
 - 2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.
- 1> if V302 is greater than N302:

...

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.20.3 Test Purpose

1. To confirm that the UE retransmits a CELL UPDATE message when it receives a CELL UPDATE CONFIRM message that will trigger an invalid configuration in the UE, if the number of retransmissions has not reached the maximum allowed value.

8.3.1.20.4 Method of Test

Initial Condition

System Simulator: 1 cell

UE: CELL_PCH (state 6-12) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is brought to CELL_PCH state at the beginning of the test. SS pages the UE by sending a PAGING TYPE 1 message using the U-RNTI identity assigned during RRC connection establishment procedure. The UE shall transmit a CELL UPDATE message on the uplink CCCH. Upon receiving such a message, the SS replies with a CELL UPDATE CONFIRM message which is set to give an invalid configuration. The UE shall re-transmit CELL UPDATE message. SS responds with a valid CELL UPDATE CONFIRM message to end the procedure. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	-	•	PAGING TYPE 1	The UE is in the CELL_PCH
				state. SS pages for the UE
				using the allocated connected
				mode identity (U-RNTI).
2	\rightarrow	•	CELL UPDATE	If CELL UPDATE message is
				received, check that the value
				"paging response" is set in IE
				"Cell update cause".
3	+	•	CELL UPDATE CONFIRM	SS transmits an invalid
				message.
4	\rightarrow	•	CELL UPDATE	IE "failure cause" is set to
				"invalid configuration"
5	-	-	CELL UPDATE CONFIRM	
6	\rightarrow	•	UTRAN MOBILITY INFORMATION	
			CONFIRM	

Specific Message Content

CELL UPDATE (Step 2)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'Paging Response'

CELL UPDATE CONFIRM (Step 3)

Use the same message sub-type found in TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
RRC State Indicator	CELL_DCH
Uplink DPCH info	Not Present

CELL UPDATE (Step 4)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'Paging Response'
Failure cause	Check to see if it is set to 'invalid configuration'

PAGING TYPE 1 (Step 1)

Use the same message sub-type titled "TM (Packet in PS)" in default message content of TS 34.108 with following exceptions:

Information Element	Value/remark
Page record list	
- Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	
- SRNC Identity	'0000 0000 0001'
- S-RNTI	'0000 0000 0000 0000 0001'

CELL UPDATE CONFIRM (Step 5)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'

8.3.1.20.5 Test Requirement

After step 1 the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "paging response".

After step 3 the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "paging response" and IE "failure cause" set to "invalid configuration".

After step 5, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

8.3.1.21 Cell Update: Cell reselection to cell of another PLMN belonging to the equivalent PLMN list

8.3.1.21.1 Definition

8.3.1.21.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

- 1.- Cell reselection:
 - if none of the criteria for performing cell update with the causes specified above in the current clause is met; and
 - if the UE is in CELL_FACH or CELL_PCH state; and
 - if the UE performs cell re-selection or the variable C_RNTI is empty:
 - perform cell update using the cause "cell reselection".
- 2. A "suitable cell" is a cell on which the UE may camp on to obtain normal service. Such a cell shall fulfil all the following requirements.
 - The cell is part of the selected PLMN or, of a PLMN considered as equivalent by the UE according to the information provided by the NAS.
 - The cell is not barred.
 - The cell is not part of the list of "forbidden LAs for roaming"
 - The cell selection criteria are fulfilled.
- 3. The Mobile Equipment shall store a list of "equivalent PLMNs". This list is replaced or deleted at the end of each location update procedure, routing area update procedure and GPRS attach procedure. The stored list

consists of a list of equivalent PLMNs as downloaded by the network plus the PLMN code of the network that downloaded the list. The stored list shall not be deleted when the MS is switched off. The stored list shall be deleted if the SIM is removed. The maximum number of possible entries in the stored list is six.

Reference

3GPP TS 25.331 clause 8.3.1.2.

3GPP TS 25.304 clause 4.3.

3GPP TS 24.008 clause 4.4.1.

8.3.1.21.3 Test purpose

- To confirm that the UE executes a cell update procedure after a successful reselection to another UTRA cell with a PLMN identity different from the original cell but with a PLMN identity that is part of the equivalent PLMN list in the UE.
- 2. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

NOTE: Verifies conformance requirement 1, 2 and 3.

3. To confirm that the UE refrains from executing a cell update procedure to a better UTRA cell with another PLMN identity when that PLMN identity is not part of the equivalent PLMN list in the UE.

NOTE: Verifies conformance requirement 1, 2 and 3.

NOTE: Test case in 8.3.1.1 is a test where the UE reselects to a cell with the same PLMN identity as the registered PLMN.

8.3.1.21.4 Method of test

Initial Condition

System Simulator: 3 cells - Cell 1 is active, with the downlink transmission power shown in column marked "T0" in table 8.3.1.21, while cell 4 and cell 7 is inactive.

UE: PS-DCCH+DTCH_FACH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108.

UE: Shall have stored equivalent PLMN list containing PLMN-1 and PLMN-2. The equivalent PLMN list stored in the UE shall not contain PLMN-3.

Test Procedure

The SS activates Cell 1, 4 & 7 according table 8.3.1.21.

Table 8.3.1.21

Parameter	Unit	Cell 1		Cell 4			Cell 7			
		T0	T1	T2	T0	T 1	T2	T0	T1	T2
UTRA RF Channel		Mid	Range T	est	High	n Range 1	Гest	Low Rang	e Test Fre	quency
Number		F	requenc	y	F	requency	y			
PLMN identity			PLMN-1			PLMN-2			PLMN-3	
CPICH Ec (FDD)	dBm	-60	-72	-72	OFF	-60	-66	OFF	OFF	-60
P-CCPCH RSCP (TDD)	dBm	-62	-74	-74	OFF	-62	-68	OFF	OFF	-62

Table 8.3.1.21-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" and "T2" are to be applied subsequently.

- a) At T1, the SS activates Cell 4, and monitors Cell 4 for received messages from UE.
- b) UE re-selects to Cell 4, and sends a CELL UPDATE. The SS shall reply with CELL UPDATE CONFIRM message on downlink DCCH.

c) At T2, the SS activates Cell 7, and monitors Cell 7 for received messages from UE.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction	Message	Comment
	UE SS	7	
1			UE is camped on Cell 1 and
			registered to PLMN1
1a	+	MASTER INFORMATION BLOCK	SS transmits MIB and SB1 with a
		SCHEDULING BLOCK 1	new value Tag. Simultaneously
		SYSTEM INFORMATION BLOCK TYPE 4	SS transmits modified SIB 4 and
		SYSTEM INFORMATION BLOCK TYPE 11	11, with contents given in specific
			message contents
1b	←	SYSTEM INFORMATION CHANGE	Including 'MIB Value TAG' set to
		INDICATION	the value currently being
			transmitted
1c			Wait 5 seconds to allow UE to
			read new system information
1d			SS shall activate Cell 4. The UE
			shall not re-select Cell 4 until Cell
			1 power level is set according to
			T1.
2	\rightarrow	CELL UPDATE	At T1: Sent in Cell 4
			The value "cell reselection" set in
			IE "Cell update cause".
3	+	CELL UPDATE CONFIRM	
4	\rightarrow	UTRAN MOBILITY INFORMATION	
		CONFIRM	
4a			SS shall activate Cell 7 and set
			power level according to T2.
5			At T2: No message sent by UE

Specific Message Contents

MASTER INFORMATION BLOCK (Step 1a)

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark
MIB Value Tag	Set to (Current MIB value tag + 1)
SIB 4 Cell Value tag	Set to (Current SIB4 value tag + 1)
SB 1 Cell Value tag	Set to (Current SB 1 value tag + 1)

SCHEDULING BLOCK 1 (Step 1a)

Information Element	Value/remark
SIB 11 Cell Value tag	Set to (Current SIB 11 value tag + 1)

System Information Block type 4 (Step 1a)

Use the same message type found in clause 6.1.0b of TS 34.108, with the following exceptions:

- Qqualmin -16

System Information Block type 11 (Step 1a)

Use the same message type found in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length	3
coefficient	
 Inter-frequency FDD measurement indicator 	TRUE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 1b)

Information Element	Value/remark
Message Type BCCH modification info	
MIB Value tag	Set equal to Value tag sent in modified MIB in step 1a

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type titled "CELL UPDATE CONFIRM message" in TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
- New C-RNTI	'1010 1010 1010 1010'

8.3.1.21.5 Test requirement

After step 1c, the UE shall send a CELL UPDATE at T1.

After step 4, the UE shall refrain from sending a cell update (or any other message) after T2.

8.3.1.22 Cell update: Restricted cell reselection to a cell belonging to forbidden LA list (Cell_FACH)

8.3.1.22.1 Definition

8.3.1.22.2 Conformance requirement

1. - Cell reselection:

- if none of the criteria for performing cell update with the causes specified above in the current clause is met;
- if the UE is in CELL_FACH or CELL_PCH state; and
- if the UE performs cell re-selection or the variable C_RNTI is empty:
 - perform cell update using the cause "cell reselection".
- 2. A "suitable cell" is a cell on which the UE may camp on to obtain normal service. Such a cell shall fulfil all the following requirements.
 - The cell is part of the selected PLMN or, of a PLMN considered as equivalent by the UE according to the information provided by the NAS.
 - The cell is not barred.
 - The cell is not part of the list of "forbidden LAs for roaming"
 - The cell selection criteria are fulfilled.
- 3. The Mobile Equipment shall contain a list of "forbidden location areas for roaming", as well as a list of "forbidden location areas for regional provision of service". These lists shall be erased when the MS is switched off or when the SIM is removed, and periodically (with period in the range 12 to 24 hours). The location area

identification received on the BCCH that triggered the location updating request shall be added to the suitable list whenever a location update reject message is received with the cause "Roaming not allowed in this location area" or with the cause "Location Area not allowed". The lists shall accommodate each 10 or more location area identifications. When the list is full and a new entry has to be inserted, the oldest entry shall be deleted.

Reference

3GPP TS 25.331 clause 8.3.1.2.

3GPP TS 25.304 clause 4.3.

3GPP TS 24.008 clause 4.4.1.

8.3.1.22.3 Test purpose

- 1. To confirm that the UE executes a cell update procedure after a successful reselection of another UTRA cell with a LA identity that is not part of the list of LAs stored in the UE as "forbidden location areas for roaming".
- 2. To confirm that if the UE get a release message and is moved to idle mode, performs a registration update where the LA list is updated and the UE again enters connected mode, that the UE refrains from selecting that same UTRA cell if that is part of the forbidden LA list.

NOTE: Test case in 8.3.1.1 is a test where the UE reselects to a cell with the same LA identity as the LA identity in the original cell.

NOTE: Test case in 8.1.3.2 is a test where normal RRC connection release on DCCH in CELL_FACH state is tested.

NOTE: Test case in 8.1.9 is a test where normal RRC connection request and location registration is tested.

8.3.1.22.4 Method of test

Initial Condition

System Simulator:

- 2 cells Cell 1 is active, with the downlink transmission power shown in column marked "T0" in table 8.3.1.22, while cell 4 is inactive.
- Qqualmin value for Cell 1 and Cell 4 is set to -16 dB in SIB4 (FDD only) (see specific message contents).

UE: PS-DCCH+DTCH_FACH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108.

UE: Shall have an empty list of LAs stored that are "forbidden location areas for roaming".

Related ICS/IXIT statements

Support of PS service Yes/No

Test Procedure

Table 8.3.1.22

Parameter	Unit	Ce	II 1	Ce	ell 4
		T0	T1	T0	T1
UTRARF Channel Number		Mid Range Test		High Ra	nge Test
		Freq	uency	Freq	uency
LA identity		LA-	ID 1	LA-	ID 2
CPICH Ec (FDD)	dBm	-60	-66	Cell 4 is	-60
				switched off	
P-CCPCH RSCP (TDD)	dBm	-62	-68	Cell 4 is	-62
				switched off	

Table 8.3.1.22-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" is to be applied subsequently.

- a) At T1, verify that the UE reselects to cell 4 and sends a cell update.
- b) SS sends a RRC connection release message to the UE from cell 4 on CCCH.
- c) The UE performs a routing area update to cell 4 (RRC Connection request, setup, initial direct transfer, DL direct transfer (with LA forbidden for roaming), RRC connection release.)
- d) The UE reselects cell 1 again although this is not the best cell.
- e) The UE performs a routing area update to cell 1 (RRC Connection request, setup, initial direct transfer, DL direct transfer (without LA forbidden for roaming)).
- f) Keep the UE in RRC Connected mode in CELL_FACH state.
- g) Make sure the UE refrains from reselecting cell 4 and does not send a cell update (or any other message) in cell 4.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Direction		Message	Comment		
-	UE SS		1					
1	→		CELL UPDATE	At T1: Sent in Cell 4 The value "cell reselection" set in IE "Cell update cause".				
2	+		RRC CONNECTION RELEASE	This message is sent on CCCH. The value "Normal event" is set in IE "Release cause"				
3			Void					
4	\rightarrow		RRC CONNECTION REQUEST	The value "Registration" is set in IE "Establishment cause"				
5	+		RRC CONNECTION SETUP	Transits the UE to CELL_FACH state.				
6	\rightarrow		RRC CONNECTION SETUP COMPLETE					
7	→		INITIAL DIRECT TRANSFER	Includes GMM message ROUTING AREA UPDATE REQUEST.				
8	+		DOWNLINK DIRECT TRANSFER	Includes GMM message ROUTING AREA UPDATE REJECT with reject cause "No Suitable Cells In Location Area"				
9	+		RRC CONNECTION RELEASE	This message is sent on DCCH. The value "Normal event" is set in IE "Release cause"				
10	\rightarrow		RRC CONNECTION RELEASE COMPLETE					
11	→		RRC CONNECTION REQUEST	Sent in Cell 1. The value "Registration" is set in IE "Establishment cause"				
12	+		RRC CONNECTION SETUP	Transits the UE to CELL_FACH state.				
13	→		RRC CONNECTION SETUP COMPLETE					
14)		INITIAL DIRECT TRANSFER	Includes GMM message ROUTING AREA UPDATE REQUEST.				
14a	←		SECURITY MODE COMMAND					
14b	\rightarrow		SECURITY MODE COMPLETE					
15	+		DOWNLINK DIRECT TRANSFER	Includes GMM message ROUTING AREA UPDATE ACCEPT.				

Specific Message Contents

System Information Block type 4

Use the same message type found in clause 6.1.0b of TS 34.108, with the following exceptions:

- Qqualmin	-16

System Information Block type 11 (FDD)

Use the same message type found in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length	3
coefficient	
 Inter-frequency FDD measurement indicator 	TRUE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present

CELL UPDATE (Step 1)

The same message found in TS34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'cell reselection'

RRC CONNECTION RELEASE (Step 2, 9)

Use the same message sub-type found in TS34.108 clause 9.

RRC CONNECTION RELEASE COMPLETE (Step 10)

Use the same message sub-type found in TS34.108 clause 9. Only the message type IE in this message will be checked.

RRC CONNECTION REQUEST (Step 4, 11)

Use the same message sub-type found in TS34.108 clause 9.

RRC CONNECTION SETUP (Step 5, 12)

Use the same message sub-type found in TS 34.108 clause 9.

RRC CONNECTION SETUP COMPLETE (Step 6, 13)

Use the same message sub-type found in TS34.108 clause 9.

INITIAL DIRECT TRANSFER (Step 7, 14)

Use the same message sub-type found in TS34.108 clause 9.

DOWNLINK DIRECT TRANSFER (Step 8, 15)

Use the same message sub-type found in TS34.108 clause 9.

8.3.1.22.5 Test requirement

In step 1, the UE shall send a CELL UPDATE in Cell 4 at T1 and attempt registration update in Cell 4.

After step 2, the UE shall transmit RRC CONNECTION REQUEST message.

After step 5, the UE shall transmit RRC CONNECTION SETUP COMPLETE message, followed by an INITIAL DIRECT TRANSFER message

Since the registration update is rejected in Cell 4, UE shall transmit RRC CONNECTION RELEASE COMPLETE message after receiving RRC CONNECTION RELEASE message from SS. UE shall not send any more messages in Cell 4.

After step 9, the UE shall transmit RRC CONNECTION REQUEST message in cell 1.

After step 12, the UE shall transmit RRC CONNECTION SETUP COMPLETE message followed by INITIAL DIRECT TRANSFER message.

8.3.1.23 Cell Update: HCS cell reselection in CELL_FACH

8.3.1.23.1 Definition

8.3.1.23.2 Conformance requirement

1. The quality level threshold criterion H for hierarchical cell structures is used to determine whether prioritised ranking according to hierarchical cell re-selection rules shall apply, and is defined by:

$$H_s = Q_{meas,s}$$
 - $Qhcs_s$
$$H_n = Q_{meas,n}$$
 - $Qhcs_n - TO_n * L_n$

. . .

2. The cell-ranking criterion R is defined by:

$$R_s = Q_{meas,s} + Qhyst_s$$

$$R_n = Q_{meas,n} - Qoffset_{s,n} - TO_n * (1 - L_n)$$

where:

$$TO_n = TEMP_OFFSET_n * W(PENALTY_TIME_n - T_n)$$

$$L_n = 0 \qquad \text{if } HCS_PRIO_n = HCS_PRIO_s$$

$$L_n = 1 \qquad \text{if } HCS_PRIO_n <> HCS_PRIO_s$$

$$W(x) = 0 \qquad \text{for } x < 0$$

$$W(x) = 1 \qquad \text{for } x >= 0$$

 $TEMP_OFFSET_n$ applies an offset to the H and R criteria for the duration of $PENALTY_TIME_n$ after a timer T_n has started for that neighbouring cell.

The timer T_n is implemented for each neighbouring cell. T_n shall be started from zero when one of the following conditions becomes true:

- if $HCS_PRIO_n \Leftrightarrow HCS_PRIO_s$ and

$$Q_{meas,n} > Qhcs_n$$

Or

- if HCS_PRIO_n = HCS_PRIO_s and
 - for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH RSCP in the serving cell, and:

$$Q_{meas,n} > Q_{meas,s} + Qoffset1_{s,n}$$

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH Ec/No in the serving cell, and:

$$Q_{\text{meas n}} > Q_{\text{meas s}} + Qoffset2_{s n}$$

- for all other serving and neighbour cells:

$$Q_{meas,n} > Q_{meas,s} + Qoffset1_{s,n}$$

 T_n for the associated neighbour cell shall be stopped as soon as any of the above conditions are no longer fulfilled. Any value calculated for TO_n is valid only if the associated timer T_n is still running else TO_n shall be set to zero.

At cell-reselection, a timer T_n is stopped only if the corresponding cell is not a neighbour cell of the new serving cell, or if the criteria given above for starting timer T_n for the corresponding cell is no longer fulfilled with the parameters of the new serving cell. On cell re-selection, timer T_n shall be continued to be run for the corresponding cells but the criteria given above shall be evaluated with parameters broadcast in the new serving cell if the corresponding cells are neighbours of the new serving cell.

...

3. The cell selection criterion S used for cell reselection is fulfilled when:

for FDD cells: Srxlev > 0 AND Squal > 0

for TDD cells: Srxlev > 0

for GSM cells: Srxlev > 0

Where:

 $Squal = Q_{qualmeas} - Qqualmin$

 $Srxlev = Q_{rxlevmeas} - Qrxlevmin - Pcompensation$

. . .

- 4. The UE shall perform ranking of all cells that fulfil the S criterion among
 - all cells that have the highest HCS_PRIO among those cells that fulfil the criterion H >= 0. Note that this rule is not valid when UE high-mobility is detected.
 - all cells, not considering HCS priority levels, if no cell fulfil the criterion H >= 0. This case is also valid when it is indicated in system information that HCS is not used, that is when serving cell does not belong to a hierarchical cell structure.

The cells shall be ranked according to the R criteria.

The best ranked cell is the cell with the highest R value.

5. If an FDD cell is ranked as the best cell and the quality measure for cell selection and re-selection is set to CPICH RSCP, the UE shall perform cell re-selection to that FDD cell.

In all cases, the UE shall reselect the new cell, only if the following conditions are met:

- the new cell is better ranked than the serving cell during a time interval Treselection.
- more than 1 second has elapsed since the UE camped on the current serving cell.

. . .

- 6. The *cell reselection* process in Connected Mode is the same as *cell reselection evaluation process* used for idle mode, described in subclause 5.2.6 of 25.304.
- 7. A UE shall initiate the cell update procedure in the following cases:
 - 1> Uplink data transmission:

. .

1> Paging response:

..

1> Radio link failure:

...

1> Re-entering service area:

..

1> RLC unrecoverable error:

. . .

- 1> Cell reselection:
 - 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:
 - 3> if the UE is in CELL_FACH or CELL_PCH state and the UE performs cell re-selection; or
 - 3> if the UE is in CELL_FACH state and the variable C_RNTI is empty:
 - 4> perform cell update using the cause "cell reselection".

Reference

3GPP TS 25.304 clause 5.2.6.1.4

3GPP TS 25.304 clause 5.4.3

3GPP TS 25.331 clause 8.3.1

8.3.1.23.3 Test purpose

- To confirm that the UE can read HCS related SIB information and act upon all HCS parameters in CELL_FACH state.
- 2. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell in CELL_FACH state.
- 3. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

8.3.1.23.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 is active with downlink transmission power shown in Column To in Table 8.3.1.23-1. Cell 2 and 3 are switched off.

UE: PS-DCCH+DTCH_FACH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108.

Specific Message Content

For system information blocks 4 and 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

Contents of System Information Block type 4 (FDD)

Information Element	Value/remark	
- Cell selection and re-selection info		
- CHOICE mode	FDD	
- Sintersearch	0 (0 dB)	
- SsearchHCS	17 (35 dB)	
- RAT List	This parameter is configurable	
- Sli mit,SearchRAT	0	
- Qqualmin	-20 dB	
- Qrxle vmin	-58 (-115 dBm)	
- Qhyst1s	5 (gives actual value of 10 dB)	
- Qhyst2s	Not Present	
- HCS Serving cell information		
-HCS Priority	6	
- Q HCS	40 (results in actual value of -75)	
- TcrMax	Not Present	

Contents of System Information Block type 4 (3.84 Mcps TDD, 1.28 Mcps TDD and 7.68 Mcps TDD)

Information Element	Value/remark	
- Cell selection and re-selection info		
- CHOICE mode	TDD	
- SsearchHCS	23 (47 dB)	
- RAT List	This parameter is configurable	
- Qrxlevmin	-52 (-103 dBm)	
- Qhyst1s	5 (gives actual value of 10 dB)	
- HCS Serving cell information	,	
-HCS Priority	6	
- Q HCS	40 (results in actual value of -75)	
- TcrMax	Not Present	

Contents of System Information Block type 11 (FDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency measurement system	
information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	Defer to clause titled "Default acting for call No.1 (EDD)"
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	-20 dB
- Qoffset1 _{s,n}	
 Maximum allowed UL TX power HCS neighbouring cell information 	33 dBm Present
- HCS_Priority	7
-Q HCS	40 (results in actual value of –75)
-HCS Cell Reselection Information	40 (165 dis iii deldai valde of 170)
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxle vmin	-58 (-115 dBm)
- Intra-frequency cell id	3
- Cell info	L
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode - Primary CPICH info	FDD
- Primary Scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)"
1 milary soramoning code	in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 _{s.n}	-20dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxle vmin	-58 (-115 dBm)

Contents of System Information Block type 11 (3.84 Mcps TDD, 1.28 Mcps TDD and 7.68 Mcps TDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	7,202
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator - CHOICE mode	FALSE TDD
- Primary CCPCH info	וטט
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for
- deli parametels ib	cell No.1 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info - Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for
- Celi parametels ib	cell No.2 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	30 dBm
 HCS neighbouring cell information 	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	40
- Penalty Time	40
-Temporary Offset - CHOICE mode	inf TDD
- Orde mode	-52 (-103 dBm)
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for
Drive and CODOLLTY is access	cell No.3 (TDD)
- Primary CCPCH TX power	Not Present Not Present
- Timeslot list - Burst type	Not Present
- Cell Selection and Re-selection info	NOLLIGSEIIL
- Qoffset1 _{s.n}	-20dB
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of –75)
-HCS Cell Reselection Information	<u> </u>
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxle vmin	-52 (-103 dBm)

Test Procedure

Table 8.3.1.23-1

Parameter	Unit	Cell 1		Cell 2			Cell 3			
		T0	T1	T2	T0	T1	T2	T0	T1	T2
Cell id in system information		1		2		3				
UTRARF Channel Number		Mid Range Test Frequency		Mid Range Test Frequency		Mid Range Test Frequency				
HCS Priority			6			7			7	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-65	-65	-82	-82	-68	-82	-68	-68
P-CCPCH RSCP (TDD)	dBm	-60	-60	-60	-80	-80	-70	-80	-70	-70
H* (During penalty time)		15	10	-inf	-inf	-inf	7	-inf	-inf	7
H* (After PenaltyTime)		15	10	10	-7	-7	7	-7	7	7
R* (During PenaltyTime)		n.a.	n.a.	n.a.	n.a.	n.a.	-inf	n.a.	n.a.	-58
R* (After PenaltyTime)		n.a.	n.a.	n.a.	n.a.	n.a.	-48	n.a.	n.a.	-58

(*) NOTE: this parameter is calculated internally in the UE and is only shown for clarification of the test procedure.

The UE is in the CELL_FACH state, camping onto cell 1. SS configures Cell 2 and 3 with power levels given in column "TO" and starts to broadcast BCCH on the primary CCPCH in cell 2 & 3. UE shall remain camped on the Cell 1 even after expiry of penalty time i.e. 40 seconds. SS sets downlink transmission power settings according to column s "T1" in table 8.3.1.23-1. The UE shall find cell 3 to be more suitable for service and hence perform a cell reselection to cell 3 after at-least 40 Seconds (Penalty Time) after the power levels have been changed. After the completion of cell reselection, the UE shall transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 3 and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_FACH", to the UE on the downlink DCCH. Then the UE shall trans mit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. UE shall stay in CELL FACH state. SS then sets downlink transmission power settings according to columns "T2" in table 8.3.1.23-1. The UE shall find cell 2 to be more suitable for service after the expiry of the penalty time and hence perform a cell reselection to cell 2 after the power levels have been changed. After the completion of cell reselection, the UE shall transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 2 and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_FACH", to the UE on the downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. UE shall stay in CELL_FACH state.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction UE SS	Message	Comment
1	02 00		The UE is in the CELL_FACH state in cell 1
2	+	BCCH	SS applies the downlink transmission power settings, according to the values in columns "T0" of table 8.3.1.23-1. The SS starts to broadcast BCCH on the primary CCPCH in cell 2 and Cell 3. The UE shall still find Cell 1 best for service even after penalty time of 40 seconds, and shall remain in Cell 1 in CELL_FACH State
3			SS changes the power levels as per column 'T1' in the table 8.3.1.23-1. For the time equal to Penalty time 40 Seconds, after the change in power levels, the UE shall still find Cell 1 as best for service and remain in cell 1. After Penalty time of 40 Seconds, UE shall find Cell 3 better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 3.
4	→	CELL UPDATE	Value "cell reselection" shall be indicated in IE "Cell update cause" Received in Cell 3
5	+	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_FACH".
6	\rightarrow	UTRAN MOBILITY INFORMATION CONFIRM	_
7			SS changes the power levels as per column 'T2' in the table 8.3.1.23-1. For the time equal to penalty time of 40 seconds, after the change in power levels, the UE shall still find cell 3 as best for service and remain in Cell 3. After penalty time of 40 seconds, UE shall find Cell 2 better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 2.
8	→	CELL UPDATE	Received in Cell 2
9	+	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_FACH".
10	→	UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

The contents of system in formation block 4 and 11 messages are identical as system in formation block 4 and 11 messages as found in 34.108 clause 6.1 with the following exceptions:

Contents of System Information Block type 4 (FDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	FDD
- Sintersearch	0 dB
- SsearchHCS	17 (35 dB)
- RAT List	This parameter is configurable
- Sli mit,SearchRAT	0
- Qqualmin	-20 dB
- Qrxlevmin	-58 (-115 dBm)
- Qhyst1s	5 (gives actual value of 10 dB)
- Qhyst2s	Not Present
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	40 (results in actual value of –75)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD, 1.28 Mcps TDD and 7.68 Mcps TDD) (Cell 2 and 3)

Information Element	Value/remark	
- Cell selection and re-selection info		
- CHOICE mode	TDD	
- Sintersearch	0 dB	
- SsearchHCS	23 (47 dB)	
- RAT List	This parameter is configurable	
- Qrxle vmin	-52 (-103 dBm)	
- Qhyst1s	5 (gives actual value of 10 dB)	
- HCS Serving cell information		
-HCS Priority	7	
- Q HCS	40 (results in actual value of -75)	
- TcrMax	Not Present	

Contents of System Information Block type 11 (FDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency measurement system	
information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	1
- Cell info	N (B)
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	Defends along stitled "Defends estimate for sell No. 1 (EDD)"
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
- Primary CPICH TX power	in clause 6.1.4 Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	I ALSE
- Qoffset1 _{s,n}	-20dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q HCS	40 (results in actual value of –75)
-HCS Cell Reselection Information	To (results in actual value of 10)
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxle vmin	-58 (-115 dBm)
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)"
	in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	00 ID
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of –75)
-HCS Cell Reselection Information	40
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxle vmin	-58 (-115 dBm)

Contents of System Information Block type 11 (3.84 Mcps TDD, 1.28 Mcps TDD and 7.68 Mcps TDD) (Cell 2)

Information Flamont	Valualramank
Information Element - SIB 12 indicator	Value/remark FALSE
- Measurement control system information	IALOL
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info	Deference clause 6.1.4 in TC24.100, Default actings for
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.2 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	Defends a clause O.A.A.in TO.O.A.A.O. Defends a time of the
- Cell parameters ID	Reference clause 6.1.4 in TS 34.108: Default settings for
Drim ary CCDCH TV navyar	cell No.1 (TDD) Not Present
- Primary CCPCH TX power - Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	Not i resem
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of -75)
-HCS Cell Reselection Information	·
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxle vmin	-52 (-103 dBm)
- Intra-frequency cell id	3
- Cell info - Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS 34.108: Default settings for
	cell No.3 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	00.45
- Qoffset1 _{s,n}	-20dB
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	40
- Penalty Time -Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-52 (-103 dBm)
-1780 HIIIII	10-(100 00-11)

Contents of System Information Block type 11 (FDD) (Cell 3)

Information Element	Value/re mark
- SIB 12 indicator	FALSE
- Measurement control system information	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
- Use of HCS	used
- Intra-frequency measurement system	
information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	3
- Cell info	
 Cell individual offset 	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)"
	in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	[1
- Cell info	Not Dropont
- Cell individual offset	Not Present
- Reference time difference to cell - Read SFN indicator	Not Present TRUE
- CHOICE mode	FDD
- Primary CPICH info	FUU
- Primary criem into	Refer to clause titled "Default settings for cell No.1 (FDD)"
- Fillinary Scrainbillig Code	in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	17602
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q HCS	40 (results in actual value of –75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxle vmin	-58 (-115 dBm)
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	Defeate along titled IID-foult III (III) (III)
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
Drimony CDICH TV namer	in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator - Cell Selection and Re-selection info	FALSE
- Cell Selection and Re-selection into	-20 dB
- Waximum allowed UL TX power	33 dBm
- IVIAXIMUM allowed OL 1X power - HCS neighbouring cell information	Present
- HCS neignbouring cell information - HCS_Priority	7
- HCS_PHOHIN	40 (results in actual value of -75)
-U_HCS -HCS Cell Reselection Information	TO (163 UIS III ACIUAI VAIUE OI -13)
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxle vmin	-58 (-115 dBm)
GI/IIO VIIIII	100 (. 10 dBill)

Contents of System Information Block type 11 (3.84 Mcps TDD, 1.28 Mcps TDD and 7.68 Mcps TDD) (Cell 3)

Information Flamout	Valua/ramark
Information Element - SIB 12 indicator	Value/remark FALSE
- Measurement control system information	17.606
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info - Cell parameters ID	Potorono clause 6.1.4 in TS24.109: Default cottings for
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.3 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	Deference clause 6.1.4 in TC 24.100; Default a attinge for
- Cell parameters ID	Reference clause 6.1.4 in TS 34.108: Default settings for cell No.1 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD 52 (102 dDm)
- Qrxle vmin	-52 (-103 dBm)
- Intra-frequency cell id - Cell info	2
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS 34.108: Default settings for
	cell No.2 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type - Cell Selection and Re-selection info	Not Present
- Cell Selection and Re-selection into	-20dB
- Waximum allowed UL TX power	30 dBm
- Maximum allowed OL 1X power - HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of –75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxle vmin	-52 (-103 dBm)

CELL UPDATE

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
Cell Update Cause	Check to see if set to 'Cell Re-selection'

CELL UPDATE CONFIRM (Step 5 and 9)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark			
New C-RNTI	'1010 1010 1010 1010'			

8.3.1.23.5 Test requirement

After step 3 the UE shall reselect to cell 3 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

After step 5 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 7 the UE shall reselect to cell 2 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

After step 9 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

8.3.1.24 Cell Update: HCS cell reselection in CELL_PCH

8.3.1.24.1 Definition

8.3.1.24.2 Conformance requirement

1. The quality level threshold criterion H for hierarchical cell structures is used to determine whether prioritised ranking according to hierarchical cell re-selection rules shall apply, and is defined by:

$$H_s = Q_{meas,s} - Qhcs_s$$

 $H_n = Q_{meas,n} - Qhcs_n - TO_n * L_n$

. . .

2. The cell-ranking criterion R is defined by:

$$\begin{aligned} R_s &= Q_{meas,s} + Qhyst_s \\ R_n &= Q_{meas,n} - Qoffset_{s,n} - TO_n * (1 - L_n) \end{aligned}$$

where:

$$\begin{split} &TO_n = TEMP_OFFSET_n * W(PENALTY_TIME_n - T_n) \\ &L_n = 0 & \text{if } HCS_PRIO_n = HCS_PRIO_s \\ &L_n = 1 & \text{if } HCS_PRIO_n <> HCS_PRIO_s \\ &W(x) = 0 & \text{for } x < 0 \\ &W(x) = 1 & \text{for } x >= 0 \end{split}$$

 $TEMP_OFFSET_n \ applies \ an \ offset \ to \ the \ H \ and \ R \ criteria \ for \ the \ duration \ of \ PENALTY_TIME_n \ after \ a \ timer \ T_n \ has \ started \ for \ that \ neighbouring \ cell.$

The timer T_n is implemented for each neighbouring cell. T_n shall be started from zero when one of the following conditions becomes true:

- if HCS_PRIO_n <> HCS_PRIO_s and

$$Q_{\text{meas},n} > Qhcs_n$$

Or

- if $HCS_PRIO_n = HCS_PRIO_s$ and
 - for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH RSCP in the serving cell, and:

$$Q_{meas,n} > Q_{meas,s} + Qoffset1_{s,n}$$

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH Ec/No in the serving cell, and:

$$Q_{meas,n} > Q_{meas,s} + Qoffset2_{s,n}$$

- for all other serving and neighbour cells:

$$Q_{meas,n} > Q_{meas,s} + Qoffset1_{s,n}$$

 T_n for the associated neighbour cell shall be stopped as soon as any of the above conditions are no longer fulfilled. Any value calculated for TO_n is valid only if the associated timer T_n is still running else TO_n shall be set to zero.

At cell-reselection, a timer T_n is stopped only if the corresponding cell is not a neighbour cell of the new serving cell, or if the criteria given above for starting timer T_n for the corresponding cell is no longer fulfilled with the parameters of the new serving cell. On cell re-selection, timer T_n shall be continued to be run for the corresponding cells but the criteria given above shall be evaluated with parameters broadcast in the new serving cell if the corresponding cells are neighbours of the new serving cell.

...

3. The cell selection criterion S used for cell reselection is fulfilled when:

for FDD cells: Srxlev > 0 AND Squal > 0

for TDD cells: Srxlev > 0

for GSM cells: Srxlev > 0

Where:

$$Squal = Q_{qualmeas} - Qqualmin$$

 $Srxlev = Q_{rxlevmeas} - Qrxlevmin - Pcompensation$

. . .

- 4. The UE shall perform ranking of all cells that fulfil the S criterion among
 - all cells that have the highest HCS_PRIO among those cells that fulfil the criterion H >= 0. Note that this rule is not valid when UE high-mobility is detected.
 - all cells, not considering HCS priority levels, if no cell fulfil the criterion H >= 0. This case is also valid when it is indicated in system information that HCS is not used, that is when serving cell does not belong to a hierarchical cell structure.

The cells shall be ranked according to the R criteria.

The best ranked cell is the cell with the highest R value.

5. If an FDD cell is ranked as the best cell and the quality measure for cell selection and re-selection is set to CPICH RSCP, the UE shall perform cell re-selection to that FDD cell.

In all cases, the UE shall reselect the new cell, only if the following conditions are met:

- the new cell is better ranked than the serving cell during a time interval Treselection.
- more than 1 second has elapsed since the UE camped on the current serving cell.

. . .

- 6. The *cell reselection* process in Connected Mode is the same as *cell reselection evaluation process* used for idle mode, described in subclause 5.2.6 of 25.304.
- 7. A UE shall initiate the cell update procedure in the following cases:
 - 1> Uplink data transmission:

..

1> Paging response:

..

1> Radio link failure:

• • •

1> Re-entering service area:

...

1> RLC unrecoverable error:

...

1> Cell reselection:

- 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:
 - 3> if the UE is in CELL_FACH or CELL_PCH state and the UE performs cell re-selection; or
 - 3> if the UE is in CELL_FACH state and the variable C_RNTI is empty:
 - 4> perform cell update using the cause "cell reselection".

Reference

3GPP TS 25.304 clause 5.2.6.1.4

3GPP TS 25.304 clause 5.4.3

3GPP TS 25.331 clause 8.3.1

8.3.1.24.3 Test purpose

- 1. To confirm that the UE can read HCS related SIB information and act upon all HCS parameters in CELL_PCH state.
- 2. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell in CELL_PCH state.
- 3. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

8.3.1.24.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 is active with downlink transmission power shown in Column To in table 8.3.1.24-1. Cell 2 and 3 are switched off.

UE: CELL_PCH (state 6-12) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Specific Message Content

For system information blocks 4 and 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

Contents of System Information Block type 4 (FDD)

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	FDD
- Sintersearch	0 dB
- SsearchHCS	17 (35 dB)
- RAT List	This parameter is configurable
- Sli mit,SearchRAT	0
- Qqualmin	-20 dB
- Qrxle vmin	-58 (-115 dBm)
- Qhyst1s	5 (gives actual value of 10 dB)
- Qhyst2s	Not Present
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	40 (results in actual value of -75)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD, 1.28 Mcps TDD and 7.68 Mcps TDD)

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	TDD
- SsearchHCS	23 (47 dB)
- RAT List	This parameter is configurable
- Qrxle vmin	-52 (-103 dBm)
- Qhyst1s	5 (gives actual value of 1 dB)
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	40 (results in actual value of -75)
- TcrMax	Not Present

Contents of System Information Block type 11 (FDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system	
information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	N . B
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator - CHOICE mode	FALSE FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
- 1 minary sciambing code	in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
Deies ODIOLITY	in clause 6.1.4
- Primary CPICH TX power	Not Present FALSE
- TX Diversity indicator - Cell Selection and Re-selection info	FALSE
- Qoffset1 _{s,n}	-20 dB
	33 dBm
 Maximum allowed UL TX power HCS neighbouring cell information 	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of –75)
-HCS Cell Reselection Information	(150 and in actual value of 15)
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxle vmin	-58 (-115 dBm)
- Intra-frequency cell id	3
- Cell info	l
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE FDD
- CHOICE mode	רטט
- Primary CPICH info - Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)"
- Filliary Sciambing code	in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of –75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB

Information Element	Value/remark		
- Qrxle vmin	-58 (-115 dBm)		

Contents of System Information Block type 11 (3.84 Mcps TDD, 1.28 Mcps TDD and 7.68 Mcps TDD) (Cell 1)

Information Flamont	Voluelromork
Information Element - SIB 12 indicator	Value/remark FALSE
- Measurement control system information	17406
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info - Cell parameters ID	Potorono clause 6.1.4 in TS24.109: Default cattings for
	Reference clause 6.1.4 in TS34.108: Default settings for cell No.1 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	Deference clause 6.1.4 in TC 24.100. Default actings for
- Cell parameters ID	Reference clause 6.1.4 in TS 34.108: Default settings for cell No.2 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode - Orxleymin	TDD (52 (103 dPm)
	-52 (-103 dBm)
- Intra-frequency cell id - Cell info	3
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS 34.108: Default settings for
	cell No.3 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type - Cell Selection and Re-selection info	Not Present
- Cell Selection and Re-selection into	-20dB
- Waximum allowed UL TX power	30 dBm
- Maximum allowed OL 1X power - HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of –75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxle vmin	-52 (-103 dBm)

Test Procedure

Table 8.3.1.24-1

Parameter	Unit		Cell 1			Cell 2			Cell 3	
		T0	T1	T2	T0	T1	T2	T0	T1	T2
Cell id in system			1			2			3	
information										
UTRARF Channel		Mid I	Range T	est	Mid	Range Te	est	Mid I	Range Te	st
Number		Fr	equenc	у	Fı	equency		Fr	equency	
HCS Priority			6			7			7	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-65	-65	-82	-82	-68	-82	-68	-68
P-CCPCH RSCP	dBm	-61	-61	-61	-80	-80	-67	-80	-73	-73
(TDD)										
H* (During penalty		15	10	-inf	-inf	-inf	7	-inf	-inf	7
time)										
H* (After PenaltyTime)		15	10	10	-7	-7	7	-7	7	7
R* (During		n.a.	n.a.	n.a.	n.a.	n.a.	-inf	n.a.	n.a.	-58
PenaltyTime)										
R* (After PenaltyTime)		n.a.	n.a.	n.a.	n.a.	n.a.	-48	n.a.	n.a.	-58

(*) Note: this parameter is calculated internally in the UE and is only shown for clarification of the test procedure.

The UE is in the CELL PCH state, camping onto cell 1. SS configures Cell 2 and 3 with power levels given in column "TO" and starts to broadcast BCCH on the primary CCPCH in cell 2 & 3. UE shall remain camped on the Cell 1 even after expiry of penalty time i.e. 40 seconds. SS sets downlink transmission power settings according to columns "T1" in table 8.3.1.24-1. The UE shall find cell 3 to be more suitable for service and hence perform a cell reselection to cell 3 after at-least 40 Seconds (Penalty Time) after the power levels have been changed. After the completion of cell reselection, the UE shall move to CELL_FACH state and transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 3 and set IE "Cell update cause" to "Cell Reselection". After SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_PCH", to the UE on the downlink CCCH. UE shall return to CELL_PCH state in Cell 3 and will not transmit anything on PRACH. SS then sets downlink transmission power settings according to columns "T2" in table 8.3.1.24-1. The UE shall find cell 2 to be more suitable for service after the expiry of penalty time and hence perform a cell reselection to cell 2 after the power levels have been changed. After the completion of cell reselection, the UE shall move to CELL FACH state and transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 2 and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_PCH", to the UE on the downlink DCCH. UE shall return to CELL_PCH state in Cell 2 and will not transmit anything on PRACH.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction UE SS	Message	Comment
1			The UE is in the CELL_PCH state in cell 1
2	+	вссн	SS applies the downlink transmission power settings, according to the values in columns "T0" of table 8.3.1.24-1. The SS starts to broadcast BCCH on the primary CCPCH in cell 2 and Cell 3. The UE shall still find Cell 1 best for service even after penalty time of 40 seconds, and shall remain in Cell 1 in CELL_PCH State
3			SS changes the power levels as per column 'T1' in the table 8.3.1.24-1. For the time equal to Penalty time 40 Seconds, after the change in power levels, the UE shall still find Cell 1 as best for service and remain in cell 1. After Penalty time of 40 Seconds, UE shall find Cell 3 better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 3.
4	→	CELL UPDATE	The UE moves to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection". Received in Cell 3
5	+	CELL UPDATE CONFIRM	Message sent on CCCH with IE "RRC State Indicator" is set to "CELL_PCH".
7			SS changes the power levels as per column 'T2' in the table 8.3.1.24-1. SS Checks that no cell update message is received during penalty time as the UE shall find Cell 2 better for service and perform a reselection after the expiry of penalty time. SS waits for the maximum duration required for the UE to camp to cell 2.
8	→	CELL UPDATE	The UE moves to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection". Received in Cell 2
9	+	CELL UPDATE CONFIRM	Message sent on DCCH with IE "RRC State Indicator" is set to "CELL_PCH".

Specific Message Contents

The contents of system in formation block 4 and 11 messages are identical as system in formation block 4 and 11 messages as found in 34.108 clause 6.1 with the following exceptions:

Contents of System Information Block type 4 (FDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	FDD
- Sintersearch	0 dB
- SsearchHCS	17 (35 dB)
- RAT List	This parameter is configurable
- Sli mit,SearchRAT	0
- Qqualmin	-20 dB
- Qrxle vmin	-58 (-115 dBm)
- Qhyst1s	5 (gives actual value of 10 dB)
- Qhyst2s	Not Present
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	40 (results in actual value of -75)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD, 1.28 Mcps TDD and 7.68 Mcps TDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	TDD
- Sintersearch	0 dB
- SsearchHCS	23 (47 dB)
- RAT List	This parameter is configurable
- Qrxle vmin	-52 (-103 dBm)
- Qhyst1s	5 (gives actual value of 10 dB)
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	40 (results in actual value of -75)
- TcrMax	Not Present

Contents of System Information Block type 11 (FDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	· ·
- Use of HCS	used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system	
information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator - CHOICE mode	FALSE FDD
- Primary CPICH info	FUU
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
- 1 minary scrambling code	in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
	in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	00.10
- Qoffset1 _{s,n}	-20dB
- Maximum allowed UL TX power	33 dBm
 HCS neighbouring cell information HCS_Priority 	Present
- HCS_FINITY -Q_HCS	6 40 (results in actual value of –75)
-HCS Cell Reselection Information	To (lesuis iii actual value of -13)
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxle vmin	-58 (-115 dBm)
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	Defeate along titled ID-fault-authors (IIA) 0 (EDD)
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)"
- Primary CPICH TX power	in clause 6.1.4 Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	1 / LOL
- Qoffset1 _{S,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of –75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB

Information Element	Value/remark
- Qrxle vmin	-58 (-115 dBm)

Contents of System Information Block type 11 (3.84 Mcps TDD, 1.28 Mcps TDD 7.68 Mcps TDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	FALSE Value/remark
- Measurement control system information	
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id - Cell info	2
- Cell indo	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for
- Primary CCPCH TX power	cell No.2 (TDD) Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info - Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS 34.108: Default settings for
Drimany CCDCH TV namer	cell No.1 (TDD) Not Present
- Primary CCPCH TX power - Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS -HCS Cell Reselection Information	40 (results in actual value of –75)
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxle vmin	-52 (-103 dBm)
- Intra-frequency cell id	3
- Cell info - Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS 34.108: Default settings for
- Primary CCPCH TV nower	cell No.3 (TDD) Not Present
- Primary CCPCH TX power - Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	// /// (results in actual value of .75)
-Q_HCS -HCS Cell Reselection Information	40 (results in actual value of –75)
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD

Information Element	Value/remark
- Qrxle vmin	-52 (-103 dBm)

Contents of System Information Block type 11 (FDD) (Cell 3)

Information Element - SIB 12 indicator - Measurement control system information - Use of HCS - Cell selection and reselection quality measure - Intra-frequency measurement system information - Intra-frequency cell info list - New intra-frequency cells - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator FALSE FALSE	
- Measurement control system information - Use of HCS - Cell selection and reselection quality measure - Intra-frequency measurement system information - Intra-frequency cell info list - New intra-frequency cells - Intra-frequency cell id - Cell info - Cell info - Cell individual offset - Reference time difference to cell used CPICH RSCP 3 CPICH RSCP	
- Use of HCS - Cell selection and reselection quality measure - Intra-frequency measurement system information - Intra-frequency cell info list - New intra-frequency cells - Intra-frequency cell id - Cell info - Cell info - Cell individual offset - Reference time difference to cell used CPICH RSCP 3 VICTURESCE NOT Present Not Present Not Present	
- Intra-frequency measurement system information - Intra-frequency cell info list - New intra-frequency cells - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell	
information - Intra-frequency cell info list - New intra-frequency cells - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell Not Present Not Present	
- Intra-frequency cell info list - New intra-frequency cells - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell Not Present Not Present	
- New intra-frequency cells - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell Not Present Not Present	
- Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell 3 Not Present Not Present	
- Cell info - Cell individual offset - Reference time difference to cell Not Present Not Present	
- Cell individual offset - Reference time difference to cell Not Present Not Present	
- Reference time difference to cell Not Present	
- Read SFN Indicator FALSE - CHOICE mode FDD	
- Primary CPICH info	
- Primary scrambling code Refer to clause titled "Default settings for cell No.3 (FDD)"	."
in clause 6.1.4	
- Primary CPICH TX power Not Present	
- TX Diversity indicator FALSE	
- Cell Selection and Re-selection info Not Present	
- Intra-frequency cell id 1	
- Cell info	
- Cell individual offset Not Present	
- Reference time difference to cell Not Present	
- Read SFN indicator TRUE	
- CHOICE mode FDD	
- Primary CPICH info	
- Primary scrambling code Refer to clause titled "Default settings for cell No.1 (FDD))"
in clause 6.1.4	
- Primary CPICH TX power Not Present	
- TX Diversity indicator FALSE	
- Cell Selection and Re-selection info	
- Qoffset1 _{S,n} -20 dB - Maximum allowed UL TX power 33 dBm	
- Maximum allowed UL TX power - HCS neighbouring cell information	
- HCS_Priority 6	
-Q_HCS 40 (results in actual value of –75)	
-HCS Cell Reselection Information	
- Penalty Time 40	
-Temporary Offset inf	
- CHOICE mode FDD	
- Qqualmin -20 dB	
- Qrxle vmin -58 (-115 dBm)	
- Intra-frequency cell id 2	
- Cell info	
- Cell individual offset Not Present	
- Reference time difference to cell Not Present	
- Read SFN indicator TRUE	
- CHOICE mode FDD	
- Primary CPICH info - Primary scrambling code Refer to clause titled "Default settings for cell No.2 (FDD)	,,,
in clause 6.1.4	'
- Primary CPICH TX power Not Present	
- TX Diversity indicator FALSE	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n} -20 dB	
- Maximum allowed UL TX power 33 dBm	
- HCS neighbouring cell information Present	
- HCS_Priority 7	
-Q_HCS 40 (results in actual value of –75)	
-HCS Cell Reselection Information	
- Penalty Time 40	
-Temporary Offset inf	
- CHOICE mode FDD	
- Qqualmin -20 dB	

Information Element	Value/remark
- Qrxle vmin	-58 (-115 dBm)

Contents of System Information Block type 11 (3.84 Mcps TDD, 1.28 Mcps TDD and 7.68 Mcps TDD) (Cell 3)

Information Flowant	Valualramark
Information Element - SIB 12 indicator	Value/remark FALSE
- Measurement control system information	17400
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info	Deference clause 6.1.4 in TC24.100. Default acttings for
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.3 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	Defending of the TO 04 400. Defends a things for
- Cell parameters ID	Reference clause 6.1.4 in TS 34.108: Default settings for
Drim on CCDCH TV nower	cell No.1 (TDD) Not Present
- Primary CCPCH TX power - Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	Not resent
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxle vmin	-52 (-103 dBm)
- Intra-frequency cell id	2
- Cell info - Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS 34.108: Default settings for
	cell No.2 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	40
- Penalty Time -Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-52 (-103 dBm)
SI/IO IIIIII	0-(,

CELL UPDATE

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
Cell Update Cause	Check to see if set to 'Cell Re-selection'

CELL UPDATE CONFIRM (Step 5 and 8)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3

8.3.1.24.5 Test requirement

After step 3 the UE shall reselect to cell 3 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

After step 6 the UE shall reselect to cell 2 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

8.3.1.25 CELL UPDATE: Radio Link Failure (T314=0, T315=0)

8.3.1.25.1 Definition

8.3.1.25.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

- 1> Uplink data transmission:
 - ...
- 1> Paging response:

..

- 1> Radio link failure:
 - 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:
 - 3> if the UE is in CELL_DCH state and the criteria for radio link failure is met as specified in TS 25.331 subclause 8.5.6; or

. . .

4> perform cell update using the cause "radio link failure".

When initiating cell update procedure, the UE shall:

. . .

1> if the UE is in CELL_DCH state:

. . .

2> if the stored values of the timer T314 and timer T315 are both equal to zero; or

. . .

- 3> release all its radio resources;
- 3> indicate release (abort) of the established signalling connections (as stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS) and established radio access bearers (as stored in the variable ESTABLISHED_RABS) to upper layers;
- 3> clear the variable ESTABLISHED SIGNALLING CONNECTIONS;
- 3> clear the variable ESTABLISHED RABS;
- 3> enter idle mode;
- 3> perform other actions when entering idle mode from connected mode as specified in TS 25.331 subclause 8.5.2;
- 3> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.1.2

8.3.1.25.3 Test purpose

1. To confirm that the UE releases all resources and enters idle mode when there is a radio link failure.

8.3.1.25.4 Method of test

Initial Condition

System Simulator: 2 cells (Cell 1 and Cell 2 are active).

UE: PS-DCCH+DTCH_DCH (state 6-10) or CS-DCCH+DTCH_DCH (state 6-9) or PS+CS-DCCH+DTCH_DCH (state 6-14) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) and services supported by the UE. If UE supports PS+CS but only supports streaming service in CS domain then state 6-9, 6-10 are applied.

Specific Message Content

For SIB type 1 message to be transmitted throughout the test, use the message titled "System Information Block type 1 (supported PLMN type is GSM-MAP)" as found in TS 34.108 clause 6, with the following exception.

Information Element	Value/remark
- T314	0
- T315	0

Test Procedure

Table 8.3.1.25

Parameter	Unit	Cell 1		Cell 2	
		T0 T1		T0	T1
UTRARF Channel Number		Mid Range Test		Mid Range Test	
		Frequency		Frequency	
CPICH Ec (FDD)	dBm/3.84MHz	-60 OFF		-75	-60
P-CCPCH RSCP (TDD)	dBm	-60 OFF		-75	-60

Table 8.3.1.25 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked 'T0' denote the initial conditions.

The UE is brought to CELL_DCH state in a cell 1 after making a successful outgoing call attempt. After the call has been established, SS configures its downlink transmission power settings according to column 'T1' in table 8.3.1.25. The UE shall detect a radio link failure in cell 1 and indicate to the non-access stratum the release of all the radio bearers. Then it shall attempt to re-select to cell 2. After that, it shall then enter idle mode state. SS calls for generic procedure C.1 to check that UE is in Idle Mode state in cell 2.

Expected sequence

Step	p Direction UE SS		Message	Comment
1				In the initial set up procedure, the SS shall request UE to set timer T314 and T315 to 0.
2				SS configures cell 1 and 2 according to column 'T1' in table 8.3.1.25.
3				SS waits for 5 seconds.
4	+	→	CALL C.1	SS execute this procedure in cell 2. If the test result of C.1 indicates that UE is in Idle Mode state, the test passes, otherwise it fails.

Specific Message Contents

None.

8.3.1.25.5 Test requirement

After step 2, the UE shall release all its radio bearers.

After step 3, the UE shall be in idle mode state in cell 2.

8.3.1.26 Cell Update: Radio Link Failure (T314>0, T315=0), PS RAB established

8.3.1.26.1 Definition

8.3.1.26.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

..

1> Paging response:

- 1> Radio link failure:
 - 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met; and
 - 2> if the UE is in CELL_DCH state; and
 - 2> if the criteria for radio link failure is met as specified in TS 25.331 subclause 8.5.6:
 - 3> perform cell update using the cause "radio link failure".

When initiating the cell update procedure, the UE shall:

- 1> stop timer T305;
- 1> if the UE is in CELL_DCH state:
 - 2> in the variable RB_TIMER_INDICATOR, set the IE "T314 expired" and the IE "T315 expired" to FALSE;
 - 2> if the stored values of the timer T314 and timer T315 are both equal to zero; or

2> if the stored value of the timer T314 is equal to zero and there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re -establishment timer" is set to "useT315":

...

2> if the stored value of the timer T314 is equal to zero:

. . .

- 2> if the stored value of the timer T315 is equal to zero:
 - 3> release all radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315";
 - 3> in the variable RB_TIMER_INDICATOR set the IE "T315 expired" to TRUE.
- 2> if the stored value of the timer T314 is greater than zero:
 - 3> if there are radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314":
 - 4> start timer T314.
 - 3> if there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314" or "useT315":
 - 4> start timer T314.
- 2> if the stored value of the timer T315 is greater than zero:

...

- 2> for the released radio bearer(s):
 - 3> delete the information about the radio bearer from the variable ESTABLISHED_RABS;
 - 3> when all radio bearers belonging to the same radio access bearer have been released:
 - 4> indicate local end release of the radio access bearer to upper layers using the CN domain identity together with the RAB identity stored in the variable ESTABLISHED_RABS;
 - 4> delete all information about the radio access bearer from the variable ESTA BLISHED_RABS.
- 2> select a suitable UTRA cell according to TS 25.304;
- 2> set the variable ORDERED_RECONFIGURATION to FALSE.
- 1> set the variables PROTOCOL_ERROR_INDICATOR, FAILURE_INDICATOR, UNSUPPORTED_CONFIGURATION and INVALID_CONFIGURATION to FALSE;
- 1> set the variable CELL_UPDATE_STARTED to TRUE;
- 1> if the UE is not already in CELL_FACH state:
 - 2> move to CELL_FACH state;
 - 2> select PRA CH according to s TS 25.331 subclause 8.5.17;
 - 2> select Secondary CCPCH according to s TS 25.331 subclause 8.5.19;
 - 2> use the transport format set given in system information as specified in TS 25.331 subclause 8.6.5.1.
- 1> if the UE performs cell re-selection:
 - 2> clear the variable C_RNTI; and
 - 2> stop using that C_RNTI just cleared from the variable C_RNTI in MAC.

- 1> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;
- 1> in case of a cell update procedure:
 - 2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;
 - 2> submit the CELL UPDATE message for transmission on the uplink CCCH.
- 1> set counter V302 to 1;
- 1> start timer T302 when the MAC layer indicates success or failure in trans mitting the message.

. .

If the received CELL UPDATE CONFIRM message would cause the UE to transit to CELL_DCH state; and

- 1> in case of a received CELL UPDATE CONFIRM message:
 - 2> if the UE failed to establish the physical channel(s) indicated in the received CELL UPDATE CONFIRM message

. . .

the UE shall:

- 1> if the variable ORDERED_RECONFIGURATION is set to TRUE caused by the received CELL UPDATE CONFIRM message in case of a cell update procedure:
 - 2> set the variable ORDERED_RECONFIGURATION to FALSE.
- 1> if V302 is equal to or smaller than N302:
 - 2> select a suitable UTRA cell according to TS 25.304;
 - 2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3, except for the IE "Cell update cause" which shall be set to "Radio link failure";
 - 2> submit the CELL UPDATE message for transmission on the uplink CCCH;
 - 2> increment counter V302;
 - 2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.
- 1> if V302 is greater than N302:

. . .

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.26.3 Test purpose

1. To confirm that the UE shall indicate to the non-access stratum the release of radio access bearer which is associated with T315 and try to find a new cell after detecting that a radio link failure has occurred.

8.3.1.26.4 Method of test

Initial Condition

System Simulator: 2 cells (Cell 1 and cell 2 are active).

UE: PS_DCCH+DTCH_DCH (state 6-10) in cell 1 or PS+CS-DCCH+DTCH_DCH (state 6-14) in cell 1, if UE supports both CS and PS do mains.

Specific Message Content

For SIB type 1 message to be transmitted throughout the test, use the message titled "System Information Block type 1 (supported PLMN type is GSM-MAP)" as found in TS 34.108 clause 6, with the following exception.

Information Element	Value/remark				
- T315	0				

Test Procedure

Table 8.3.1.26

Parameter	Unit	Cell 1		Cell 2	
		T0 T1		T0	T1
UTRARF Channel Number		Mid Range Test		Mid Range Test	
		Frequency		Frequency	
CPICH Ec (FDD)	dBm/3.84MHz	-60 OFF		-75	-60
P-CCPCH RSCP (TDD)	dBm	-60 OFF		-75	-60

Table 8.3.1.26 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked "T0" denote the initial conditions.

The UE is brought to CELL_DCH state in a cell 1 after making a successful outgoing call attempt. After the call has been established, SS configures its downlink transmission power settings according to column "T1" in table 8.3.1.26. The UE shall detect a radio link failure in cell 1.

UE shall release of the radio bearer which is associated with T315, if the latter has been set up in the initial condition.

Then it shall attempt to re-select to cell 2. After that, it shall then enter CELL_FACH state and transmit CELL UPDATE on the uplink CCCH to SS. The SS transmits CELL UPDATE CONFIRM message which includes dedicated physical channel parameters on downlink DCCH. Then the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

SS transmits COUNTER CHECK message to UE. UE shall transmit a COUNTER CHECK RESPONSE message back to SS.

Expected sequence

Step	Direction		Direction Message		Comment
	UE	SS			
1				SS configures cell 1 and 2 according to column "T1" in table 8.3.1.26. SS starts to listen to the uplink CCCH of cell 2.	
2				The UE detects the radio link failure.	
3)		CELL UPDATE	The UE shall find a new cell 2 and the value "radio link failure" shall be set in IE "Cell update cause".	
4	+	•	CELL UPDATE CONFIRM	Including dedicated physical channel parameters.	
5)	•	PHYSICAL CHANNEL RECONFIGURATION COMPLETE		
6	+		COUNTER CHECK	SS sent the COUNT-C info for the RBs that were established in the initial condition.	
7	\rightarrow	•	COUNTER CHECK RESPONSE		

Specific Message Contents

CELL UPDATE (Step 3)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
-SRNC Identity	Check to see if set to value assigned in cell 1.
- S-RNTI	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to 'radio link failure'
RB timer indicator	
- T314 expired	FALSE
- T315 expired	TRUE

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

If the initial condition of the UE is in state 6-10, then

Information Element	Value/remark
RRC State indicator	CELL_DCH
CHOICE channel requirement	Same as the set defined in RRC CONNECTION SETUP message: UM (Transition to CELL_DCH) found in TS 34.108 clause 9.
Downlink information common for all radio links	Same as the set defined in RRC CONNECTION SETUP message: UM (Transition to CELL_DCH) found in TS 34.108 clause 9.
Downlink information per radio link list	Same as the set defined in RRC CONNECTION SETUP message: UM (Transition to CELL_DCH) found in TS 34.108 clause 9.

If the initial condition of the UE is in state 6-14, then

Information Element	Value/remark
RRC State indicator	CELL_DCH
CHOICE channel requirement	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.
Downlink information common for all radio links	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.
Downlink information per radio link list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.

COUNTER CHECK (Step 6)

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info RB COUNT-C MSB information	Calculated value
- RB identity	Set to the RB identity that was release by the UE upon radio link failure
- COUNT-C MSB uplink	Arbitrary COUNT-C MSB
- COUNT-C MSB downlink	Arbitrary COUNT-C MSB

COUNTER CHECK RESPONSE (Step 7)

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Not checked
RB COUNT-C information	
- RB identity	Check to see if set to the RB identity that was release by the UE upon radio link failure
- COUNT-C uplink	Check to see if COUNT-C MSB is set to arbitrary
·	value given in step 13 and LSB is fill with '0'
- COUNT-C downlink	Check to see if COUNT-C MSB is set to arbitrary
	value given in step 13 and LSB is fill with '0'

8.3.1.26.5 Test requirement

After step 2, the UE shall detect the presence of cell 2, perform cell re-selection and transmit a CELL UPDATE message.

After step 4, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 6, the UE shall transmit a COUNTER CHECK RESPONSE message with the MSB part of the COUNT-C values set identical to COUNT-C MSB values in the COUNTER CHECK message in step 6.

8.3.1.27 Cell Update: Radio Link Failure (T314=0, T315>0), CS RAB

8.3.1.27.1 Definition

8.3.1.27.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

- 1> Radio link failure:
 - 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met; and
 - 2> if the UE is in CELL_DCH state; and
 - 2> if the criteria for radio link failure is met as specified in TS 25.331 subclause 8.5.6:
 - 3> perform cell update using the cause "radio link failure".

When initiating the cell update procedure, the UE shall:

- 1> stop timer T305;
- 1> if the UE is in CELL_DCH state:
 - 2> in the variable RB_TIMER_INDICATOR, set the IE "T314 expired" and the IE "T315 expired" to FALSE;

• • •

2> if the stored values of the timer T314 and timer T315 are both equal to zero; or

- 2> if the stored value of the timer T314 is equal to zero and there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re -establishment timer" is set to "useT315":
 - 3> release all its radio resources;
 - 3> indicate release (abort) of the established signalling connections (as stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS) and established radio access bearers (as stored in the variable ESTABLISHED RABS) to upper layers;
 - 3> clear the variable ESTABLISHED_SIGNALLING_CONNECTIONS;
 - 3> clear the variable ESTABLISHED RABS;
 - 3> enter idle mode;
 - 3> perform other actions when entering idle mode from connected mode as specified in subclause 8.5.2;
 - 3> and the procedure ends.
- 2> for the released radio bearer(s):
 - 3> delete the information about the radio bearer from the variable ESTABLISHED_RABS;
 - 3> when all radio bearers belonging to the same radio access bearer have been released:
 - 4> indicate local end release of the radio access bearer to upper layers using the CN domain identity together with the RAB identity stored in the variable ESTABLISHED_RABS;
 - 4> delete all information about the radio access bearer from the variable ESTABLISHED_RABS.
- 2> select a suitable UTRA cell according to TS 25.304;
- 2> set the variable ORDERED_RECONFIGURATION to FALSE.

. . .

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.27.3 Test purpose

1. To confirm that the UE release radio access bearer which is associated with T314 and try to find a new cell after detecting that a radio link failure has occurred.

8.3.1.27.4 Method of test

Initial Condition

System Simulator: 2 cells (Cell 1 and Cell 2 are active).

UE: CS_DCCH+DTCH_DCH (state 6-9).

Specific Message Content

For SIB type 1 message to be transmitted throughout the test, use the message titled "System Information Block type 1 (supported PLMN type is GSM-MAP)" as found in TS 34.108 clause 6, with the following exception.

Information Element	Value/remark				
- T314	0				

Test Procedure

Table 8.3.1.27

Parameter	Unit	Cell 1		Cell 2	
		T0 T1		T0	T1
UTRARF Channel Number		Mid Range Test		Mid Range Test	
		Frequency		Frequency	
CPICH Ec (FDD)	dBm/3.84MHz	-60 OFF		-75	-60
P-CCPCH RSCP (TDD)	dBm	-60 OFF		-75	-60

Table 8.3.1.27 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked 'T0' denote the initial conditions.

The UE is brought to CELL_DCH state in a cell 1 after making a successful outgoing call attempt. After the call has been established, SS configures its downlink transmission power settings according to column 'T1' in table 8.3.1.27. The UE shall detect a radio link failure in cell 1.

The UE shall release radio bearer associated with T314 and enter idle mode state. SS calls for generic procedure C.1 to check that UE is in Idle Mode state in cell 2.

Expected sequence

Step	Direction		Message	Comment			
	UE	SS					
1				SS configures cell 1 and 2 according to column 'T1' in table 8.3.1.27. SS starts to listen to the uplink CCCH of cell 2.			
2				The UE detects the radio link failure.			
3	←	\rightarrow	CALL C.1	SS execute this procedure in cell 2. If the test result of C.1 indicates that UE is in Idle Mode state, the test passes. Otherwise it fails.			

Specific Message Contents

None.

8.3.1.27.5 Test requirement

After step 2, the UE shall detect the presence of cell 2 and enter idle mode state in cell 2.

8.3.1.28 Cell Update: Radio Link Failure (T314=0, T315>0), PS RAB

8.3.1.28.1 Definition

8.3.1.28.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

- 1> Radio link failure:
 - 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met; and
 - 2> if the UE is in CELL_DCH state; and

- 2> if the criteria for radio link failure is met as specified in TS 25.331 subclause 8.5.6:
 - 3> perform cell update using the cause "radio link failure".

...

When initiating the cell update procedure, the UE shall:

- 1> stop timer T305;
- 1> if the UE is in CELL_DCH state:
 - 2> in the variable RB_TIMER_INDICATOR, set the IE "T314 expired" and the IE "T315 expired" to FALSE;
 - 2> if the stored values of the timer T314 and timer T315 are both equal to zero; or
 - 2> if the stored value of the timer T314 is equal to zero and there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re -establishment timer" is set to "useT315":

...

- 2> if the stored value of the timer T314 is equal to zero:
 - 3> release all radio bearers, associated with any radio access bearers for which in the variable ESTABLISHED RABS the value of the IE "Re-establishment timer" is set to "useT314";
 - 3> in the variable RB_TIMER_INDICATOR set the IE "T314 expired" to TRUE.

. . .

- 2> if the stored value of the timer T315 is greater than zero:
 - 3> if there are radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315":
 - 4> start timer T315.
- 2> for the released radio bearer(s):
 - 3> delete the information about the radio bearer from the variable ESTABLISHED_RABS;
 - 3> when all radio bearers belonging to the same radio access bearer have been released:
 - 4> indicate local end release of the radio access bearer to upper layers using the CN domain identity together with the RAB identity stored in the variable ESTABLISHED_RABS;
 - 4> delete all information about the radio access bearer from the variable ESTA BLISHED_RABS.
- 2> select a suitable UTRA cell according to TS 25.304;
- 2> set the variable ORDERED_RECONFIGURATION to FALSE.

. . .

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.28.3 Test purpose

1. To confirm that the UE release radio access bearer which is associated with T314 and try to find a new cell after detecting that a radio link failure has occurred.

8.3.1.28.4 Method of test

Initial Condition

System Simulator: 2 cells (Cell 1 and Cell 2 are active).

UE: PS_DCCH+DTCH_DCH (state 6-10) in cell 1 or PS+CS-DCCH+DTCH_DCH (state 6-14) in cell 1, if UE supports both CS and PS domains.

Specific Message Content

For SIB type 1 message to be transmitted throughout the test, use the message titled "System Information Block type 1 (supported PLMN type is GSM-MAP)" as found in TS 34.108 clause 6, with the following exception.

Information Element	Value/remark			
- T314	0			

Test Procedure

Table 8.3.1.28

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRARF Channel Number		Mid Range Test		Mid Range Test	
		Frequency		Frequency	
CPICH Ec (FDD)	dBm/3.84MHz	-60	OFF	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	OFF	-75	-60

Table 8.3.1.28 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked 'T0' denote the initial conditions.

The UE is brought to CELL_DCH state in a cell 1 after making a successful outgoing call attempt. After the call has been established, SS configures its downlink transmission power settings according to column 'T1' in table 8.3.1.28. The UE shall detect a radio link failure in cell 1.

The UE shall attempt to re-select to cell 2. After that, it shall then enter CELL_FACH state and transmit CELL UPDATE on the uplink CCCH to SS. The SS transmits CELL UPDATE CONFIRM message which includes dedicated physical channel parameters on downlink DCCH. Then the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH. SS transmits COUNTER CHECK message to UE. UE shall transmit a COUNTER CHECK RESPONSE message back to SS.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		•		SS configures cell 1 and
				2 according to column
				'T1' in table 8.3.1.28. SS
				starts to listen to the
				uplink CCCH of cell 2.
2				The UE detects the
				radio link failure.
3	7	•	CELL UPDATE	The UE shall find a new
				cell 2 and the value
				"radio link failure" shall
				be set in IE "Cell update
				cause".
4	+		CELL UPDATE CONFIRM	See message content.
5	\rightarrow	>	PHYSICAL CHANNEL RECONFIGURATION	
			COMPLETE	
6	←	-	COUNTER CHECK	SS sent the COUNT-C
				info for the RBs that
				were established in the
				initial condition.
7	\rightarrow	>	COUNTER CHECK RESPONSE	

Specific Message Contents

CELL UPDATE (Step 3)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in cell
	1.
- SRNC Identity	Check to see if set to value assigned in cell
	1.
Cell Update Cause	Check to see if set to 'radio link failure'
RB timer indicator	
- T314 expired	TRUE
- T315 expired	FALSE

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
CHOICE channel requirement	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A4, with the following exception: A non-zero value in the range of 0-16777216 used for cell 2.
Downlink information common for all radio links	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A4.
Downlink information per radio link list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A4.

COUNTER CHECK (Step 6)

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Calculated value
RB COUNT-C MSB information	
- RB identity	Set to the RB identity that was set up in the initial
·	condition
- COUNT-C MSB uplink	Set to the value stored in the SS
- COUNT-C MSB downlink	Set to the value stored in the SS

COUNTER CHECK RESPONSE (Step 7)

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Not checked
RB COUNT-C information	Not present

8.3.1.28.5 Test requirement

After step 2, the UE shall detect the presence of cell 2, perform cell re-selection and transmit a CELL UPDATE message.

At step 5, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

At step 7, the UE shall transmit a COUNTER CHECK RESPONSE message without including IE "RB COUNT-C information".

8.3.1.29 Cell Update: Radio Link Failure (T314>0, T315>0), CS RAB

8.3.1.29.1 Definition

8.3.1.29.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

1> Paging response:

. .

- 1> Radio link failure:
 - 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met; and
 - 2> if the UE is in CELL_DCH state; and
 - 2> if the criteria for radio link failure is met as specified in TS 25.331 subclause 8.5.6:
 - 3> perform cell update using the cause "radio link failure".

. . .

When initiating the cell update procedure, the UE shall:

. . .

- 1> if the UE is in CELL_DCH state:
 - 2> in the variable RB_TIMER_INDICATOR, set the IE "T314 expired" and the IE "T315 expired" to FALSE;

. . .

- 2> if the stored value of the timer T314 is greater than zero:
 - 3> if there are radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314":
 - 4> start timer T314.
 - 3> if there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314" or "useT315":
 - 4> start timer T314.
- 2> if the stored value of the timer T315 is greater than zero:
 - 3> if there are radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315":
 - 4> start timer T315.

. . .

Upon expiry of timer T314 the UE shall:

1> if timer T302 is running:

. . .

- 1> if timer T302 is not running and timer T315 is running:
 - 2> set IE "T314 expired" in variable RB_TIMER_INDICATOR to TRUE;
 - 2> release locally all radio bearers which are associated with any radio access bearers for which in the variable ESTABLISHED RABS the value of the IE "Re-establishment timer" is set to "useT314";
 - 2> indicate release of those radio access bearers to upper layers;
 - 2> delete all information about those radio access bearers from the variable ESTABLISHED_RABS.
- 1> if timers T302 and T315 are not running:
 - 2> clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
 - 2> clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
 - 2> clear the variable PDCP_SN_INFO;
 - 2> clear the entry for the CELL UPDATE CONFIRM message in the table "Rejected transactions" in the variable TRA NSA CTIONS;
 - 2> release all its radio resources;
 - 2> indicate release (abort) of the established signalling connections (as stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS) and established radio access bearers (as stored in the variable ESTABLISHED_RABS) to upper layers;
 - 2> clear the variable ESTABLISHED_SIGNALLING_CONNECTIONS;
 - 2> clear the variable ESTABLISHED RABS;
 - 2> set the variable CELL_UPDATE_STARTED to FALSE;
 - 2> enter idle mode;

- 2> other actions the UE shall perform when entering idle mode from connected mode are specified in subclause 8.5.2;
- 2> and the procedure ends.

Upon expiry of timer T315 the UE shall:

1> if timer T302 is running:

. . .

- 1> if timer T302 is not running and timer T314 is running:
 - 2> set IE "T315 expired" in variable RB_TIMER_INDICATOR to TRUE;
 - 2> release locally all radio bearers which are associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "use T315";
 - 2> indicate release of those radio access bearers to upper layers;
 - 2> delete all information about those radio access bearers from the variable ESTABLISHED_RABS.
- 1> if timers T302 and T314 are not running:
 - 2> clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
 - 2> clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
 - 2> clear the variable PDCP_SN_INFO;
 - 2> clear the entry for the CELL UPDATE CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS;
 - 2> release all its radio resources;
 - 2> indicate release (abort) of the established signalling connections (as stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS) and established radio access bearers (as stored in the variable ESTABLISHED_RABS) to upper layers;
 - 2> clear the variable ESTABLISHED_SIGNALLING_CONNECTIONS;
 - 2> clear the variable ESTABLISHED_RABS;
 - 2> set the variable CELL_UPDATE_STARTED to FALSE;
 - 2> enter idle mode;
 - 2> other actions the UE shall perform when entering idle mode from connected mode are specified in subclause 8.5.2:
 - 2> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.29.3 Test purpose

- 1. To confirm that the UE shall indicate to the non-access stratum the release of radio access bearer which is associated with T314 and try to find a new cell after detecting that a radio link failure has occurred.
- 2. To confirm that the UE enters idle mode after T314 expires and T302 and T315 are not running.

8.3.1.29.4 Method of test

Initial Condition

System Simulator: 1 cell (Cell 1 is active).

UE: CS_DCCH+DTCH_DCH (state 6-9).

Specific Message Content

For SIB type 1 message to be transmitted throughout the test, use the message titled "System Information Block type 1 (supported PLMN type is GSM-MAP)" as found in TS 34.108 clause 6, with the following exception.

Information Element	Value/remark
- T314	12
- T315	30

Test Procedure

Table 8.3.1.29

Parameter	Unit	Cell 1	
		T0	T1
UTRARF Channel Number		Mid Rang	ge Test
		Frequ	ency
CPICH Ec (FDD)	dBm/3.84MHz	-60	OFF
P-CCPCH RSCP (TDD)	dBm	-60	OFF

The UE is brought to CELL_DCH state after making a successful outgoing call attempt. After the call has been established, SS configures its downlink transmission power settings according to column 'T1' in table 8.3.1.29. The UE shall detect a radio link failure in cell 1.

The SS shall wait for 12s (see Note 1) and then configure its downlink transmission power settings according to column 'T0' in table 8.3.1.29. The UE shall release radio bearer associated with T314 and enter idle mode state. SS calls for generic procedure C.1 to check that UE is in Idle Mode state in cell 1.

NOTE 1: Considering the timer tolerance of the UE, T314 may expire between 12s±0.3s, therefore the SS must wait for at least 12.3s before it reconfigures it downlink transmission power. Since SS has a timer tolerance of 10% or 2*TTI+55ms (consider the greater value of the two), the test case shall set the SS to reconfigure the power level 13.67s after the SS configures the power settings according to column 'T1' in table 8.3.1.29.

Expected sequence

Step	Direction		Message	Comment
	UE SS		1	
1				SS configures cell 1 according to column 'T1' in table 8.3.1.29.
2				SS waits for 12s after the completion of step 1 and then configures cell 1 according to column 'T0' in table 8.3.1.29.
3	+	\rightarrow	CALL C.1	SS execute this procedure in cell 1. If the test result of C.1 indicates that UE is in Idle Mode state, the test passes. Otherwise it fails.

Specific Message Contents

None.

8.3.1.29.5 Test requirement

After step 2, the UE shall detect the presence of cell 1 and enter idle mode state in cell 1.

8.3.1.30 Cell Update: Radio Link Failure (T314>0, T315>0), PS RAB Definition 8.3.1.30.1 8.3.1.30.2 Conformance requirement A UE shall initiate the cell update procedure in the following cases: 1> Uplink data transmission: 1> Paging response: 1> Radio link failure: 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met; and 2> if the UE is in CELL_DCH state; and 2> if the criteria for radio link failure is met as specified in TS 25.331 subclause 8.5.6: 3> perform cell update using the cause "radio link failure". When initiating the cell update procedure, the UE shall: 1> if the UE is in CELL_DCH state: 2> in the variable RB_TIMER_INDICATOR, set the IE "T314 expired" and the IE "T315 expired" to FALSE; 2> if the stored value of the timer T314 is greater than zero: 3> if there are radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314": 4> start timer T314. 3> if there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314" or "useT315": 4> start timer T314. 2> if the stored value of the timer T315 is greater than zero: 3> if there are radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315": 4> start timer T315. Upon expiry of timer T314 the UE shall: 1> if timer T302 is running: 1> if timer T302 is not running and timer T315 is running:

- 2> set IE "T314 expired" in variable RB_TIMER_INDICATOR to TRUE;
- 2> release locally all radio bearers which are associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314";
- 2> indicate release of those radio access bearers to upper layers;
- 2> delete all information about those radio access bearers from the variable ESTABLISHED RABS.
- 1> if timers T302 and T315 are not running:
 - 2> clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
 - 2> clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
 - 2> clear the variable PDCP_SN_INFO;
 - 2> clear the entry for the CELL UPDATE CONFIRM message in the table "Rejected transactions" in the variable TRA NSA CTIONS;
 - 2> release all its radio resources;
 - 2> indicate release (abort) of the established signalling connections (as stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS) and established radio access bearers (as stored in the variable ESTABLISHED_RABS) to upper layers;
 - 2> clear the variable ESTABLISHED_SIGNALLING_CONNECTIONS;
 - 2> clear the variable ESTABLISHED_RABS;
 - 2> set the variable CELL_UPDATE_STARTED to FALSE;
 - 2> enter idle mode;
 - 2> other actions the UE shall perform when entering idle mode from connected mode are specified in subclause 8.5.2;
 - 2> and the procedure ends.

Upon expiry of timer T315 the UE shall:

1> if timer T302 is running:

. . .

- 1> if timer T302 is not running and timer T314 is running:
 - 2> set IE "T315 expired" in variable RB_TIMER_INDICATOR to TRUE;
 - 2> release locally all radio bearers which are associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "use T315";
 - 2> indicate release of those radio access bearers to upper layers;
 - 2> delete all information about those radio access bearers from the variable ESTABLISHED_RABS.
- 1> if timers T302 and T314 are not running:
 - 2> clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
 - 2> clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
 - 2> clear the variable PDCP_SN_INFO;
 - 2> clear the entry for the CELL UPDATE CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS;
 - 2> release all its radio resources;

- 2> indicate release (abort) of the established signalling connections (as stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS) and established radio access bearers (as stored in the variable ESTABLISHED_RABS) to upper layers;
- 2> clear the variable ESTABLISHED_SIGNALLING_CONNECTIONS;
- 2> clear the variable ESTABLISHED_RABS;
- 2> set the variable CELL UPDATE STARTED to FALSE;
- 2> enter idle mode:
- 2> other actions the UE shall perform when entering idle mode from connected mode are specified in subclause 8.5.2;
- 2> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.30.3 Test purpose

- 1. To confirm that the UE shall indicate to the non-access stratum the release of radio access bearer which is associated with T315 and try to find a new cell after detecting that a radio link failure has occurred.
- 2. To confirm that the UE shall indicate to the non-access stratum the release of radio access bearer which is associated with T314 and try to find a new cell after detecting that a radio link failure has occurred. (This test purpose is only applicable when CS RAB is set up in the initial condition.)
- 3. To confirm that the UE enters idle mode after T315 expires and T302 and T314 are not running.

8.3.1.30.4 Method of test

Initial Condition

System Simulator: 1 cell (Cell 1 is active).

UE: PS_DCCH+DTCH_DCH (state 6-10 or PS+CS-DCCH+DTCH_DCH (state 6-14), as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) and services supported by the UE. If UE supports PS+CS but only supports streaming service in CS domain then state 6-10 is applied.

Specific Message Content

For SIB type 1 message to be transmitted throughout the test, use the message titled "System Information Block type 1 (supported PLMN type is GSM-MAP)" as found in TS 34.108 clause 6, with the following exception.

Information Element	Value/remark
- T314	12
- T315	60
- UE Timers and constants in connected mode	
- T312	2

Test Procedure

Table 8.3.1.30

Parameter	Unit	Cell 1	
		T0	T1
UTRARF Channel Number		Mid Range Test Frequency	
CPICH Ec (FDD)	dBm/3.84MHz	-60	OFF
P-CCPCH RSCP (TDD)	dBm	-60	OFF

The UE is brought to CELL_DCH state after making a successful outgoing call attempt. After the call has been established, SS configures its downlink transmission power settings according to column 'T1' in table 8.3.1.30. The UE shall detect a radio link failure in cell 1.

Case A (the initial condition of the UE is in state 6-10):

The SS shall wait for 69.3s (see Note 2) and then configure its downlink transmission power settings according to column 'T0' in table 8.3.1.30. The UE shall release radio bearer associated with T315 and enter idle mode state. SS calls for generic procedure C.1 to check that UE is in Idle Mode state in cell 1.

Case B (the initial condition of the UE is in state 6-14):

The SS shall wait for 16.5s (see Note 1) and then configure its downlink transmission power settings according to column 'T0' in table 8.3.1.30. The UE shall release radio bearer associated with T314 and attempt to re-select to cell 1. After that, it shall then enter CELL_FACH state and transmit CELL UPDATE on the uplink CCCH to SS. The SS transmits CELL UPDATE CONFIRM message which includes dedicated physical channel and transport channel parameters on downlink DCCH. Then the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH. The UE may also optionally send "Signalling Connection Release Indicator for CS domain, which can occur before or after TRANSPORT CHANNEL RECONFIGURATION COMPLETE message. SS transmits COUNTER CHECK message to UE. UE shall transmit a COUNTER CHECK RESPONSE message back to SS. Then SS configures its downlink transmission power settings according to column 'T1' in table 8.3.1.30. The UE shall detect a radio link failure in cell 1. The SS shall wait for 69.3s (see Note 2) and then configure its downlink transmission power settings according to column 'T0' in table 8.3.1.30. The UE shall release radio bearer associated with T315 and enter idle mode state. SS calls for generic procedure C.1 to check that UE is in Idle Mode state in cell 1.

- NOTE 1: Considering the timer tolerance of the UE, T314 may expire in 12s, therefore the SS must wait for at least 12.0s plus T313 (3.0s) for UE to detect Radio Link Failure before it reconfigures downlink transmission power. Since SS has a timer tolerance of 10% or 2*TTI+55ms (consider the greater value of the two), the test case shall set the SS to reconfigure the power level 16.5s after the SS configures the power settings according to column 'T1' in table 8.3.1.30.
- NOTE 2: Considering the timer tolerance of the UE, T315 may expire in 60s, therefore the SS must wait for at least 60.0s plus T313 (3.0s) for UE to detect Radio Link Failure before it reconfigures it downlink transmission power. Since SS has a timer tolerance of 10% or 2*TTI+55ms (consider the greater value of the two), the test case shall set the SS to reconfigure the power level 69.3s after the SS configures the power settings according to column 'T1' in table 8.3.1.30.

Expected sequence

Step	Direction		Message	Comment	
-	UE	SS	7		
1		•		SS configures cell 1 according to column 'T1' in table 8.3.1.30.	
2				For Case A, go to step 9. SS waits for 16.5s after the completion of step 1 (for Case B) and then configures cell 1 according to column 'T0' in table 8.3.1.30.	
3	-)	CELL UPDATE	UE shall select cell 1 and enter CELL_FACH state to transmit this message	
4	•	(CELL UPDATE CONFIRM	See message content.	
4a	-	>	SIGNALLING CONNECTION RELEASE INDICATION	UE can optionally send this PDU. Steps 4a and 5 can occur in any order.	
5	-)	TRANSPORT CHANNEL RECONFIGURATION COMPLETE		
6	•	(COUNTER CHECK	SS sent the COUNT-C info for the RBs that were established in the initial condition.	
7	-)	COUNTER CHECK RESPONSE		
8				SS configures cell 1 according to column 'T1' in table 8.3.1.30.	
9				SS waits for 69.3s after the completion of step 1 (for Case A) or step 8 (for Case B) and then configures cell 1 according to column 'T0' in table 8.3.1.30.	
10	+	·→	CALL C.1	SS execute this procedure in cell 1. If the test result of C.1 indicates that UE is in Idle Mode state, the test passes. Otherwise it fails.	

Specific Message Contents

CELL UPDATE (Step 3)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark	
U-RNTI		
- S-RNTI	Check to see if set to value assigned in cell	
	1.	
- SRNC Identity	Check to see if set to value assigned in cell	
·	1.	
Cell Update Cause	Check to see if set to 'radio link failure'	
RB timer indicator		
- T314 expired	TRUE	
- T315 expired	FALSE	

SIGNALLING CONNECTION RELEASE INDICATION (Step 4a)

Information Element	Value/remark	
CN domain identity	CS domain	

CELL UPDATE CONFIRM (Step 4) if CS service to be tested for RRC test cases is Speech

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
UL Transport channel information common for all	Same as the set defined in RADIO BEARER
transport channels	SETUP message found in TS 34.108 clause 9
	under condition A4.
Deleted UL TrCH Information	
- Uplink transport channel type	DCH
- Transport channel identity	1
Deleted UL TrCH Information	
- Uplink transport channel type	DCH
- Transport channel identity	2
Deleted UL TrCH Information	
- Uplink transport channel type	DCH
- Transport channel identity	3
DL Transport channel information common for all	Same as the set defined in RADIO BEARER
transport channel	SETUP message found in TS 34.108 clause 9
	under condition A4.
Deleted DL TrCH information	
- Downlink transport channel type	DCH
- Transport channel identity	6
Deleted DL TrCH Information	
- Downlink transport channel type	DCH
- Transport channel identity	7
Deleted DL TrCH Information	
- Downlink transport channel type	DCH
- Transport channel identity	8
CHOICE channel requirement	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	under condition A4.
Downlink information common for all radio links	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	under condition A4.
Downlink information per radio link list	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	under condition A4.

CELL UPDATE CONFIRM (Step 4) , if CS service to be tested for RRC test cases is non-speech

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
UL Transport channel information common for all transport channels	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A4.
Deleted UL TrCH Information	
- Uplink transport channel type	DCH
- Transport channel identity	1
DL Transport channel information common for all transport channel	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A4.
Deleted DL TrCH information	
- Downlink transport channel type	DCH
- Transport channel identity	6
CHOICE channel requirement	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A4.
Downlink information common for all radio links	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A4.
Downlink information per radio link list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A4.

COUNTER CHECK (Step 6)

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Calculated value
RB COUNT-C MSB information	
- RB identity	Set to the RB identity that was set up in the initial
	condition and support PS service.
- COUNT-C MSB uplink	Set to the value stored in the SS
- COUNT-C MSB downlink	Set to the value stored in the SS

COUNTER CHECK RESPONSE (Step 7)

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Not checked
RB COUNT-C information	Not present

8.3.1.30.5 Test requirement

Case A:

After step 2, the UE shall detect the presence of cell 1 and enter idle mode state in cell 1.

Case B:

After step 2, the UE shall detect the presence of cell 1, perform cell re-selection and transmit a CELL UPDATE message.

After step 4, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 6, the UE shall transmit a COUNTER CHECK RESPONSE message without including IE "RB COUNT -C information".

After step 9, the UE shall detect the presence of cell 1 and enter idle mode state in cell 1.

8.3.1.31 Cell Update: re-entering of service area from URA_PCH after T316 expiry but before T317 expiry

8.3.1.31.1 Definition

8.3.1.31.2 Conformance requirement

If the UE detects the "out of service area" and the UE is in URA_PCH or CELL_PCH state it shall perform the following actions:

1> start timer T316;

1> perform processes described in subclause 7.2.2.

. .

In the URA_PCH or CELL_PCH state the UE shall perform the following actions:

NOTE: Neither DCCH nor DTCH are available in these states.

1> if the UE is "in service area":

. . . .

1> if the UE is "out of service area":

- 2> perform cell selection process as specified in [4];
- 2> run timer T316;
- 2> run timer T305.

...

On T316 expiry the UE shall perform the following actions. The UE shall:

- 1> if "out of service area" is detected:
 - 2> start timer T317;
 - 2> move to CELL_FACH state;
 - 2> perform processes described in subclause 7.2.2.
- 1> if "in service area" is detected:

. . . .

If the UE detects "in service area" before T317 expiry the UE shall perform the following actions. If no cell update procedure or URA update procedure is ongoing, the UE shall:

- 1> stop T317;
- 1> if T307 is active:
 - 2> stop T307.
- 1> initiate the cell update procedure using as cause "Re-entering service area" as specified in subclause 8.3.1;
- 1> perform processes described in subclause 7.2.2.

If a cell update procedure or URA update procedure is ongoing, the UE shall:

- 1> stop T317;
- 1> perform the actions as specified in 8.3.1.

Reference

3GPP TS 25.331 clause 8.3.1, 8.5.5.1.1, 8.5.5.2.2, 8.5.5.3, 7.2.2.1, and 7.2.2.2.

8.3.1.31.3 Test purpose

To confirm that the UE executes a cell update procedure when the UE re-enters the service area before the expiry of timer T317, after expiry of T316.

8.3.1.31.4 Method of test

Initial Condition

System Simulator: 1 cell with URA-ID 1 and the downlink transmission power shown in column marked "T0" in table 8.3.1.31.

UE: URA PCH (state 6-13) as specified in clause 7.4 of TS 34.108, with URA-ID 1 in the list of URA-ID.

Test Procedure

Table 8.3.1.31

Parameter	Unit	Cell 1	
		T0	T1
UTRARF Channel Number	nber Mid Range Te		
		Frequ	ency
CPICH Ec	dBm/3.84MHz	-60	-80
P-CCPCH RSCP (TDD)	dBm	-60	-80

Table 8.3.1.31 illustrates the downlink power to be applied at various time instants of the test execution. Columns marked "T0" denote the initial conditions.

The UE is initially in URA_PCH state. The content of the SYSTEM INFORMATION BLOCK TYPE 3 and 4 is modified. The SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.31 so that S<0. When the UE detects that it is out of service area, it will start T316 and search for a cell to camp. SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.31 within a time equivalent to T316+T317 but larger than T316, so that S>0. The UE shall detect that it returns back in service area before T317 expires. Since the UE has moved to CELL_FACH state on expiry of T316, it shall now transmit a CELL UPDATE message which contains the value "re-entering service area" in IE "Cell update cause" to the SS on the uplink CCCH. After the SS receives this message, it transmits a CELL UPDATE CONFIRM message which includes the IE "new C-RNTI", and "new U-RNTI" to the UE on the downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH.

Expected sequence

Step	Direction		Direction Message	Comment	
	UE	SS			
1				The UE starts operating from URA_PCH state.	
1a	+	-	MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 3 and 4	SS changes the contents of MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK (see specific message contents).	
1b	+	-	PAGING TYPE 1	Include IE "BCCH modification info"	

		void	
		void	
2			SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.31 such that the cell 1 is no longer suitable for camping i.e. S<0.
3			The UE shall detect a "out of service area" condition, start T316. The UE shall start T317 on expiry of T316)
4			60 seconds after step 2 (see note 1), the SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.31 before T317 expires.
5	→	CELL UPDATE	Value "re-entering service area" shall be set in IE "Cell update cause"
6	←	CELL UPDATE CONFIRM	
7	→	UTRAN MOBILITY INFORMATION CONFIRM	
8	←→	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

NOTE: The 60 seconds in step 4 should be large enough for any UE to have detected the out of service area condition (Nserv consecutive DRX cycles + 12s) and have started T317 after T316 expiry (default=30s), but well before T317 expiry.

Specific Message Contents

MASTER INFORMATION BLOCK (Step 1a)

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark
MIB Value Tag	A valid MIB value tag as defined in TS 25.331 that is
	different from the previous value.
Scheduling information	Scheduling info for System Information Type 3
- Cell Value tag	A value that is different from the previous Cell value tag
Scheduling information	Scheduling info for System Information Type 4
- Cell Value tag	A value that is different from the previous Cell value tag

SYSTEM INFORMATION BLOCK TYPE 3 and 4 (Step 1a)

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark	
Qrxlevmin	-70	

PAGING TYPE 1 (Step 1b)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Paging record list	Not Present
BCCH modification info	
MIB Value tag	A valid MIB value tag as defined in TS 25.331 that is
	different from the previous value.
BCCH modification time	Not present

CELL UPDATE (Step 5)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 're-entering service area'

CELL UPDATE CONFIRM (Step 6)

Use the same message sub-type found in TS 34.108 clause 9, with the exception of the following IEs:

Information Element	Value/remark
New U-RNTI	
- SRNC Identity	'0000 0000 0001'
- S-RNTI	'0000 0000 0000 0101 0101'
New C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 7)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE.

8.3.1.31.5 Test requirement

After step 2 the UE shall detect that it is out of service area and shall not send a URA UPDATE on the uplink CCCH channel.

After step 4 the UE shall transmit a CELL UPDATE message which sets value "re-entering service area" into IE "Cell update cause".

After step 6 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message.

8.3.1.32 Cell Update: Transition from URA_PCH to CELL_DCH, start of HS-DSCH reception

8.3.1.32.1 Definition

All UEs which support FDD or TDD and HS-PDSCH.

8.3.1.32.2 Conformance requirement

When the UE receives a PAGING TYPE 1 message, it shall perform the actions as specified below.

If the UE is in connected mode, for each occurrence of the IE "Paging record" included in the message the UE shall:

- 1> if the IE "Used paging identity" is a UTRAN identity and if this U-RNTI is the same as the U-RNTI allocated to the UE:
 - 2> if the optional IE "CN originated page to connected mode UE" is included:
 - 3> indicate reception of paging; and
 - 3> forward the IE "CN do main identity", the IE "Paging cause" and the IE "Paging record type identifier" to the upper layers.

- 2> otherwise:
 - 3> perform a cell update procedure with cause "paging response" as specified in subclause 8.3.1.2.
- 2> ignore any other remaining IE "Paging record" that may be present in the message.
- 1> otherwise:
 - 2> ignore that paging record.

. .

A UE shall initiate the cell update procedure in the following cases:

1> Paging response:

.

. . .

If the IE "New H-RNTI" is included, the UE shall:

- 1> if the IE "Downlink HS-PDSCH Information" is also included and the UE would enter CELL_DCH state according to subclause 8.6.3.3 of TS 25.331 applied on the received message:
 - 2> store the value in the variable H_RNTI.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

1> use the value of the variable H_RNTI as UE identity in the HS-SCCH reception procedure in the physical layer.

. . .

If the IE "Added or Reconfigured DL TrCH information" is included then for the transport channel identified by the IE "DL Transport Channel Identity" the UE shall:

- 1> if the choice "DL parameters" is set to 'HSDSCH':
 - 2> if the IE "HARQ Info" is included:
 - 3> perform the actions specified in subclause 8.6.5.6b of TS 25.331.

. . .

If the IE "Downlink HS-PDSCH Information" is included and the UE would enter CELL_DCH state according to subclause 8.6.3.3 applied on the received message, the UE shall:

- 1> if the IE "New H-RNTI" is included:
 - 2> perform the actions as specified in subclause 8.6.3.1b of TS 25.331.
- 1> if the IE "HS-SCCH Info" is included:
 - 2> act as specified in subclause 8.6.6.33 of TS 25.331.
- 1> if the IE "Measurement Feedback Info" is included:
 - 2> act as specified in subclause 8.6.6.34 of TS 25.331.
- 1> For FDD, if, as a result of the received message, the variable H_RNTI is set and the UE has a stored IE "HS-SCCH Info" and a stored IE "Measurement Feedback Info"; and
- 1> For FDD, if the UE has received IE "Uplink DPCH Power Control Info" and stored Δ_{ACK} , Δ_{NACK} and Ack-NACK Repetition factor; and
- 1> For FDD, if the UE has stored IEs "MAC-hs queue to add or reconfigure list", "MAC-d PDU size Info" and "RB Mapping Info" corresponding to the HS-PDSCH configuration;

- 2> set the variable HS_DSCH_RECEPTION to TRUE;
- 2> start HS-DSCH reception procedures according to the stored HS-PDSCH configuration:
 - 3> as stated in subclause 8.6.3.1b of TS 25.331 for the IE "H-RNTI";
 - 3> in subclause 8.6.6.33 of TS 25.331 for the IE "HS-SCCH Info": and
 - 3> in subclause 8.6.6.34 of TS 25.331 for the IE "Measurement Feedback Info".

. . .

If the IE "HS-SCCH Info" is included, the UE shall:

1> store the received configuration.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

- 1> in the case of FDD:
 - 2> receive the HS-SCCH(s) according to the IE "HS-SCCH channelisation code" on the serving HS-DSCH radio link applying the scrambling code as received in the IE "DL Scrambling code".
- 1> in the case of TDD:
 - 2> receive the HS-SCCH(s) according to the IEs "Timeslot Number", "Channelisation Code" and Midamble configuration IEs.
 - 2> transmit the HS-SICH according to the IEs "Timeslot Number", "Channelisation Code" and Midamble configuration IEs.
 - 2> for HS-SCCH power control the UE shall use the "BLER target" signalled in the first occurrence of the "HS-SCCH Set Configuration".
 - 2> in 3.84 Mcps TDD and 7.68 Mcps TDD:
 - 3> use the parameters specified in the IE "HS-SICH power control info" for open loop power control as defined in subclause 8.5.7.
 - 2> in 1.28 Mcps TDD:
 - 3> use the IE " PRX_{HS-SICH} " and "ACK-NAK power offset" to calculate and set an initial uplink transmission power;
 - 3> use the IE "TPC step size" upon reception of TPC commands for closed loop power control.

. . .

If the IE "Measurement Feedback Info" is included, the UE shall:

1> store the received configuration.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

1> use the information for the channel quality indication (CQI) procedure in the physical layer on the serving HS - DSCH rad io link.

Reference

3GPP TS 25.331 clauses 8.1.2, 8.3.1, 8,6,3,1, 8.6.3.1b, 8.6.5.6, 8.6.6.32, 8.6.6.33, 8.6.6.34

8.3.1.32.3 Test purpose

To confirm that the UE enters the CELL_DCH state after it receives a CELL UPDATE CONFIRM message with a physical channel configuration causing it to start HS-DSCH reception.

8.3.1.32.4 Method of test

Initial Condition

System Simulator: 1 cell.

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

UE: PS_DCCH_DTCH_HS_DSCH (state 6-17) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in the CELL_DCH state and has a radio bearer established that is mapped to HS-DSCH. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which invoke the UE to transit from CELL_DCH to URA_PCH. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters URA_PCH state.

The SS trans mits a PAGING TYPE 1 message. The UE enters the CELL_FACH state to transmit a CELL UPDATE message using uplink CCCH in respond to the paging.

The SS trans mits CELL UPDATE CONFIRM message which includes DPCH and HS-PDSCH physical channel parameters on the downlink DCCH. Then the UE resumes HS-DSCH reception and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

Expected sequence

Step	Direc	tion	Message	Comment
	UE	SS		
1			PHYSICAL CHANNEL RECONFIGURATION	
2			PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE enters the URA_PCH state
2a	S	S		SS sends the L2 ack on the PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and then waits 5 seconds to allow the UE to read system information before the next step. Note: The SS should continue to keep the dedicated channel configuration during the time when the L2 ack is sent to the UE.
3	-	_	PAGING TYPE 1	
4	-	>	CELL UPDATE	The UE enters the CELL_FACH state.
5	-	-	CELL UPDATE CONFIRM	
6	-3	>	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE enters the CELL_DCH state and starts HS-DSCH reception.

Specific Message Contents

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_FA CH from CELL_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
New C-RNTI	Not Present
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
URA Identity	0000 0000 0000 0001B

Paging Type 1 (Step 3)

Information Element	Value/remark
Message Type	
Paging record list	Only 1 entry
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	Equal to the U-RNTI assigned earlier.
- SRNC Identity	
- S-RNTI	
- CN originated page to connected mode UE	Not Present
BCCH modification info	Not Present

CELL UPDATE (Step 4)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in cell 1.
- SRNC Identity	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to "Paging response"

CELL UPDATE CONFIRM (Step 5)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New H-RNTI	'1010 1010 1010 1010'
RRC State indicator	CELL_DCH
CHOICE channel requirement	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A10.
Downlink information common for all radio links	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A10.
Downlink HS-PDSCH Information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A10.
Downlink information per radio link list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A10.

8.3.1.32.5 Test requirement

After step 1, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 3, the UE shall transmit a CELL UPDATE message.

After step 5, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

8.3.1.32a Cell Update: Transition from URA_PCH to CELL_DCH, start of HS-DSCH reception (Carriers belong to different frequency band for LCR TDD)

8.3.1.32a.1 Definition and applicability

Same definition and applicability as in clause 8.3.1.32.1 except that UE supports the primary carrier and the secondary carriers which are configured into different frequency bands

8.3.1.32a.2 Conformance requirement

Same conformance requirement as in clause 8.3.1.32 2.

8.3.1.32a.3 Test purpose

Same test purpose as in clause 8.3.1.32.3 except that UE can work in the primary carrier and the secondary carriers which are configured into different frequency bands.

8.3.1.32a.4 Method of test

Initial Condition

System Simulator: 1 cell, three carriers, each cell configure 3 carriers, one is the primary carrier, the other two are secondary carrier, primary carrier and secondary carrier which are configured into different frequency bands.

UE: PS_DCCH_DTCH_HS_DSCH (state 6-17) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports TDD
- UE supports HS-PDSCH
- UE supports multiple frequency bands simultaneously

Test Procedure:

The UE is in the CELL_DCH state and has a radio bearer established that is mapped to HS-DSCH. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which invoke the UE to transit from CELL_DCH to URA_PCH. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters URA_PCH state.

The SS trans mits a PAGING TYPE 1 message. The UE enters the CELL_FACH state to transmit a CELL UPDATE message using uplink CCCH in respond to the paging.

The SS trans mits CELL UPDATE CONFIRM message which includes DPCH and HS-PDSCH physical channel parameters on the downlink DCCH. Then the UE resumes HS-DSCH reception and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

Expected sequence:

Step	Direc	tion	Message	Comment
	UE	SS	_	
				Note: Cell is configured with primary carrier and the secondary carriers into different frequency bands.
1			PHYSICAL CHANNEL RECONFIGURATION	
2			PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE enters the URA_PCH state
2a	S	S		SS sends the L2 ack on the PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and then waits 5 seconds to allow the UE to read system information before the next step. Note: The SS should continue to keep the dedicated channel configuration during the time when the L2 ack is sent to the UE.
3	+	-	PAGING TYPE 1	
4	-	>	CELL UPDATE	The UE enters the CELL_FACH state.
5	(-	CELL UPDATE CONFIRM	
6	-2	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE enters the CELL_DCH state and starts HS-DSCH reception.

Same specific message contents as in clause 8.3.1.32.4.

8.3.1.32a.5 Test requirements

Same test requirements as in clause 8.3.1.32.5.

8.3.1.33 Cell Update: Transition from CELL_PCH to CELL_DCH, start of HS-DSCH reception, frequency modification

8.3.1.33.1 Definition

All UEs which support FDD or TDD and HS-PDSCH.

8.3.1.33.2 Conformance requirement

When the UE receives a PAGING TYPE 1 message, it shall perform the actions as specified below.

If the UE is in connected mode, for each occurrence of the IE "Paging record" included in the message the UE shall:

- 1> if the IE "Used paging identity" is a UTRAN identity and if this U-RNTI is the same as the U-RNTI allocated to the UE:
 - 2> if the optional IE "CN originated page to connected mode UE" is included:
 - 3> indicate reception of paging; and
 - 3> forward the IE "CN domain identity", the IE "Paging cause" and the IE "Paging record type identifier" to the upper layers.
 - 2> otherwise:
 - 3> perform a cell update procedure with cause "paging response" as specified in subclause 8.3.1.2.
 - 2> ignore any other remaining IE "Paging record" that may be present in the message.
- 1> otherwise:
 - 2> ignore that paging record.

. .

A UE shall initiate the cell update procedure in the following cases:

1> Paging response: In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC. If the new state is CELL_PCH, the response message shall be transmitted using the old configuration before the state transition, but the new C-RNTI shall be used if the IE "New C-RNTI" was included in the received reconfiguration message, and the UE shall: 1> when RLC has confirmed the successful transmission of the response message: 2> enter the new state (CELL_PCH); When the UE receives a CELL UPDATE CONFIRM/URA UPDATE CONFIRM message; and if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or if the message is received on DCCH: 2> if the IE "Frequency info" is included in the message: 3> if the IE "RRC State Indicator" is set to the value "CELL_DCH": 4> act on the IE "Frequency info" as specified in subclause 8.6.6.1 in TS 25.331. If the IE "New H-RNTI" is included, the UE shall: 1> if the IE "Downlink HS-PDSCH Information" is also included and the UE would enter CELL_DCH state according to subclause 8.6.3.3 of TS 25.331 applied on the received message: 2> store the value in the variable H_RNTI. When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall: 1> use the value of the variable H_RNTI as UE identity in the HS-SCCH reception procedure in the physical layer. If the IE "Added or Reconfigured DL TrCH information" is included then for the transport channel identified by the IE "DL Transport Channel Identity" the UE shall: 1> if the choice "DL parameters" is set to 'HSDSCH': 2> if the IE "HARQ Info" is included: 3> perform the actions specified in subclause 8.6.5.6b of TS 25.331.

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If, after completion of the procedure, the UE will be in CELL_DCH state, the UE shall:

1> if the IE "Frequency info" is included:

- 2> if the frequency is different from the currently used frequency:
 - 3> store and use the frequency indicated by the IE "Frequency Info"; and
 - 3> perform the physical layer synchronisation procedure A as specified in TS 25.214 (FDD only) or TS 25.224 (TDD only).

. . .

If the IE "Downlink HS-PDSCH Information" is included and the UE would enter CELL_DCH state according to subclause 8.6.3.3 applied on the received message, the UE shall:

- 1> if the IE "New H-RNTI" is included:
 - 2> perform the actions as specified in subclause 8.6.3. 1b of TS 25.331.
- 1> if the IE "HS-SCCH Info" is included:
 - 2> act as specified in subclause 8.6.6.33 of TS 25.331.
- 1> if the IE "Measurement Feedback Info" is included:
 - 2> act as specified in subclause 8.6.6.34 of TS 25.331.
- 1> For FDD, if, as a result of the received message, the variable H_RNTI is set and the UE has a stored IE "HS SCCH Info" and a stored IE "Measurement Feedback Info"; and
- 1> For FDD, if the UE has received IE "Uplink DPCH Power Control Info" and stored Δ_{ACK} , Δ_{NACK} and Ack-NACK Repetition factor; and
- 1> For FDD, if the UE has stored IEs "MAC-hs queue to add or reconfigure list", "MAC-d PDU size Info" and "RB Mapping Info" corresponding to the HS-PDSCH configuration;
 - 2> set the variable HS_DSCH_RECEPTION to TRUE;
 - 2> start HS-DSCH reception procedures according to the stored HS-PDSCH configuration:
 - 3> as stated in subclause 8.6.3.1b of TS 25.331 for the IE "H-RNTI";
 - 3> in subclause 8.6.6.33 of TS 25.331 for the IE "HS-SCCH Info"; and
 - 3> in subclause 8.6.6.34 of TS 25.331 for the IE "Measurement Feedback Info".

. . .

If the IE "HS-SCCH Info" is included, the UE shall:

1> store the received configuration.

When the variable HS DSCH RECEPTION is set to TRUE the UE shall:

- 1> in the case of FDD:
 - 2> receive the HS-SCCH(s) according to the IE "HS-SCCH channelisation code" on the serving HS-DSCH radio link applying the scrambling code as received in the IE "DL Scrambling code".
- 1> in the case of TDD:
 - 2> receive the HS-SCCH(s) according to the IEs "Times lot Number", "Channelisation Code" and Midamble configuration IEs.
 - 2> transmit the HS-SICH according to the IEs "Timeslot Number", "Channelisation Code" and Midamble configuration IEs.
 - 2> for HS-SCCH power control the UE shall use the "BLER target" signalled in the first occurrence of the "HS-SCCH Set Configuration".
 - 2> in 3.84 Mcps TDD and 7.68 Mcps TDD:

3> use the parameters specified in the IE "HS-SICH power control info" for open loop power control as defined in subclause 8.5.7.

2> in 1.28 Mcps TDD:

- 3> use the IE " PRX_{HS-SICH} " and "ACK-NAK power offset" to calculate and set an initial uplink transmission power;
- 3> use the IE "TPC step size" upon reception of TPC commands for closed loop power control.

. .

If the IE "Measurement Feedback Info" is included, the UE shall:

1> store the received configuration.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

1> use the information for the channel quality indication (CQI) procedure in the physical layer on the serving HS - DSCH rad io link.

Reference

3GPP TS 25.331 clauses 8.1.2, 8.2.2.3, 8.2.2.4, 8.3.1, 8,6,3,1, 8.6.3.1b, 8.6.5.6, 8.6.6.1, 8.6.6.32, 8.6.6.33, 8.6.6.34

8.3.1.33.3 Test purpose

To confirm that the UE enters the CELL_DCH state after it receives a CELL UPDATE CONFIRM message with a physical channel configuration causing it to start HS-DSCH reception on a different cell and frequency. To confirm that the UE enters CELL_PCH state on another frequency and stops HS-DSCH reception when it receives a PHYSICAL CHANNEL RECONFIGURATION message.

8.3.1.33.4 Method of test

Initial Condition

System Simulator: 2 cells - cell 1 is active and cell 6 is inactive.

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

UE: PS_DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD or TDD
- UE supports HS-PDSCH

Test Procedure

Table 8.3.1.33

Parameter	Unit	Cell 1			Cell 6		
		T0	T1	T2	T0	T1	T2
UTRARF Channel Number		Mid Range Frequency (f ₁)		High Range Frequency (f ₂)			
CPICH Ec (FDD)	dBm/3.84MHz	-60	-72	-60	Off	-55	-72
P-CCPCH RSCP (TDD)	dBm	-60	-72	-60	Off	-55	-72

Table 8.3.1.33 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

SS initiates P25 to make the UE move to state 6-17 as specified in TS34.108 clause7.4. The UE is in the CELL_DCH state in cell 1 and has a radio bearer established that is mapped to HS-DSCH. The SS has configured its downlink transmission power setting according to columns "T0" in table 8.3.1.33.

The SS switches its downlink transmission power settings to columns "T1". The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL_DCH to CELL_PCH in cell 6. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC, selects cell 6 and enters CELL_PCH state.

The SS trans mits a PAGING TYPE 1 message. The UE enters the CELL_FACH state to transmit a CELL UPDATE message using uplink CCCH in cell 6 in response to the paging.

The SS switches its downlink transmission power settings to columns "T2". The SS transmits CELL UPDATE CONFIRM message, which includes DPCH and HS-PDSCH physical channel parameters for cell 1 on the downlink DCCH. Then the UE establishes the DPCH and HS-PDSCH in cell 1 and resumes HS-DSCH reception and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH in cell 1.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction	Message	Comment
_	UE SS	1	
0	←→	P25	See below for the specific message content used in RADIO BEARER SETUP
1			message (Step 0) The UE is in CELL_DCH state in cell 1 and the SS configures its downlink transmission power setting according to columns "T1" in table 8.3.1.33.
2		PHYSICAL CHANNEL RECONFIGURATION	
3		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	After transmitting this message, the UE enters the CELL_PCH state in cell 6
4	SS		SS sends the L2 ack on the PHYSIC AL CHANNEL RECONFIGURATION COMPLETE message and then waits 5 seconds to allow the UE to read system information before the next step. Note: The SS should continue to keep the dedicated channel configuration during the time when the L2 ack is sent to the UE.
5	+	PAGING TYPE 1	
6	→	CELL UPDATE	The UE enters the CELL_FACH state.
7	SS		The SS switches its downlink transmission power settings to columns "T2" in table 8.3.1.33.
8	+	CELL UPDATE CONFIRM	
9	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE changes to cell 1, enters the CELL_DCH state and starts HS-DSCH reception.
10	←→	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

System Information Block type 1

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

RADIO BEARER SETUP (Step 0)

Use the same message as specified for " Packet to CELL_DCH / HS-DSCH from CELL_DCH in PS" in 34.108, except for the following:

Information Element	Value/remark
RAB information for setup	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition A10.
Added or Reconfigured DL TrCH information	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition A10.

PHYSICAL CHANNEL RECONFIGURATION (Step 2) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark	Version
New C-RNTI	Not Present	
RRC State Indicator	CELL_PCH	
UTRAN DRX cycle length coefficient	3	
Frequency info		
- CHOICE mode	FDD	
- UARFCN uplink(Nu)	Not present	
	Absence of this IE is equivalent to applying the	
	default duplex distance defined for the operating	
	frequency according to 3GPP TS 25.101 [21]	
- UARFCN downlink(Nd)	Same downlink UARFCN as used for cell 6	
Downlink information for each radio link list		
- Downlink information for each radio link		
- Choice mode	FDD	
- Primary CPICH info		
- Primary scrambling code	Set to the Primary scrambling code used for cell6	
- Serving HS-DSCH radio link indicator	FALSE	
- Downlink DPCH info for each RL	Not present	
- SCCPCH information for FACH	Not Present	R99 and Rel-4 only

PHYSICAL CHANNEL RECONFIGURATION (Step 2) (1.28Mcps TDD)

Use the same message sub-type titled "Packet to CELL_FA CH from CELL_DCH in PS" in TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark	Version
New C-RNTI	Not Present	
RRC State Indicator	CELL_PCH	
UTRAN DRX cycle length coefficient	3	
Frequency info		
- CHOICE mode	TDD	
- UARFCN (Nt)	Same UARFCN as used for cell 6	
Downlink information for each radio link list		
- Downlink information for each radio link		
- Choice mode	TDD	
- Primary CCPCH info		
- Choice mode	TDD	
- Choice TDD Option	1.28Mcps TDD	
- TSTD indicator	FALSE	
- Cell parameters ID	Reference clause 6.1.4 Default settings for cell 6	
- SCTD indicator	FALSE	
- Downlink DPCH info for each RL	Not present	
- SCCPCH information for FACH	Not Present	R99 and Rel-4
		only

PHYSICAL CHANNEL RECONFIGURATION (Step 2) (3.84Mcps TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark	Version
New C-RNTI	Not Present	
RRC State Indicator	CELL_PCH	
UTRAN DRX cycle length coefficient	3	
Frequency info		
- CHOICE mode	TDD	
- UARFCN (Nt)	Same UARFCN as used for cell 6	
Downlink information for each radio link list		
- Downlink information for each radio link		
- Choice mode	TDD	
- Primary CCPCH info		
- Choice mode	TDD	
- Choice TDD Option	3.84Mcps TDD	
- Choice SyncCase	Sync Case 2	
- Timeslot	0	
- Cell parameters ID	Reference clause 6.1.4 Default settings for cell 6	
- SCTD indicator	FALSE	
- Downlink DPCH info for each RL	Not present	
- SCCPCH information for FACH	Not Present	R99 and Rel-4
		only

PHYSICAL CHANNEL RECONFIGURATION (Step 2) (3.84Mcps TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark	Version
New C-RNTI	Not Present	
RRC State Indicator	CELL_PCH	
UTRAN DRX cycle length coefficient	3	
Frequency info		
- CHOICE mode	TDD	
- UARFCN (Nt)	Same UARFCN as used for cell 6	
Downlink information for each radio link list		
- Downlink information for each radio link		
- Choice mode	TDD	
- Primary CCPCH info		
- Choice mode	TDD	
- Choice TDD Option	7.68 Mcps TDD	
- Choice SyncCase	Sync Case 2	
- Timeslot	0	
- Cell parameters ID	Reference clause 6.1.4 Default settings for cell 6	
- SCTD indicator	FALSE	
- Downlink DPCH info for each RL	Not present	
- SCCPCH information for FACH	Not Present	R99 and Rel-4 only

Paging Type 1 (Step 5)

Information Element	Value/remark		
Message Type			
Paging record list	Only 1 entry		
Paging record			
- CHOICE Used paging identity	UTRAN identity		
- U-RNTI	Equal to the U-RNTI assigned earlier.		
- SRNC Identity			
- S-RNTI			
- CN originated page to connected mode UE	Not Present		
BCCH modification info	Not Present		

CELL UPDATE (Step 6)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in cell 1.
- SRNC Identity	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to "Paging response"

CELL UPDATE CONFIRM (Step 8) (FDD)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark	Version
New H-RNTI	'0101 0101 0101 0101'	
RRC State indicator	CELL_DCH	
Frequency info	Set to the frequency of cell 1	
CHOICE channel requirement	Same as the set defined in RADIO BEARER	
·	SETUP message found in TS 34.108 clause 9	
	under condition A10.	
Downlink information common for all radio links	Same as the set defined in RADIO BEARER	
	SETUP message found in TS 34.108 clause 9	
	under condition A10.	
Downlink HS-PDSCH Information	Same as the set defined in RADIO BEARER	
	SETUP message found in TS 34.108 clause 9	
	under condition A10.	
Downlink information for each radio link list		
- Downlink information for each radio link		
- Choice mode	FDD	
- Primary CPICH info		
- Primary scrambling code	Set to the primary scrambling code of cell 1	
- Serving HS-DSCH radio link indicator	TRUE	
- Downlink DPCH info for each RL		
- Primary CPICH usage for channel	Primary CPICH may be used	
estimation		
- DPCH frame offset	Set to value Default DPCH Offset Value (as	
	currently stored in SS) mod 38400	
- Secondary CPICH info	Not Present	
- DL channelisation code		
- Secondary scrambling code	1	
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set	
- Code number	1	
 Scrambling code change 	No change	
- TPC combination index	0	
- Power offset Ptpc-dpdch	Not Present	
- SSDT Cell Identity	Not Present	R99 and Rel-4
		only
 Closed loop timing adjustment mode 	Not Present	
- SCCPCH information for FACH		R99 and Rel-4
		only

CELL UPDATE CONFIRM (Step 8) (1.28Mcps TDD)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark	Version
New H-RNTI	'0101 0101 0101 0101'	
RRC State indicator	CELL_DCH	
Frequency info	Set to the frequency of cell 1	
CHOICE channel requirement	Same as the set defined in RADIO BEARER	
	SETUP message found in TS 34.108 clause 9	
	under condition A10.	
Downlink information common for all radio links	Same as the set defined in RADIO BEARER	
	SETUP message found in TS 34.108 clause 9	
	under condition A10.	
Downlink HS-PDSCH Information	Same as the set defined in RADIO BEARER	
	SETUP message found in TS 34.108 clause 9	
	under condition A10.	
Downlink information for each radio link list		
- Downlink information for each radio link	TDD	
- Choice mode	טטו	
- Primary CCPCH info	TDD	
- Choice mode	TDD	
- Choice TDD Option - TSTD indicator	1.28Mcps TDD FALSE	
- Cell parameters ID	Reference clause 6.1.4 Default settings for cell 1	
- SCTD indicator	FALSE	
- Downlink DPCH info for each RL	Same as the set defined in RADIO BEARER	
- DOWNINK DI CITINIO IOI EACH NE		
	SETUP message found in TS 34.108 clause 9 under condition A10.	

CELL UPDATE CONFIRM (Step 8) (3.84Mcps TDD)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark	Version
New H-RNTI	'0101 0101 0101 0101'	
RRC State indicator	CELL_DCH	
Frequency info	Set to the frequency of cell 1	
CHOICE channel requirement	Same as the set defined in RADIO BEARER	
	SETUP message found in TS 34.108 clause 9	
	under condition A10.	
Downlink information common for all radio links	Same as the set defined in RADIO BEARER	
	SETUP message found in TS 34.108 clause 9	
	under condition A10.	
Downlink HS-PDSCH Information	Same as the set defined in RADIO BEARER	
	SETUP message found in TS 34.108 clause 9	
	under condition A10.	
Downlink information for each radio link list		
- Downlink information for each radio link		
- Choice mode	TDD	
- Primary CCPCH info		
- Choice mode	TDD	
- Choice TDD Option	3.84Mcps TDD	
- Choice SyncCase	Sync Case 2	
- Timeslot	0	
- Cell parameters ID	Reference clause 6.1.4 Default settings for cell 1	
- SCTD indicator	FALSE	
- Downlink DPCH info for each RL	Same as the set defined in RADIO BEARER	
	SETUP message found in TS 34.108 clause 9	
	under condition A10.	

CELL UPDATE CONFIRM (Step 8) (7.68 Mcps TDD)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark	Version
New H-RNTI	'0101 0101 0101 0101'	
RRC State indicator	CELL_DCH	
Frequency info	Set to the frequency of cell 1	
CHOICE channel requirement	Same as the set defined in RADIO BEARER	
	SETUP message found in TS 34.108 clause 9	
	under condition A10.	
Downlink information common for all radio links	Same as the set defined in RADIO BEARER	
	SETUP message found in TS 34.108 clause 9	
	under condition A10.	
Downlink HS-PDSCH Information	Same as the set defined in RADIO BEARER	
	SETUP message found in TS 34.108 clause 9	
	under condition A10.	
Downlink information for each radio link list		
- Downlink information for each radio link		
- Choice mode	TDD	
- Primary CCPCH info		
- Choice mode	TDD	
- Choice TDD Option	7.68 Mcps TDD	
- Choice SyncCase	Sync Case 2	
- Timeslot	0	
- Cell parameters ID	Reference clause 6.1.4 Default settings for cell 1	
- SCTD indicator	FALSE	
- Downlink DPCH info for each RL	Same as the set defined in RADIO BEARER	
	SETUP message found in TS 34.108 clause 9	
	under condition A10.	

8.3.1.33.5 Test requirement

After step 2, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 5, the UE shall transmit a CELL UPDATE message.

After step 8, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC in cell 1.

8.3.1.33a Cell Update: Transition from CELL_PCH to CELL_DCH, start of HS-DSCH reception, frequency modification(TDD)

8.3.1.33a.1 Definition

All UEs which support TDD and HS-PDSCH.

8.3.1.33a.2 Conformance requirement

When the UE receives a PAGING TYPE 1 message, it shall perform the actions as specified below.

If the UE is in connected mode, for each occurrence of the IE "Paging record" included in the message the UE shall:

- 1> if the IE "Used paging identity" is a UTRAN identity and if this U-RNTI is the same as the U-RNTI allocated to the UE:
- 2> if the optional IE "CN originated page to connected mode UE" is included:
- 3> indicate reception of paging; and
- 3> forward the IE "CN domain identity", the IE "Paging cause" and the IE "Paging record type identifier" to the upper layers.

2> otherwise:
3> perform a cell update procedure with cause "paging response" as specified in subclause 8.3.1.2.
2> ignore any other remaining IE "Paging record" that may be present in the message.
1> otherwise:
2> ignore that paging record.
...
A UE shall initiate the cell update procedure in the following cases:
1> Paging response:
...

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

. . .

If the new state is CELL_PCH, the response message shall be transmitted using the old configuration before the state transition, but the new C-RNTI shall be used if the IE "New C-RNTI" was included in the received reconfiguration message, and the UE shall:

1> when RLC has confirmed the successful transmission of the response message:

• • •

2> enter the new state (CELL_PCH);

. . .

When the UE receives a CELL UPDATE CONFIRM/URA UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or
- if the message is received on DCCH:
- 2> if the IE "Frequency info" is included in the message:
- 3> if the IE "RRC State Indicator" is set to the value "CELL_DCH":
- 4> act on the IE "Frequency info" as specified in subclause 8.6.6.1 in TS 25.331.

. . .

If the IE "New H-RNTI" is included, the UE shall:

1> if the IE "Downlink HS-PDSCH Information" is also included and the UE would enter CELL_DCH state according to subclause 8.6.3.3 of TS 25.331 applied on the received message:

2> store the value in the variable H_RNTI.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

1> use the value of the variable H_RNTI as UE identity in the HS-SCCH reception procedure in the physical layer.

. . .

If the IE "Added or Reconfigured DL TrCH information" is included then for the transport channel identified by the IE "DL Transport Channel Identity" the UE shall:

- 1> if the choice "DL parameters" is set to 'HSDSCH':
- 2> if the IE "HARQ Info" is included:
- 3> perform the actions specified in subclause 8.6.5.6b of TS 25.331.

. .

If, after completion of the procedure, the UE will be in CELL_DCH state, the UE shall:

- 1> if the IE "Frequency info" is included:
- 2> if the frequency is different from the currently used frequency:
- 3> store and use the frequency indicated by the IE "Frequency Info"; and
- 3> perform the physical layer synchronisation procedure A as specified in TS 25.224 (TDD only).

. . .

If the IE "Downlink HS-PDSCH Information" is included and the UE would enter CELL_DCH state according to subclause 8.6.3.3 applied on the received message, the UE shall:

- 1> if the IE "New H-RNTI" is included:
- 2> perform the actions as specified in subclause 8.6.3.1b of TS 25.331.
- 1> if the IE "HS-SCCH Info" is included:
- 2> act as specified in subclause 8.6.6.33 of TS 25.331.
- 1> if the IE "Measurement Feedback Info" is included:
- 2> act as specified in subclause 8.6.6.34 of TS 25.331.
- 2> set the variable HS_DSCH_RECEPTION to TRUE;
- 2> start HS-DSCH reception procedures according to the stored HS-PDSCH configuration:
- 3> as stated in subclause 8.6.3.1b of TS 25.331 for the IE "H-RNTI";
- 3> in subclause 8.6.6.33 of TS 25.331 for the IE "HS-SCCH Info"; and
- 3> in subclause 8.6.6.34 of TS 25.331 for the IE "Measurement Feedback Info".

. . .

If the IE "HS-SCCH Info" is included, the UE shall:

1> store the received configuration.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

- 1> in the case of TDD:
- 2> receive the HS-SCCH(s) according to the IEs "Times lot Number", "Channelisation Code" and Midamble configuration IEs.
- 2> transmit the HS-SICH according to the IEs "Timeslot Number", "Channelisation Code" and Midamble configuration IEs.
- 2> for HS-SCCH power control the UE shall use the "BLER target" signalled in the first occurrence of the "HS-SCCH Set Configuration".
- 2> in 3.84 Mcps TDD and 7.68 Mcps TDD:

3> use the parameters specified in the IE "HS-SICH power control info" for open loop power control as defined in subclause 8.5.7.

2> in 1.28 Mcps TDD:

3> use the IE " PRX_{HS-SICH} " and "ACK-NA K power offset" to calculate and set an initial uplink transmission power;

3> use the IE "TPC step size" upon reception of TPC commands for closed loop power control.

. . .

If the IE "Measurement Feedback Info" is included, the UE shall:

1> store the received configuration.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

1> use the information for the channel quality indication (CQI) procedure in the physical layer on the serving HS-DSCH radio link.

Reference

3GPP TS 25.331 clauses 8.1.2, 8.2.2.3, 8.2.2.4, 8.3.1, 8,6,3,1, 8.6.3.1b, 8.6.5.6, 8.6.6.1, 8.6.6.32, 8.6.6.33, 8.6.6.34

8.3.1.33a.3 Test purpose

To confirm that the UE enters the CELL_DCH state after it receives a CELL UPDATE CONFIRM message with a physical channel configuration causing it to start HS-DSCH reception on a different cell and frequency. To confirm that the UE enters CELL_PCH state on another frequency and stops HS-DSCH reception when it receives a PHYSICAL CHANNEL RECONFIGURATION message.

8.3.1.33a.4 Method of test

Initial Condition

System Simulator: 2 cells - cell 1 is active and cell 6 is inactive. Each cell configure 3 carriers, one is the primary carrier, the other two are secondary carrier.

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

UE: PS_DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports TDD
- UE supports HS-PDSCH

Test Procedure

Table 8.3.1.33a

Parameter	Unit	Cell 1		Cell 6			
		T0	T1	T2	T0	T1	T2
UTRA RF Channel Number		Mid Range Frequency (f ₁)		High	Range F (f ₂)	requency	
P-CCPCH RSCP (TDD)	dBm	-60	-72	-60	Off	-55	-72

Table 8.3.1.33 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

SS initiates P25 to make the UE move to state 6-17 as specified in TS34.108 clause7.4. The UE is in the CELL_DCH state in cell 1 and has a radio bearer established that is mapped to HS-DSCH. The SS has configured its downlink transmission power setting according to columns "T0" in table 8.3.1.33a.

The SS switches its downlink transmission power settings to columns "T1". The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL_DCH to CELL_PCH in cell 6. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC, selects cell 6 and enters CELL_PCH state.

The SS trans mits a PAGING TYPE 1 message. The UE enters the CELL_FACH state to transmit a CELL UPDATE message using uplink CCCH in cell 6 in response to the paging.

The SS switches its downlink transmission power settings to columns "T2". The SS transmits CELL UPDATE CONFIRM message, which includes DPCH and HS-PDSCH physical channel parameters for cell 1 on the downlink DCCH. Then the UE establishes the DPCH and HS-PDSCH in cell 1 and resumes HS-DSCH reception and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH in cell 1.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
1 -	UE	SS	7	
0	←→	-	P25	See below for the specific message content used in RADIO BEARER SETUP message (Step 0)
1				The UE is in CELL_DCH state in cell 1 and the SS configures its downlink transmission power setting according to columns "T1" in table 8.3.1.33a.
2			PHYSICAL CHANNEL RECONFIGURATION	
3			PHYSICAL CHANNEL RECONFIGURATION COMPLETE	After transmitting this message, the UE enters the CELL_PCH state in cell 6
4	SS			SS sends the L2 ack on the PHYSIC AL CHANNEL RECONFIGURATION COMPLETE message and then waits 5 seconds to allow the UE to read system information before the next step. Note: The SS should continue to keep the dedicated channel configuration during the time when the L2 ack is sent to the UE.
5	-		PAGING TYPE 1	
6	→		CELL UPDATE	The UE enters the CELL_FACH state.
7	SS			The SS switches its downlink transmission power settings to columns "T2" in table 8.3.1.33a.
8	←		CELL UPDATE CONFIRM	
9	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE changes to cell 1, enters the CELL_DCH state and starts HS-DSCH reception.
10	←→		CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

System Information Block type 1

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

RADIO BEARER SETUP (Step 0)

Use the same message as specified for " Packet to CELL_DCH / HS-DSCH from CELL_DCH in PS" in 34.108, except for the following:

Information Element	Value/remark
RAB information for setup	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A10.
Added or Reconfigured DL TrCH information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A10.

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark	Version
New C-RNTI	Not Present	
RRC State Indicator	CELL_PCH	
UTRAN DRX cycle length coefficient	3	
Frequency info		
- CHOICE mode	TDD	
- UARFCN (Nt)	Same UARFCN as used for cell 6	
Downlink information for each radio link list		
- Downlink information for each radio link		
- Choice mode	TDD	
- Primary CCPCH info		
- Choice mode	TDD	
- Choice TDD Option	1.28Mcps TDD	
- TSTD indicator	FALSE	
- Cell parameters ID	Reference clause 6.1.4 Default settings for cell 6	
- SCTD indicator	FALSE	
- Downlink DPCH info for each RL	Not present	
- SCCPCH information for FACH	Not Present	R99 and Rel-4 only

Paging Type 1 (Step 5)

Information Element	Value/remark
Message Type	
Paging record list	Only 1 entry
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	Equal to the U-RNTI assigned earlier.
- SRNC Identity	
- S-RNTI	
- CN originated page to connected mode UE	Not Present
BCCH modification info	Not Present

CELL UPDATE (Step 6)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in cell 1.
- SRNC Identity	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to "Paging response"

CELL UPDATE CONFIRM (Step 8)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark	Version
New H-RNTI	'0101 0101 0101 0101'	
RRC State indicator	CELL_DCH	
Frequency info	Set to the frequency of cell 1	
CHOICE channel requirement	Same as the set defined in RADIO BEARER	
	SETUP message found in TS 34.108 clause 9	
	under condition A10.	
Downlink information common for all radio links	Same as the set defined in RADIO BEARER	
	SETUP message found in TS 34.108 clause 9	
	under condition A10.	
Downlink HS-PDSCH Information	Same as the set defined in RADIO BEARER	
	SETUP message found in TS 34.108 clause 9	
	under condition A10.	
Downlink information for each radio link list		
- Downlink information for each radio link		
- Choice mode	TDD	
- Primary CCPCH info		
- Choice mode	TDD	
- Choice TDD Option	1.28Mcps TDD	
- TSTD indicator	FALSE	
- Cell parameters ID	Reference clause 6.1.4 Default settings for cell 1	
- SCTD indicator	FALSE	
CellUpdateConfirm-CCCH-r5-TDD128-add-ext-IEs		
frequencylnfo	secondary carrier frequency in cell 6	

8.3.1.33a.5 Test requirement

After step 2, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 5, the UE shall transmit a CELL UPDATE message.

After step 8, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC in cell 1.

8.3.1.34 Cell Update: Transition from CELL_DCH to CELL_FACH, stop of HS-DSCH reception

8.3.1.34.1 Definition

8.3.1.34.2 Conformance requirement

1> Radio link failure:

. . .

3> if the UE is in CELL_DCH state and the criteria for radio link failure are met as specified in subclause 8.5.6 of TS 25.331; or

. . .

4> perform cell update using the cause "radio link failure".

When initiating the URA update or cell update procedure, the UE shall:

. . .

- 1> if HS-DSCH is configured:
 - 2> stop any HS-DSCH reception procedures;
 - 2> clear any stored HS-PDSCH configuration;
 - 2> act as if the IE "MAC-hs reset indicator" is received and set to TRUE;
 - 2> release all HARQ resources;
 - 2> remove any H-RNTI stored;
 - 2> clear the variable H_RNTI;
 - 2> set the variable HS_DSCH_RECEPTION to FALSE.
- 1> if the UE is not already in CELL_FACH state:
 - 2> move to CELL_FACH state;
 - 2> select PRA CH according to subclause 8.5.17 of TS 25.331;
 - 2> select Secondary CCPCH according to subclause 8.5.19 of TS 25.331;
 - 2> use the transport format set given in system information as specified in subclause 8.6.5.1 of TS 25.331.

Reference

3GPP TS 25.331 clauses 8.3.1.2

8.3.1.34 .3 Test purpose

To confirm that the UE stops HS-DSCH reception after a radio link failure in CELL_DCH during HS-DSCH reception.

8.3.1.34 .4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active and cell 2 is inactive.

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

UE: PS-DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.1.34

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRARF Channel Number		Mid Range Test Mid Range Test			
		Frequ	ency	Frequ	ency
CPICH Ec (FDD)	dBm/3.84MHz	-60	OFF	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	OFF	-75	-60

Table 8.3.1.34 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked "T0" denote the initial conditions.

The UE is in CELL_DCH state and only signalling radio bearers have been established. SS initiates P25 to make the UE to move to state 6-17 as specified in TS 34.108 clause 7.4. The UE is in the CELL_DCH state and has a radio bearer

established that is mapped to HS-DSCH. SS configures its downlink transmission power settings according to column "T1" in table 8.3.1.34. The UE shall detect a radio link failure in cell 1.

Then it shall attempt to re-select to cell 2. After that, it shall then enter CELL_FACH state and transmit a CELL UPDATE message on the uplink CCCH to SS.

The SS trans mits a CELL UPDATE CONFIRM message which request the UE to transit to CELL_FACH state. The UE responds with a RADIO BEARER RECONFIGURATION COMPLETE message.

Expected sequence

Step	Direct	tion	Message	Comment
	UE	SS		
0	-	>	P25	See below for the specific
				message content used in
				RADIO BEARER SETUP
				message. (Step 0)
1				SS configures cell 1 and 2
				according to column "T1"
				in table 8.3.1.34. SS starts
				to listen to the uplink
				CCCH of cell 2.
2				The UE detects the radio
				link failure and stops
				reception of HS-DSCH.
3	\rightarrow		CELL UPDATE	The UE shall find a new
				cell 2 and the value "radio
				link failure" shall be set in
				IE "Cell update cause".
4	←		CELL UPDATE CONFIRM	
5	\rightarrow		RADIO BEARER RECONFIGURATION	
			COMPLETE	

Specific Message Contents

System Information Block type 1

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2
- T313	2

RADIO BEARER SETUP (Step 0) (FDD)

Use the same message as specified for " Packet to CELL_DCH / HS-DSCH from CELL_DCH in PS" in 34.108, except for the following:

Information Element	Value/remark
Added or Reconfigured DL TrCH information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition
	A9, with the following exception;
- MAC-d PDU size	656

RADIO BEARER SETUP (Step 0) (TDD)

Use the same message as specified for "Packet to CELL_DCH / HS-DSCH from CELL_DCH in PS" in 34.108.

CELL UPDATE (Step 3)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in cell 1.
- SRNC Identity	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to "Radio link failure"

CELL UPDATE CONFIRM (Step 4) (FDD)

Use the same message sub-type found in TS 34.108 clause 9 with the exception of the following IEs:

Information Element	Value/remark
New C-RNTI	'0101 0101 0101 0101'
RLC re-establish indicator (RB2, RB3 and RB4)	TRUE
RB information to reconfigure list	
- RB information to reconfigure	(AM DCCH for RRC)
- RB identity	2
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	ANARIO
- CHOICE Uplink RLC mode - Transmission RLC discard	AMRLC
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
Last retransmission PDU pollPoll_Window	TRUE 99
- Foil_vviridow - Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	Not Present
 RB stop/continue RB information to reconfigure 	Not Present (AM DCCH for NAS_DT High priority)
- RB identity	3
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	
- SDU discard mode	No discard
MAX_DAT	15
- Transmission window size - Timer_RST	128
- Timer_KST - Max_RST	600
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
 Last transmission PDU poll 	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic - CHOICE Downlink RLC mode	Not Present AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
 Missing PDU indicator 	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS_DT Low priority)
- RB identity	4

Information Element	Value/remark
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
 Timer_poll_prohibit 	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure - RB identity	(AM DTCH)
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	Not i lesent
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	/ WITCE
- SDU discard mode	No discard
- MAX DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	Not Present
- RB stop/continue	Not Present
Deleted DL TrCH Information	He Dech
- Downlink transport channel type	HS-DSCH
- DL HS-DSCH MAC-d flow identity	0
Added or Reconfigured DL TrCH information - MAC-d PDU size	336
- IVIAU-U FDU SIZE	330

CELL UPDATE CONFIRM (Step 4) (1.28Mcps TDD)

Use the same message sub-type found in TS 34.108 clause 9 with the exception of the following IEs:

Information Element	Value/remark		
New C-RNTI	'0101 0101 0101 0101'		
RLC re-establish indicator (RB2, RB3 and RB4)	TRUE		
RB information to reconfigure list			
- RB information to reconfigure	(AM DCCH for RRC)		
- RB identity	2		
- PDCP info	Not Present		
- PDCP SN info	Not Present		
- RLC info	AMBLO		
- CHOICE Uplink RLC mode	AMRLC		
 Transmission RLC discard SDU discard mode 	No discard		
- MAX_DAT	15		
- Transmission window size	128		
- Timer_RST	600		
- Max_RST	4		
- Polling info			
Timer_poll_prohibit	250		
- Timer_poll	250		
- Poll_PDU	Not present		
- Poll_SDU	1 TRUE		
 Last transmission PDU poll Last retransmission PDU poll 	TRUE		
- Poll_Window	99		
- Timer_poll_periodic	Not Present		
- CHOICE Downlink RLC mode	AMRLC		
- In-sequence delivery	TRUE		
- Receiving window size	128		
- Downlink RLC status info			
 Timer_status_prohibit 	200		
- Timer_EPC	Not present		
- Missing PDU indicator	TRUE		
- Timer_STATUS_periodic	Not Present Not Present		
 RB mapping info RB stop/continue 	Not Present		
- RB information to reconfigure	(AM DCCH for NAS_DT High priority)		
- RB identity	3		
- PDCP info	Not Present		
- PDCP SN info	Not Present		
- RLC info			
- CHOICE Uplink RLC mode	AMRLC		
- Transmission RLC discard			
- SDU discard mode	No discard		
- MAX_DAT - Transmission window size	15 128		
- Transmission window size - Timer_RST	600		
- Max_RST	4		
- Polling info			
- Timer_poll_prohibit	250		
- Timer_poll	250		
- Poll_PDU	Not present		
- Poll_SDU	1		
- Last transmission PDU poll	TRUE		
- Last retransmission PDU poll	TRUE		
- Poll_Window	99 Not Present		
- Timer_poll_periodic - CHOICE Downlink RLC mode	AMRLC		
- In-sequence delivery	TRUE		
- Receiving window size	128		
- Downlink RLC status info			
- Timer_status_prohibit	200		
- Timer_EPC	Not present		
- Missing PDU indicator	TRUE		
- Timer_STATUS_periodic	Not Present		
- RB mapping info	Not Present		
 RB stop/continue RB information to reconfigure 	Not Present		
- RB identity	(AM DCCH for NAS_DT Low priority) 4		
- No lucituity			

. PDCP info	Information Element	Value/remark
RLC info		
- CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Polling info - Timer_poll_prohibit - Poll_PDU - Poll_SDU - Last transmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - Insequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - RB mapping info - RB mapping info - POL_POIL POL - RC HOICE Uplink RLC mode - Transmission RLC discard - MAX_DAT - Transmission window size - Downlink RLC mode - Transmission RLC discard - MAX_DAT - Transmission window size - Timer_poll_prohibit - Timer_pol	- PDCP SN info	Not Present
- Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_ prohibit - Poll. PDU - Poll. PDU - Poll. PDU - Poll. SDU - Last transmission PDU poll - Last teltansmission PDU poll - Poll. Window - Timer_poll_ periodic - CHOICE Downlink RLC mode - In-sequence delivery - Receiving window size - Timer_status_prohibit - Timer_status_prohibit - RB stop/continue - RB information to reconfigure - SDU discard mode - MAX_DAT - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission reconfigure - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_ prohibit - Poll_ PDU - Poll_ PDU - Poll_ PDU - Poll_ PDU - Poll_ SDU - Last transmission PDU poll - Last transmission PDU poll - Poll_ Poll_ Poll - Poll_ Poll_ Not Present - TRUE -	- RLC info	
- SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Polling info - Timer_poll_prohibit - Poll_PDU - Poll_SDU - Last transmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - In-sequence delivery - Timer_STATUS_periodic - RB stopicontinue - RB Identity - RB Information to reconfigure - Timer_RST - POLI SDU - Timer_RST - RB Information to reconfigure - RB Information to reconfigure - Transmission RLC discard - PDCP Info - CHOICE Uplink RLC mode - MAX_DAT - Transmission window size - Downlink RLC status info - Timer_RST - Polling info - CHOICE Uplink RLC mode - Transmission window size - Timer_RST - Polling info - CHOICE Uplink RLC mode - MAX_DAT - Transmission window size - Timer_RST - Polling info - Last transmission PDU poll - Poll_PDU - Timer_poll_periodic - CHOICE Downlink RLC mode - In-sequence delivery - Receiving window size - Inser_poll_periodic - CHOICE Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_poll_periodic - RB stopicontinue - Not Present - TRUE - SED - Downlink RLC status info - Timer_status_prohibit - Timer_status_prohib	- CHOICE Uplink RLC mode	AM RLC
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- Polling info	- Timer_RST	600
- Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - RB stop/continue - RB stop Son Not Present - SDU discard mode - MAX_DAT - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_poll_prohibit - Not Present - TRUE - Mssing PDU indicator - Timer_status_prohibit - Not Present - Not Pr	- Max_RST	4
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Poll SDU	- Timer_poll_prohibit	250
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- Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Mssing PDU indicator - RB mapping info - RB stop/continue - RB information to reconfigure - RB information to reconfigure - PDCP SN info - PDCP SN info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Polling info - Timer_poll - Poll_PDU - Poll_PDU - Last transmission PDU poll - Last retransmission PDU poll - Last retransmission PDU poll - Poll_SDU - Timer_poll - Poll_Poll_periodic - CHOICE Downlink RLC mode - Transmission window size - Timer_poll - Poll_PDU - Poll_PDU - Poll_PDU - Poll_PDU - Not Present - TRUE - SDU discard - SDU discard mode - MAX_DAT - Timer_poll periodic - Timer_poll - Poll_PDU - Poll_PDU - Poll_PDU - Poll_PDU - Not Present - TRUE - Poll_POIN Not Present - TRUE - TRUE - TRUE - TRUE - Poll_POIN Not Present - TRUE - T	- Poll_PDU	Not present
- Last retransmission PDU poll Poll, Window 99 - Timer_poll_periodic - CHOICE Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_status_prohibit - Timer_STATUS_periodic - RB mapping info RB stop/continue - RB identity - PDC Pinfo - PDC PS N info - RCIC info - CHOICE Uplink RLC mode - MAX_DAT - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Poll_SDU - Poll_PDU - Poll_SDU - Poll_PDU - Receiving window size - Imer_poll - Poll_Pdindow - TRUE - Receiving window size - Imer_poll_periodic - Horesent - RM RLC - TRUE - Receiving window size - Poll_PDU - TRUE - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_st		1
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- CHOICE Downlink RLC mode		99
- In-sequence delivery Receiving window size 128 - Downlink RLC status info - Timer_status_prohibit 200 - Timer_status_prohibit 7 - RB mapping info Not Present Not Present - RB stop/continue Not Present Not Present - RB identity 20 - PDCP sn info Not Present Not Present - PDCP sn info Not Present - PDCP sn info Not Present - PDCP sn info Not Present Not Present - PDCP sn info Not Present Not Present - PDCP sn info Not Present 15 - PCP sn info Not Present 15 - SDU discard mode No discard 15 - Transmission RLC discard 15 - Transmission window size 128 - Timer_RST 600 15 - POlling info 10 - Poll_prohibit 250 10 - Poll_prohibit 17 18 - Poll_prohibit 18 18 - Poll_prohi	- Timer_poll_periodic	Not Present
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- Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - RB mapping info - RB stop/continue Deleted DL TrCH Information - Downlink transport channel type Not Present		
- Timer_poll_periodic - CHOICE Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - RB mapping info - RB stop/continue Deleted DL TrCH Information - Downlink transport channel type Not Present AM RLC AM R		
- CHOICE Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - RB mapping info - RB stop/continue Deleted DL TrCH Information - Downlink transport channel type AM RLC TRUE 200 Not Present TRUE Not Present		
- In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - RB mapping info - RB stop/continue Deleted DL TrCH Information - Downlink transport channel type TRUE 200 Not Present TRUE Not Present		
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- Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - RB mapping info - RB stop/continue Deleted DL TrCH Information - Downlink transport channel type Not Present		
- Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - RB mapping info - RB stop/continue Deleted DL TrCH Information - Downlink transport channel type Not Present		200
- Timer_STATUS_periodic Not Present - RB mapping info Not Present - RB stop/continue Not Present Deleted DL TrCH Information - Downlink transport channel type HS-DSCH		Not Present
- RB mapping info - RB stop/continue Deleted DL TrCH Information - Downlink transport channel type Not Present Not Present HS-DSCH	- Missing PDU indicator	TRUE
- RB stop/continue Not Present Deleted DL TrCH Information - Downlink transport channel type HS-DSCH	- Timer_STATUS_periodic	Not Present
Deleted DL TrCH Information - Downlink transport channel type HS-DSCH		
- Downlink transport channel type HS-DSCH		Not Present
	Deleted DL TrCH Information	
- DL HS-DSCH MAC-d flow identity 0		
	- DL HS-DSCH MAC-d flow identity	0

8.3.1.34 .5 Test requirement

After step 2, the UE shall transmit a CELL UPDATE message and stop HS-DSCH reception.

- 8.3.1.35 Cell Update: Transition from CELL_DCH to CELL_DCH, with active HS-DSCH reception
- 8.3.1.35 .1 Definition
- 8.3.1.35 .2 Conformance requirement
 - 1> Radio link failure:

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3> if the UE is in CELL_DCH state and the criteria for radio link failure are met as specified in subclause 8.5.6 of TS 25.331; or

. . .

4> perform cell update using the cause "radio link failure".

When initiating the URA update or cell update procedure, the UE shall:

. . .

- 1> if HS-DSCH is configured:
 - 2> stop any HS-DSCH reception procedures;
 - 2> clear any stored HS-PDSCH configuration;
 - 2> act as if the IE "MAC-hs reset indicator" is received and set to TRUE;
 - 2> release all HARQ resources;
 - 2> remove any H-RNTI stored;
 - 2> clear the variable H_RNTI;
 - 2> set the variable HS_DSCH_RECEPTION to FALSE.

Reference

3GPP TS 25.331 clauses 8.3.1.2

8.3.1.35 .3 Test purpose

To confirm that the UE keeps the RB mapping option for HS-DSCH reception after a radio link failure in CELL_DCH during HS-DSCH reception.

8.3.1.35.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active and cell 2 is inactive.

Specific Message Contents

System Information Block type 11

Use the default system information block with the same type specified in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Intra-frequency measurement reporting criteria	
- Parameters required for each event	3 kinds
- Intra-frequency event identity	1a
- Time to trigger	5000

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents)

UE: PS-DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.1.35

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRARF Channel Number		Mid Range Test		Mid Range Test	
		Frequency		Frequency	
CPICH Ec (FDD)	dBm/3.84MHz	-60	OFF	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	OFF	-75	-60

Table 8.3.1.35 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked "T0" denote the initial conditions.

The UE is in CELL_DCH state and only signalling radio bearers have been established. SS initiates P25 to make the UE to move to state 6-17 as specified in TS 34.108 clause 7.4. The UE is in the CELL_DCH state and has a radio bearer established that is mapped to HS-DSCH. SS configures its downlink transmission power settings according to column "T1" in table 8.3.1.35. The UE shall detect a radio link failure in cell 1.

Then it shall attempt to re-select to cell 2. After that, it shall then enter CELL_FACH state and transmit a CELL UPDATE message on the uplink CCCH to SS.

The SS trans mits a CELL UPDATE CONFIRM message which request the UE to transit to CELL_DCH state and start reception of HS-DSCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0	←.	\rightarrow	P25	See below for the specific
				message content used in
				RADIO BEARER SETUP
				message. (Step 0)
1				SS configures cell 1 and 2
				according to column "T1"
				in table 8.3.1.35. SS starts
				to listen to the uplink
				CCCH of cell 2.
2				The UE detects the radio
				link failure and stops
				reception of HS-DSCH.
3	→	•	CELL UPDATE	The UE shall find a new
				cell 2 and the value "radio
				link failure" shall be set in
				IE "Cell update cause".
4	(CELL UPDATE CONFIRM	
5	 	•	TRANSPORT CHANNEL RECONFIGURATION	
			COMPLETE	

Specific Message Contents

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2
- T313	2

RADIO BEARER SETUP (Step 0)

Use the same message as specified for "Packet to CELL_DCH / HS-DSCH from CELL_DCH in PS" in 34.108.

CELL UPDATE (Step 3)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in cell 1.
- SRNC Identity	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to "Radio link failure"

CELL UPDATE CONFIRM (Step 4)(FDD)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New H-RNTI	0101 0101 0101 0101'
RRC State indicator	CELL_DCH
UL Transport channel information common for all transport channels	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A10
DL Transport channel information common for all transport channels	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A10.
Added or Reconfigured DL TrCH information list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A9.
CHOICE channel requirement	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A10, with the following exception
- Scrambling Code Number	A non-zero value in the range of 0-16777215 used for cell 2
Downlink HS-PDSCH Information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A10
Downlink information common for all radio links	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A10
Downlink information per radio link list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A10, with the following exception;
- Primary CPICH info	
- Primary scrambling code	150

CELL UPDATE CONFIRM (Step 4)(1.28Mcps TDD)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New H-RNTI	0101 0101 0101 0101'
RRC State indicator	CELL_DCH
UL Transport channel information common for all	Same as the set defined in RADIO BEARER
transport channels	SETUP message found in TS 34.108 clause 9
	under condition A10
DL Transport channel information common for all	Same as the set defined in RADIO BEARER
transport channels	SETUP message found in TS 34.108 clause 9
	under condition A10.
Added or Reconfigured DL TrCH information list	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	under condition A9.
CHOICE channel requirement	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	under condition A10
Downlink HS-PDSCH Information	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	under condition A10
Downlink information common for all radio links	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	under condition A10
Downlink information per radio link list	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
D: CODOUL!	under condition A10, with the following exception;
- Primary CCPCH info	
- Cell parameters ID	Set to the Cell parameters ID for cell 2

8.3.1.35 .5 Test requirement

After step 2, the UE shall transmit a CELL UPDATE message.

After step 4, the UE shall transmit a TRA NSPORT CHANNEL RECONFIGURATION COMPLET E message and start reception of HS-DSCH.

8.3.1.36 Cell Update: Transition from CELL_DCH to CELL_FACH (stop of HS-DSCH reception with frequency modification)

8.3.1.36 .1 Definition

(All UEs which support FDD or TDD and HS-PDSCH.)

8.3.1.36 .2 Conformance requirement

1> Radio link failure:

. . .

3> if the UE is in CELL_DCH state and the criteria for radio link failure are met as specified in subclause 8.5.6; or

...

4> perform cell update using the cause "radio link failure".

When initiating the URA update or cell update procedure, the UE shall:

. . .

- 1> if HS-DSCH is configured:
 - 2> stop any HS-DSCH reception procedures;
 - 2> clear any stored HS-PDSCH configuration;
 - 2> act as if the IE "MAC-hs reset indicator" is received and set to TRUE;
 - 2> release all HARQ resources;
 - 2> remove any H-RNTI stored;
 - 2> clear the variable H_RNTI;
 - 2> set the variable HS_DSCH_RECEPTION to FALSE.
- 1> if the UE is not already in CELL_FACH state:
 - 2> move to CELL_FACH state;
 - 2> select PRACH according to subclause 8.5.17;
 - 2> select Secondary CCPCH according to subclause 8.5.19;
 - 2> use the transport format set given in system information as specified in subclause 8.6.5.1.

Reference

3GPP TS 25.331 clauses 8.3.1.2

8.3.1.36 .3 Test purpose

To confirm that the UE stops HS-DSCH reception after a radio link failure in CELL_DCH during HS-DSCH reception.

8.3.1.36.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active and cell 6 is inactive.

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

UE: PS-DCCH DCH (state 6-7) as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.1.36

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRARF Channel Number		Mid Range Test		High Range	
		Frequency		Test	
				Frequ	ency
CPICH Ec (FDD)	dBm/3.84MHz	-60	OFF	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	OFF	-75	-60

Table 8.3.1.36 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked "T0" denote the initial conditions.

The UE is in CELL_DCH state and only signalling radio bearers have been established. SS in itiates P25 to make the UE to move to state 6-17 as specified in TS 34.108 clause 7.4. The UE is in the CELL_DCH state and has a radio bearer established that is mapped to HS-DSCH. SS configures its downlink transmission power settings according to column "T1" in table 8.3.1.36. The UE shall detect a radio link failure in cell 1.

Then it shall attempt to re-select to cell 6. After that, it shall then enter CELL_FACH state and transmit a CELL UPDATE message on the uplink CCCH to SS.

The SS trans mits a CELL UPDATE CONFIRM message which requests the UE to transit to CELL_FACH state. The UE responds with a RADIO BEARER RECONFIGURATION COMPLETE message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0	(-	→	P25	See below for the specific message content used in RADIO BEARER SETUP message. (Step 0)
1				SS configures cell 1 and 6 according to column "T1" in table 8.3.1.36. SS starts to listen to the uplink CCCH of cell 6.
2				The UE detects the radio link failure and stops reception of HS-DSCH.
3	-)	•	CELL UPDATE	The UE shall find a new cell 6 and the value "radio link failure" shall be set in IE "Cell update cause".
4	-	•	CELL UPDATE CONFIRM	
5	→		RADIO BEARER RECONFIGURATION COMPLETE	

Specific Message Contents

System Information Block type 1

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2
- T313	2

RADIO BEARER SETUP (Step 0)

Use the same message as specified for " Packet to CELL_DCH / HS-DSCH from CELL_DCH in PS" in 34.108.

CELL UPDATE (Step 3)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in cell 1.
- SRNC Identity	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to "Radio link failure"

CELL UPDATE CONFIRM (Step 4) (FDD)

Use the same message sub-type found in TS 34.108 clause 9 with the exception of the following IEs:

Information Element	Value/remark	Version
New C-RNTI	'0101 0101 0101 0101'	
RLC re-establish indicator (RB2, RB3 and RB4)	TRUE	
RB information to reconfigure list		
- RB information to reconfigure	(AM DCCH for RRC)	
- RB identity	2	
- PDCP info	Not Present	
- PDCP SN info	Not Present	
- RLC info		
- CHOICE Uplink RLC mode	AM RLC	
- Transmission RLC discard		
- SDU discard mode	No discard	
MAX_DAT	15	
- Transmission window size	128	
- Timer_RST	600	
- Max_RST	4	
- Polling info	250	
- Timer_poll_prohibit - Timer_poll	250	
- Poll_PDU	Not present	
- Poll_SDU	1	
- Last transmission PDU poll	TRUE	
- Last retransmission PDU poll	TRUE	
- Poll_Window	99	
- Timer_poll_periodic	Not Present	
- CHOICE Downlink RLC mode	AMRLC	
- In-sequence delivery	TRUE	
- Receiving window size	128	
- Downlink RLC status info		
- Timer_status_prohibit	200	
- Timer_EPC	Not present	
 Missing PDU indicator 	TRUE	
- Timer_STATUS_periodic	Not Present	
- RB mapping info	Not Present	
- RB stop/continue	Not Present	
- RB information to reconfigure	(AM DCCH for NAS_DT High priority)	
- RB identity	3	
- PDCP info	Not Present	
- PDCP SN info - RLC info	Not Present	
- CHOICE Uplink RLC mode	AMRLC	
- Transmission RLC discard	AWINEO	
- SDU discard mode	No discard	
- MAX_DAT	15	
- Transmission window size	128	
- Timer_RST	600	
- Max_RST	4	
- Polling info		
- Timer_poll_prohibit	250	
- Timer_poll	250	
- Poll_PDU	Not present	
- Poll_SDU	1	
- Last transmission PDU poll	TRUE	
- Last retransmission PDU poll	TRUE	
- Poll_Window	99 Not Bross and	
- Timer_poll_periodic	Not Present	
- CHOICE Downlink RLC mode	AMRLC	
- In-sequence delivery	TRUE	
- Receiving window size - Downlink RLC status info	128	
	200	
- Timer_status_prohibit - Timer_EPC	Not present	
- Missing PDU indicator	TRUE	
- Timer_STATUS_periodic	Not Present	
- miner_orAroo_pendulo	INOCT TOSOTIC	į į

- RB mapping info	Not Present	
- RB stop/continue	Not Present	
- RB information to reconfigure	(AM DCCH for NAS_DT Low priority)	
- RB identity	4	
- PDCP info	Not Present	
- PDCP SN info	Not Present	
- RLC info		
- CHOICE Uplink RLC mode	AMRLC	
- Transmission RLC discard	,	
- SDU discard mode	No discard	
- MAX_DAT	15	
- Transmission window size	128	
- Timer_RST	600	
- Max_RST	4	
	4	
- Polling info	250	
- Timer_poll_prohibit	250 250	
- Timer_poll		
- Poll_PDU	Not present	
- Poll_SDU	1	
- Last transmission PDU poll	TRUE	
- Last retransmission PDU poll	TRUE	
- Poll_Window	99	
- Timer_poll_periodic	Not Present	
- CHOICE Downlink RLC mode	AMRLC	
- In-sequence delivery	TRUE	
- Receiving window size	128	
- Downlink RLC status info		
 Timer_status_prohibit 	200	
- Timer_EPC	Not Present	
 Missing PDU indicator 	TRUE	
- Timer_STATUS_periodic	Not Present	
- RB mapping info	Not Present	
- RB stop/continue	Not Present	
- RB information to reconfigure	(AM DTCH)	
- RB identity	25	
- PDCP info	Not Present	
- PDCP SN info	Not Present	
- RLC info		
- CHOICE Uplink RLC mode	AMRLC	
- Transmission RLC discard		
- SDU discard mode	No discard	
- MAX_DAT	15	
- Transmission window size	128	
- Timer_RST	600	
- Max_RST	4	
- Polling info		
- Timer_poll_prohibit	250	
- Timer_poil_prombit	250	
- Poll_PDU	Not Present	
- Poll_PDU - Poll_SDU	1	
- Last transmission PDU poll	TRUE	
- Last transmission PDU poll	TRUE	
- Poll_Window	99 Net Brosent	
- Timer_poll_periodic	Not Present	
- CHOICE Downlink RLC mode	AMRLC	
- In-sequence delivery	TRUE	
- Receiving window size	128	
- Downlink RLC status info		
- Timer_status_prohibit	200	
- Timer_EPC	Not Present	
 Missing PDU indicator 	TRUE	
- Timer_STATUS_periodic	Not Present	
- RB mapping info	Not Present	
- RB stop/continue	Not Present	
Deleted DL TrCH Information	Same as the set defined in RADIO	
	BEARER RELEASE message found in TS	
	34.108 clause 9 under condition A9.	
- Downlink information for each radio link		
	1	

- Choice mode	FDD	
- Primary CPICH info		
- Primary scrambling code	Set to the Primary scrambling code used	
	for cell6	
- Serving HS-DSCH radio link indicator	FALSE	
- Downlink DPCH info for each RL	Not present	
- SCCPCH information for FACH	Not Present	R99 and Rel-4
		only

CELL UPDATE CONFIRM (Step 4) (1.28Mcps TDD)

Use the same message sub-type found in TS 34.108 clause 9 with the exception of the following IEs:

Information Element	Value/remark	Version
New C-RNTI	'0101 0101 0101 0101'	
RLC re-establish indicator (RB2, RB3 and RB4)	TRUE	
RB information to reconfigure list		
- RB information to reconfigure	(AM DCCH for RRC)	
- RB identity	2	
- PDCP info	Not Present	
- PDCP SN info	Not Present	
- RLC info		
- CHOICE Uplink RLC mode	AMRLC	
- Transmission RLC discard	No. dia and	
- SDU discard mode	No discard	
- MAX_DAT - Transmission window size	15 128	
- Timer_RST	600	
- Max_RST	4	
- Polling info	l'	
- Timer_poll_prohibit	250	
- Timer_poll	250	
- Poll_PDU	Not present	
- Poll_SDU	1	
- Last transmission PDU poll	TRUE	
- Last retransmission PDU poll	TRUE	
- Poll_Window	99	
- Timer_poll_periodic	Not Present	
- CHOICE Downlink RLC mode	AMRLC	
- In-sequence delivery	TRUE	
- Receiving window size	128	
- Downlink RLC status info	200	
- Timer_status_prohibit - Timer_EPC	Not present	
- Missing PDU indicator	TRUE	
- Timer_STATUS_periodic	Not Present	
- RB mapping info	Not Present	
- RB stop/continue	Not Present	
- RB information to reconfigure	(AM DCCH for NAS_DT High priority)	
- RB identity	3	
- PDCP info	Not Present	
- PDCP SN info	Not Present	
- RLC info		
- CHOICE Uplink RLC mode	AM RLC	
- Transmission RLC discard		
- SDU discard mode	No discard	
- MAX_DAT	15	
- Transmission window size - Timer_RST	128 600	
- IIIIeI_KST - Max_RST	4	
- Max_R31 - Polling info	[
- Tolling lind - Timer_poll_prohibit	250	
- Timer_poil_promot	250	
- Poll_PDU	Not present	
- Poll_SDU	1 '	
- Last transmission PDU poll	TRUE	
 Last retransmission PDU poll 	TRUE	
- Poll_Window	99 _	
- Timer_poll_periodic	Not Present	
- CHOICE Downlink RLC mode	AMRLC	
- In-sequence delivery	TRUE	
- Receiving window size	128	
- Downlink RLC status info	200	
- Timer_status_prohibit - Timer_EPC	200 Not present	
- Timer_EPC - Missing PDU indicator	TRUE	
- Timer_STATUS_periodic	Not Present	
1 111101_01/1100_periodic	1.000 1.00	

DD manning info	Not Present	ı
RB mapping infoRB stop/continue	Not Present Not Present	
- RB information to reconfigure	(AM DCCH for NAS_DT Low priority)	
- RB identity	4	
- PDCP info	Not Present	
- PDCP SN info	Not Present	
- RLC info		
- CHOICE Uplink RLC mode	AMRLC	
- Transmission RLC discard		
- SDU discard mode	No discard	
- MAX_DAT - Transmission window size	15 128	
- Timer_RST	600	
- Max_RST	4	
- Polling info	'	
- Timer_poll_prohibit	250	
- Timer_poll	250	
- Poll_PDU	Not present	
- Poll_SDU	1	
 Last transmission PDU poll 	TRUE	
- Last retransmission PDU poll	TRUE	
- Poll_Window	99	
- Timer_poll_periodic	Not Present	
 CHOICE Downlink RLC mode In-sequence delivery 	AMRLC TRUE	
- Receiving window size	128	
- Downlink RLC status info	120	
- Timer_status_prohibit	200	
- Timer_EPC	Not Present	
- Missing PDU indicator	TRUE	
 Timer_STATUS_periodic 	Not Present	
- RB mapping info	Not Present	
- RB stop/continue	Not Present	
- RB information to reconfigure	(AM DTCH)	
- RB identity	20 Not Present	
- PDCP info - PDCP SN info	Not Present Not Present	
- RLC info	Not Flesent	
- CHOICE Uplink RLC mode	AMRLC	
- Transmission RLC discard		
- SDU discard mode	No discard	
- MAX_DAT	15	
 Transmission window size 	128	
- Timer_RST	600	
- Max_RST	4	
- Polling info	050	
- Timer_poll_prohibit - Timer_poll	250 250	
- rimer_poil - Poll_PDU	Not Present	
- Poll_SDU	11	
- Last transmission PDU poll	TRUE	
- Last retransmission PDU poll	TRUE	
- Poll_Window	99	
 Timer_poll_periodic 	Not Present	
- CHOICE Downlink RLC mode	AM RLC	
- In-sequence delivery	TRUE	
- Receiving window size	128	
- Downlink RLC status info		
- Timer_status_prohibit	200 Not Present	
- Timer_EPC- Missing PDU indicator	Not Present TRUE	
- Timer_STATUS_periodic	Not Present	
- RB mapping info	Not Present	
- RB stop/continue	Not Present	
Deleted DL TrCH Information	Same as the set defined in RADIO BEARER	
	RELEASE message found in TS 34.108 clause 9	
	under condition A9.	
Frequency info		\neg

- CHOICE mode	TDD	
- UARFCN (Nt)	Same UARFCN as used for cell 6	
- Downlink information for each radio link		
- Choice mode	TDD	
- Primary CCPCH info		
- Choice mode	TDD	
- Choice TDD Option	1.28Mcps TDD	
- TSTD indicator	FALSE	
- Cell parameters ID	Same Cell parameters ID as used for cell 6	
- SCTD indicator	FALSE	
- Downlink DPCH info for each RL	Not present	
- SCCPCH information for FACH	Not Present	R99 and Rel-4 only

8.3.1.36 .5 Test requirement

After step 2, the UE shall transmit a CELL UPDATE message and stop HS-DSCH reception.

8.3.1.37 Cell Update: Transition from CELL_DCH to CELL_DCH (with active HS-DSCH reception and frequency modification)

8.3.1.37 .1 Definition

(All UEs which support FDD or TDD and HS-PDSCH.)

8.3.1.37 .2 Conformance requirement

1> Radio link failure:

. . .

- 3> if the UE is in CELL_DCH state and the criteria for radio link failure are met as specified in subclause 8.5.6; or
- . . .
- 4> perform cell update using the cause "radio link failure".

When initiating the URA update or cell update procedure, the UE shall:

- 1> if HS-DSCH is configured:
 - 2> stop any HS-DSCH reception procedures;
 - 2> clear any stored HS-PDSCH configuration;
 - 2> act as if the IE "MAC-hs reset indicator" is received and set to TRUE;
 - 2> release all HARQ resources;
 - 2> remove any H-RNTI stored;
 - 2> clear the variable H_RNTI;
 - 2> set the variable HS_DSCH_RECEPTION to FALSE.

Reference

3GPP TS 25.331 clauses 8.3.1.2

8.3.1.37 .3 Test purpose

To confirm that the UE keeps the RB mapping option for HS-DSCH reception after a radio link failure in CELL_DCH during HS-DSCH reception.

8.3.1.37.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active and cell 6 is inactive.

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

UE: PS-DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.1.37

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRARF Channel Number		Mid Ran	ge Test	High R	lange
		Frequ	ency	Te	st
				Frequ	ency
CPICH Ec (FDD)	dBm/3.84MHz	-60	OFF	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	OFF	-75	-60

Table 8.3.1.37 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked "T0" denote the initial conditions.

The UE is in CELL_DCH state and only signalling radio bearers have been established. SS in itiates P25 to make the UE to move to state 6-17 as specified in TS 34.108 clause 7.4. The UE is in the CELL_DCH state and has a radio bearer established that is mapped to HS-DSCH. SS configures its downlink transmission power settings according to column "T1" in table 8.3.1.37. The UE shall detect a radio link failure in cell 1.

Then it shall attempt to re-select to cell 6. After that, it shall then enter CELL_FACH state and transmit a CELL UPDATE message on the uplink CCCH to SS.

The SS trans mits a CELL UPDATE CONFIRM message which requests the UE to transit to CELL_DCH state and start reception of HS-DSCH.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
0	←→		See below for the specific message content used in RADIO BEARER SETUP message. (Step 0)
1			SS configures cell 1 and 6 according to column "T1" in table 8.3.1.37. SS starts to listen to the uplink CCCH of cell 6.
2			The UE detects the radio link failure and stops reception of HS-DSCH.
3)	CELL UPDATE	The UE shall find a new cell 6 and the value "radio link failure" shall be set in IE "Cell update cause".
4	+	CELL UPDATE CONFIRM	
5	→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

System Information Block type 1

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2
- T313	2

RADIO BEARER SETUP (Step 0) (FDD)

Use the same message as specified for " Packet to CELL_DCH / HS-DSCH from CELL_DCH in PS" in 34.108, except for the following:

Information Element	Value/remark
RAB information for setup	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition
	A10, with the following exceptions
- PDCP info	Not present
- Transmission RLC discard	
- MAX_DAT	10
- Transmission window size	256
- Timer_RST	1000
- Max_RST	12
- Timer_poll_prohibit	50
- Timer_poll	400
- Poll_Windows	80
- Receiving window size	2047
- Downlink RLC status info	
- Timer_status_prohibit	50
UL Transport channel Information for all transport	
channels	
- CHOICE Gain Factors	Computed Gain Factors (The last TFC is set to Signalled
	Gain Factors)
- Gain factorβc	9 (equal or higher than 64 kbps and below 384 kbps)
	6 (equal or higher than 384 kbps)
- Gain factorβd	15
	(Not Present if the CHOICE Gain Factors is set to
	Computed Gain Factors)
Added or Reconfigured DL TrCH information	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition
	A10, with the following exception;
- MAC-d PDU size	656
Maximum allowed UL TX power	24dBm
CHOICE channel requirement	
- Aack	6
- Anack	6
Downlink HS-PDSCH Information	
- Measurement Feedback Info	
- POhsdsch	9dB
- CQI Feedback cycle, k	10ms
- Acqı	3

RADIO BEARER SETUP (Step 0) (1.28Mcps TDD)

Use the same message as specified for "Packet to CELL_DCH / HS-DSCH from CELL_DCH in PS" in 34.108, except for the following:

Information Element	Value/remark
Maximum allowed UL TX power	24dBm

CELL UPDATE (Step 3)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in cell
	1.
- SRNC Identity	Check to see if set to value assigned in cell
	1.
Cell Update Cause	Check to see if set to "Radio link failure"

CELL UPDATE CONFIRM (Step 4) (FDD)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New H-RNTI	'0101 0101 0101 0101'
RRC State indicator	CELL_DCH
RLC re-establish indicator (RB2, RB3 and RB4)	TRUE
UL Transport channel information common for all	Same as the set defined in RADIO BEARER SETUP
transport channels	message found in TS 34.108 clause 9 under condition A9, with the following exceptions;
- CHOICE Gain Factors	Computed Gain Factors (The last TFC is set to Signalled Gain Factors)
- Gainfactorβc	9 (equal or higher than 64 kbps and below 384 kbps) 6 (equal or higher than 384 kbps)
- Gain factorβd	15
•	(Not Present if the CHOICE Gain Factors is set to Computed Gain Factors)
DL Transport channel information common for all	Same as the set defined in RADIO BEARER SETUP
transport channels	message found in TS 34.108 clause 9 under condition A9.
Added or Reconfigured DL TrCH information list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A10.
- MAC-d PDU size	656
Frequency info	
- UARFCN uplink (Nu)	This IE should be present, if the default duplex distance
- UARFCN downlink (Nd)	defined for the operating frequency band is not used. Same downlink UARFCN as used for cell 6
CHOICE channel requirement	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A9, with the following exceptions;
- Aack	6
- Anack	6
- Scrambling Code Number	A non-zero value in the range of 0-16777215 used for cell 6
Downlink HS-PDSCH Information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A9, with the following exceptions;
- Measurement Feedback Info	
- POhsdsch	9dB
- CQI Feedback cycle, k	10ms
- Δcqi	3
Downlink information common for all radio links	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A10;
Downlink information per radio link list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A9, with the following exception;
- Primary CPICH info - Primary scrambling code	350
-	•

CELL UPDATE CONFIRM (Step 4) (1.28Mcps TDD)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New H-RNTI	'0101 0101 0101 0101'
RRC State indicator	CELL_DCH
RLC re-establish indicator (RB2, RB3 and RB4)	TRUE
UL Transport channel information common for all	Same as the set defined in RADIO BEARER SETUP
transport channels	message found in TS 34.108 clause 9 under condition A9.
DL Transport channel information common for all	Same as the set defined in RADIO BEARER SETUP
transport channels	message found in TS 34.108 clause 9 under condition A9.
Added or Reconfigured DL TrCH information list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A10.
- MAC-d PDU size	656
Frequency info	TD 0
- CHOICE mode	TDD
- UARFCN (Nt)	Same UARFCN as used for cell 6
CHOICE channel requirement	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A9.
Downlink HS-PDSCH Information	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition A9.
Downlink information common for all radio links	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition
	A9, with the following exception;
- Timing indicator	Initialise
Downlink information per radio link list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A9, with the following exception;
- Primary CCPCH info	
- Choice mode	TDD
- Choice TDD Option	1.28 Mcps TDD
- TSTD indicator	FALSE
- Cell parameters ID	Ref. to the Default setting in TS34.108 clause 6.1 for CELL 6 (TDD)
- SCTD indicator	FALSE

8.3.1.37 .5 Test requirement

After step 2, the UE shall transmit a CELL UPDATE message.

After step 4, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and start reception of HS-DSCH.

8.3.1.38 Cell Update: state specific handling of Treselection and Qhyst for cell reselection in CELL FACH

8.3.1.38.1 Conformance requirement

2. The cell-ranking criterion R is defined by:

$$R_s = Q_{meas,s} + Qhyst_s$$

$$R_n = Q_{meas,n} - Qoffset_{s,n} - TO_n * (1 - L_n)$$

The cells shall be ranked according to the R criteria specified above, deriving $Q_{meas,n}$ and $Q_{meas,s}$ and calculating the R values using CPICH RSCP, P-CCPCH RSCP and the averaged received signal level as specified in [10] and [11] for FDD, TDD and GSM cells, respectively.

The offset Qoffset $1_{s,n}$ is used for Qoffset $1_{s,n}$ to calculate $1_{s,n}$ to calcu

If an FDD cell is ranked as the best cell and the quality measure for cell selection and re-selection is set to CPICH Ec/No, the UE shall perform a second ranking of the FDD cells according to the R criteria specified above, but using the measurement quantity CPICH Ec/No for deriving the $Q_{meas,n}$ and $Q_{meas,s}$ and calculating the R values of the FDD cells. The offset Qoffset2_{s,n} is used for Qoffset_{s,n} to calculate R_n , the hysteresis Qhyst2_s is used for Qhyst_s to calculate R_s . For UE in RRC connected mode states CELL_PCH or URA_PCH the hysteresis Qhyst_s takes the value Qhyst2_{sPCH} to calculate R_s , if provided in SIB4 [see 4]. For UE in RRC connected mode state CELL_FA CH the hysteresis Qhyst_s takes the value Qhyst2_{s,FACH} to calculate R_s , if provided in SIB4 [see 4]. If the usage of HCS is indicated in system information, TEMP_OFFSET2_n is used to calculate TO_n. If it is indicated in system information that HCS is not used, TEMP_OFFSET_n is not applied when calculating R_n . Following this second ranking, the UE shall perform cell reselection to the best ranked FDD cell.

In all cases, the UE shall reselect the new cell, only if the following conditions are met:

- the new cell is better ranked than the serving cell during a time interval Treselection. For UE in RRC connected mode states CELL_PCH or URA_PCH the interval Treselection_{s,PCH} applies, if provided in SIB4 [see 4], while for UE in RRC connected mode state CELL_FA CH the interval Treselection_{s,FACH} applies, if provided in SIB4 [see 4]. For hierarchical cell structures when high mobility state has not been detected, if according to the HCS rules the serving cell is not ranked then all the ranked cells are considered to be better ranked than the serving cell.

Qhyst1_{s,FACH}

This specifies the hysteresis value (Qhyst) to be used in RRC connected mode state CELL_FACH. It is used for TDD and GSM cells and for FDD cells in case the quality measure for cell selection and re-selection is set to CPICH RSCP. If this parameter is not provided in SIB4, Qhyst1_s shall be used.

Qhyst2_{s,FACH}

This specifies the hysteresis value (Qhyst) to be used in RRC connected mode state CELL_FACH. It is used for FDD cells if the quality measure for cell selection and re-selection is set to CPICH Ec/No. If this parameter is not provided in SIB4, Qhyst 2_s shall be used.

Treselection_{s,FACH}

This specifies the cell reselection timer value the UE shall use in RRC connected mode state CELL_FACH if provided in SIB4, otherwise Treselection, shall be used.

A UE shall initiate the cell update procedure in the following cases:

...

1> Cell reselection:

- 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:
 - 3> if the UE is in CELL_FACH or CELL_PCH state and the UE performs cell re-selection; or
 - 3> if the UE is in CELL_FACH state and the variable C_RNTI is empty:
 - 4> perform cell update using the cause "cell reselection".

the UE shall:

...

- 1> in case of a cell update procedure:
 - 2> set the IE "RRC transaction identifier" in any response message transmitted below to the value of "RRC transaction identifier" in the entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry.

...

1> transmit a response message as specified in TS 25.331 subclause 8.3.1.7;

...

Reference

3GPP TS 25.304 clause 5.2.6.1.4.

3GPP TS 25.304 clause 5.4.3.

3GPP TS 25.331 clause 8.3.1.

8.3.1.38.2 Test purpose

1. To confirm that the UE uses the correct SIB 4 IEs to perform cell reselection calculation in CELL_FACH.

8.3.1.38.3 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 4 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.1.38

Parameter	Unit	Cell 1			Cell 4		
		T0	T1	T2	T0	T1	T2
UTRARF Channel Number		Mid Range Test Frequency			_	Range Te equency	st
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-67	-82	OFF	-60	-60

Table 8.3.1.38 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions. SS switches the power settings to columns "T1" and "T2", when the description below specifies.

The UE is in the CELL_FACH state, camping onto cell 1. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.38. The UE shall remain on cell 1 even after expiry of Treselection. SS configures its downlink transmission power settings according to columns "T2" in table 8.3.1.38. The UE shall find cell 4 to be more suitable for service after expiry of Treselection, and shall transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 4 and set IE "Cell update cause" to "Cell Reselection". SS checks this is received after expiry of Treselection. After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_FACH", and a valid IE "New C-RNTI", to the UE on the downlink DCCH. UE responds with UTRAN MOBILITY INFORMATION CONFIRM message.. UE shall stay in CELL_FACH state. SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS	1	
1		•		The UE is in the CELL_FACH
				state in cell 1
2				SS applies the downlink
				transmission power settings,
				according to the values in
				columns "T1" of table 8.3.1.38.
				SS checks that no message is
				received even after expiry of
				Treselection.
3				SS applies the downlink
				transmission power settings,
				according to the values in
				columns "T2" of table 8.3.1.38.
				The UE shall find that the cell 4
				is better for service and
				perform a reselection. SS
				checks that no message is
				received until Treselection
				expires.
4	-	>	CELL UPDATE	Value "cell reselection" shall be
				indicated in IE "Cell update
				cause"
5	·	-	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set
				to "CELL_FACH".
6	-)	UTRAN MOBILITY INFORMATION	
			CONFIRM	
7	+	\rightarrow	CALL C.2	If the test result of C.2 indicates
				that UE is in CELL_FACH
				state, the test passes,
				otherwise it fails.

Specific Message Contents

System Information Block type 4 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	FDD
- s-Intersearch	Not Present
- Qqualmin	-24 dB
- Qrxle vmin	-58 (-115 dBm)
- Qhyst1s	0 (0 dB)
- Qhyst1 _{s,FACH}	7 (14 dB)
- Treselection _{s,FACH}	6 seconds

System Information Block type 11 (FDD)

Use the same message type found in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
FACH measurement occasion info	
 FACH Measurement occasion cycle length 	3
coefficient	
 Inter-frequency FDD measurement indicator 	TRUE
 Inter-frequency TDD measurement indicator 	FALSE
- Inter-RAT measurement indicators	Not Present

CELL UPDATE (Step 4)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
Cell Update Cause	Check to see if set to 'Cell Re-selection'

CELL UPDATE CONFIRM (Step 5)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'

8.3.1.38.4 Test requirement

At step 2 no cell update is received, even after expiry of Treselelection

At step 3 no cell update is received until after Treselection has expired.

At step 4 the UE shall reselect to cell 4 and then it shall transmit a CELL UPDATE message which sets the value "cell reselection" in IE "Cell update cause".

8.3.1.39 Cell Update: state specific handling of Treselection and Qhyst for cell reselection in CELL PCH

8.3.1.39.1 Conformance requirement

2. The cell-ranking criterion R is defined by:

$$R_s = Q_{meas,s} + Qhyst_s$$

$$R_n = Q_{meas,n} - Qoffset_{s,n} - TO_n * (1 - L_n)$$

The cells shall be ranked according to the R criteria specified above, deriving $Q_{meas,n}$ and $Q_{meas,s}$ and calculating the R values using CPICH RSCP, P-CCPCH RSCP and the averaged received signal level as specified in [10] and [11] for FDD, TDD and GSM cells, respectively.

The offset Qoffset $1_{s,n}$ is used for Qoffset $1_{s,n}$ to calculate $1_{s,n}$ to calcu

If an FDD cell is ranked as the best cell and the quality measure for cell selection and re-selection is set to CPICH Ec/No, the UE shall perform a second ranking of the FDD cells according to the R criteria specified above, but using the measurement quantity CPICH Ec/No for deriving the $Q_{meas,n}$ and $Q_{meas,s}$ and calculating the R values of the FDD cells. The offset $Q_{neas,n}$ is used for $Q_{neas,n}$ to calculate $Q_{neas,n}$ to $Q_{neas,n}$ the $Q_{neas,n}$ to Q_{neas

 R_s . For UE in RRC connected mode states CELL_PCH or URA_PCH the hysteresis Qhysts takes the value Qhyst2_{sPCH} to calculate R_s , if provided in SIB4 [see 4]. For UE in RRC connected mode state CELL_FA CH the hysteresis Qhysts takes the value Qhyst2_{s,FACH} to calculate R_s , if provided in SIB4 [see 4]. If the usage of HCS is indicated in system information, TEMP_OFFSET2_n is used to calculate TO_n . If it is indicated in system information that HCS is not used, TEMP_OFFSET_n is not applied when calculating R_n . Following this second ranking, the UE shall perform cell reselection to the best ranked FDD cell.

In all cases, the UE shall reselect the new cell, only if the following conditions are met:

- the new cell is better ranked than the serving cell during a time interval Treselection. For UE in RRC connected mode states CELL_PCH or URA_PCH the interval Treselection_{s,PCH} applies, if provided in SIB4 [see 4], while for UE in RRC connected mode state CELL_FA CH the interval Treselection_{s,FACH} applies, if provided in SIB4 [see 4]. For hierarchical cell structures when high mobility state has not been detected, if according to the HCS rules the serving cell is not ranked then all the ranked cells are considered to be better ranked than the serving cell.

Qhyst1_{s,PCH}

This specifies the hysteresis value (Qhyst) to be used in RRC connected mode states CELL_PCH and URA_PCH. It is used for TDD and GSM cells and for FDD cells in case the quality measure for cell selection and re-selection is set to CPICH RSCP. If this parameter is not provided in SIB4, Qhyst1_s shall be used.

Qhyst2_{s,PCH}

This specifies the hysteresis value (Qhyst) to be used in RRC connected mode states CELL_PCH and URA_PCH. It is used for FDD cells if the quality measure for cell selection and re-selection is set to CPICH Ec/No. If this parameter is not provided in SIB4, Qhyst2_s shall be used.

Treselection_{s,PCH}

This specifies the cell reselection timer value the UE shall use in RRC connected mode states CELL_PCH and URA_PCH if provided in SIB4, otherwise Treselection_s shall be used.

A UE shall initiate the cell update procedure in the following cases:

1> Cell reselection:

2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:

3> if the UE is in CELL_FACH or CELL_PCH state and the UE performs cell re-selection; or

3> if the UE is in CELL_FACH state and the variable C_RNTI is empty:

4> perform cell update using the cause "cell reselection".

the UE shall:

...

1> in case of a cell update procedure:

2> set the IE "RRC transaction identifier" in any response message transmitted below to the value of "RRC transaction identifier" in the entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry.

. . .

1> transmit a response message as specified in TS 25.331 subclause 8.3.1.7;

• • •

Reference

3GPP TS 25.304 clause 5.2.6.1.4.

3GPP TS 25.304 clause 5.4.3.

3GPP TS 25.331 clause 8.3.1.

8.3.1.39.2

1. To confirm that the UE uses the correct SIB 4 IEs to perform cell reselection calculation in CELL_PCH.

8.3.1.39.3 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and 4 are active.

Test purpose

UE: CELL_PCH (state 6-12) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.1.39

Parameter	Unit	Cell 1		Cell 4			
		T0	T1	T2	T0	T1	T2
UTRARF Channel Number		Mid Range Test			High Range Test		
		Fr	equenc	У	Fre	equency	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-67	-82	OFF	-60	-60

Table 8.3.1.39 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions. SS switches the power settings to columns "T1" and "T2", when the description below specifies.

The UE is brought to CELL_PCH state and is camped onto cell 1. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.39. The UE shall remain on cell 1 even after expiry of Treselection. SS configures its downlink transmission power settings according to columns "T2" in table 8.3.1.39. The UE shall find cell 4 to be more suitable for service after expiry of Treselection, and shall transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 4 and set IE "Cell update cause" to "Cell Reselection". SS checks this is received after expiry of Treselection. Upon reception of CELL_UPDATE message, SS replies with a CELL UPDATE CONFIRM message with the IE "RRC State Indicator" set to "CELL_PCH". After receiving this message, the UE returns to CELL_PCH state without transmitting any uplink message. SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS	1	
1				The UE is brought to CELL_PCH state in cell 1
2				SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.39. SS checks that no message is received even after expiry of Treselection.
3				SS applies the downlink transmission power settings, according to the values in columns "T2" of table 8.3.1.39. The UE shall find that the cell 4 is better for service and perform a reselection. SS checks that no message is received until Treselection expires.
4	-	>	CELL UPDATE	The UE moves to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection"
5	•	-	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_PCH".
6	+	→	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

System Information Block type 4 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	FDD
- s-Intersearch	Not Present
- Qqualmin	-24 dB
- Qrxlevmin	-58 (-115 dBm)
- Qhyst1 _s	0 (0 dB)
- Qhyst1 _{s,PCH}	7 (14 dB)
- Treselection _{s,PCH}	15 seconds

CELL UPDATE (Steps 4)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark	
Cell Update Cause	Check to see if set to 'Cell Re-selection'	

CELL UPDATE CONFIRM (Step 5)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3

8.3.1.39.4 Test requirement

At step 2 no cell update is received, even after expiry of Treselelection

At step 3 no cell update is received until after Treselection has expired.

At step 4 the UE shall reselect to cell 4 and then it shall trans mit a CELL UPDATE message which sets the value "cell reselection" in IE "Cell update cause".

8.3.1.40 Cell update: Transition from CELL_PCH to CELL_DCH, inclusion of establishment cause

8.3.1.40.1 Definition

8.3.1.40.2 Conformance requirement

Upon initiation of the initial direct transfer procedure when the UE is in CELL_PCH or URA_PCH state, the UE shall:

- 1> perform a cell update procedure, according to subclause 8.3.1, using the cause "uplink data transmission";
- 1> when the cell update procedure completed successfully:
 - 2> continue with the initial direct transfer procedure as below.

.....

The UE shall set the IEs in the CELL UPDATE message as follows:

. . .

- $1\!\!>$ if the variable ESTA BLISHMENT_CAUSE is initialised:
 - 2> include the IE "Establishment cause" and set it to the value of the variable ESTABLISHMENT_CAUSE.

.....

When the UE receives a CELL UPDATE CONFIRM/URA UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or
- if the message is received on DCCH:

the UE may:

1> maintain a list of the set of cells to which the UE has Radio Links if the IE "Cell ID" is present.

the UE shall:

...

- 1> if the variable ESTABLISHMENT_CAUSE is set:
 - 2> clear the variable ESTABLISHMENT_CAUSE.

Reference

3GPP TS 25.331 clause 8.1.8.2, 8.3.1.3, 8.3.1.6

8.3.1.40.3 Test purpose

- 1. To confirm that, in the case the Cell Update procedure is initiated by a UE in CELL_PCH state in order to transmit the Initial Direct Transfer message, the UE shall include the IE "Establish ment cause" in the Cell Update message.
- 2. To confirm that the IE "Establishment Cause" is not included in the following Initial Direct Transfer message.

8.3.1.40.4 Method of test

Initial Condition

System Simulator: 1 cell

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

UE: CELL_PCH (state 6-12) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports PS+CS

Test Procedure

The test operator is prompted to make an out-going CS call. The UE shall transmit a CELL UPDATE message to the SS on the uplink CCCH, with the IE "Cell update cause" set to value "uplink data transmission" and IE "Establishment cause" set to "Originating conversational call". A fter receiving such a message, SS transmits a CELL UPDATE CONFIRM message on downlink DCCH to send the UE to CELL_DCH state. The UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits an INITIAL DIRECT TRANSFER message using AM RLC on DCCH with the IE "Establishment cause" set to "Not Present". After reception of the CM Service Request message from the UE, the SS will send a CM Service Reject to complete the Service Request procedure.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1			SS prompts the test operator to make an outgoing CS call.
2	→	CELL UPDATE	The UE sets "Cell update cause" IE as "uplink data transmission" and "Establishment cause" IE as "Originating Conversational Call ".
3	+	CELL UPDATE CONFIRM	See message content. UE moves to CELL_DCH state
3a	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4	→	INITIAL DIRECT TRANSFER (CM SERVICE REQUEST)	The IE "Establishment cause" is not present.
5	+	DOWNLINK DIRECT TRANSFER (CM SERVICE REJECT)	
6	←→	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 6.1.0b of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

CELL UPDATE (Step 2)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark	
Cell Update Cause	uplink data transmission	
Establishment cause	originating Conversational Call	

CELL UPDATE CONFIRM (Step 3)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark	
RRC State indicator	CELL_DCH	
CHOICE channel requirement	Same as the set defined in RADIO BEARER SETUP	
	message found in TS 34.108 clause 9 under condition A4.	
Downlink information common for all radio links	Same as the set defined in RADIO BEARER SETUP	
	message found in TS 34.108 clause 9 under condition A4.	
Downlink information per radio link list	Same as the set defined in RADIO BEARER SETUP	
	message found in TS 34.108 clause 9 under condition A4.	

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 3a)

Use the default message with the same message type specified in clause 9 of TS 34.108.

INITIAL DIRECT TRANSFER (Step 4)

Use the default message with the same message type specified in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark	
CN Domain Identity	CS domain	
Establishment cause	Not Present	

8.3.1.40.5 Test requirement

After step 1, the UE shall transmit a CELL UPDATE message where the IE "Cell update cause" is set to "uplink data transmission" and the IE "Establishment cause" is set to "Originating conversation call".

After step 3 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 3a, the UE shall transmit an INITIAL DIRECT TRANSFER message to SS using AM RLC on DCCH in CELL_DCH state with no Establishment cause IE.

8.3.1.41 Cell Update: Transition from URA_PCH to CELL_DCH: Success (start of E-DCH transmission)

8.3.1.41.1 Definition

All UEs which support FDD and HS-PDSCH and E-DPDCH and all UEs which support TDD and HS-PDSCH and E-PUCH.

8.3.1.41.2 Conformance requirement

When the UE receives a PAGING TYPE 1 message, it shall perform the actions as specified below.

If the UE is in connected mode, for each occurrence of the IE "Paging record" included in the message the UE shall:

- 1> if the IE "Used paging identity" is a UTRAN identity and if this U-RNTI is the same as the U-RNTI allocated to the UE:
 - 2> if the optional IE "CN originated page to connected mode UE" is included:
 - 3> indicate reception of paging; and
 - 3> forward the IE "CN do main identity", the IE "Paging cause" and the IE "Paging record type identifier" to the upper layers.
 - 2> otherwise:
 - 3> perform a cell update procedure with cause "paging response" as specified in subclause 8.3.1.2.
 - 2> ignore any other remaining IE "Paging record" that may be present in the message.
- 1> otherwise:
 - 2> ignore that paging record.

. . .

A UE shall initiate the cell update procedure in the following cases:

1> Paging response:

. . .

- 1> Uplink data transmission:
 - 2> if the UE is in URA_PCH or CELL_PCH state; and
 - 2> if the UE has uplink RLC data PDU or uplink RLC control PDU on RB1 or upwards to transmit:
 - 3> perform cell update using the cause "uplink data transmission".

. . .

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

When the UE receives a CELL UPDATE CONFIRM/URA UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U RNTI; or
- if the message is received on DCCH:

the UE shall:

1>act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following:

- 2> if the IE "Frequency info" is included in the message:
 - 3> if the IE "RRC State Indicator" is set to the value "CELL DCH":
 - 4> act on the IE "Frequency info" as specified in subclause 8.6.6.1 in TS 25.331.

. . .

If, after completion of the procedure, the UE will be in CELL_DCH state, the UE shall:

- 1> for FDD, 3.84 Mcps TDD and 7.68 Mcps TDD, if the IE "Frequency info" is included; or
- 1> for 1.28 Mcps TDD, if the IE "Frequency info" is included and the "Second Frequency info" is not included:
 - 2> if the frequency is different from the currently used frequency:
 - 3> store and use the frequency indicated by the IE "Frequency Info";
 - 3> if the received message is used to perform a Timing-maintained hard handover (see subclause 8.3.5.2), and IE "Timing maintained Synchronization indicator" is included:
 - 4> not perform any physical layer synchronisation procedure (FDD only);
 - 3> else:
 - 4> perform the physical layer synchronisation procedure A as specified in [29] (FDD only).

. . .

If the IE "New H-RNTI" is included, the UE shall:

1> store the value in the variable H_RNTI.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

1> use the value of the variable H_RNTI as UE identity in the HS-SCCH reception procedure in the physical layer.

. . .

- 1> for FDD:
 - 2> if the IE "New Primary E-RNTI" and/or the IE "New Secondary E-RNTI" are/is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:
 - 3> store the new value(s) in the variable E_RNTI;
 - 3> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.
- 1> for TDD:
 - 2> if the IE "New E-RNTI" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:
 - 3> store the new value in the variable E_RNTI;
 - 3> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.

When the variable E_DCH_TRANSMISSION is set to TRUE the UE shall:

1> for FDD:

- 2> use the value of the Primary E-RNTI and/or Secondary E-RNTI stored in the variable E_RNTI as UE identities in the E-A GCH reception procedure in the physical layer.
- 1> for TDD:
- 2> use the value of New E-RNTI stored in the variable E_RNTI as the UE identity in the E-AGCH reception procedure and the E-RUCCH transmission procedure in the physical layer.

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If the IE "Downlink HS-PDSCH Information" is included and the UE would enter CELL_DCH state according to subclause 8.6.3.3 applied on the received message, the UE shall:

- 1> if the IE "HS-SCCH Info" is included:
 - 2> act as specified in subclause 8.6.6.33 of TS 25.331.
- 1> if the IE "Measurement Feedback Info" is included:
 - 2> act as specified in subclause 8.6.6.34 of TS 25.331.
- 1> if the IE "HS-DSCH Timeslot Configuration" or "HS-PDSCH Midamble Configuration" is included:
 - 2> store the received configuration;
 - 2> determine the value for the HS_DSCH_RECEPTION variable and take actions as described in subclause 8.5.25.

If the IE "HS-SCCH Info" is included, the UE shall:

1> store the received configuration.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

- 1> in the case of FDD:
 - 2> receive the HS-SCCH(s) according to the IE "HS-SCCH channelisation code" on the serving HS-DSCH radio link applying the scrambling code as received in the IE "DL Scrambling code".
- 1> in the case of TDD:
 - 2> receive the HS-SCCH(s) according to the IEs "Times lot Number", "Channelisation Code" and Midamble configuration IEs.
 - 2> transmit the HS-SICH according to the IEs "Timeslot Number", "Channelisation Code" and Midamble configuration IEs.
 - 2> for HS-SCCH power control the UE shall use the "BLER target" signalled in the first occurrence of the "HS-SCCH Set Configuration", and the UE shall also use the IE "Power Control GAP" for 1.28 Mcps TDD.
 - 2> in 3.84 Mcps TDD and 7.68 Mcps TDD:
 - 3> use the parameters specified in the IE "HS-SICH power control info" for open loop power control as defined in subclause 8.5.7.
 - 2> in 1.28 Mcps TDD:
 - 3> use the IE " PRX_{HS-SICH} " to calculate and set an initial uplink transmission power;
 - 3> use the IE " TPC step size" upon reception of TPC commands for closed loop power control;
 - 3> perform closed loop power control on HS-SICH within the interval indicated in the IE "Power Control GAP":
 - 3> use the IE "Pathloss compensation switch" to determine if the pathloss compensation from the beacon channel estimation should be taken into account for closed loop power control on HS-SICH;

3> use default value of "Uplink synchronisation frequency" and same value of "Uplink synchronisation step size" in "Uplink DPCH info" for HS-SICH upon reception of SS commands for closed loop uplink synchronisation on HS-SICH.

If the IE "Measurement Feedback Info" is included, the UE shall:

1> store the received configuration.

When the variable HS DSCH RECEPTION is set to TRUE the UE shall:

1> use the information for the channel quality indication (CQI) procedure in the physical layer on the serving HS -DSCH radio link.

. .

If the IE "Downlink information for each radio link" is included in a received message, the UE shall:

- 1> if the UE would enter CELL_DCH state according to subclause 8.6.3.3 applied on the received message:
 - 2> if the IE "Serving HS-DSCH radio link indicator" is set to 'TRUE':
 - 3> consider this radio link as the serving HS-DSCH radio link.
 - 2> if the IE "Serving E-DCH radio link indicator" is set to 'TRUE':
 - 3> consider this radio link as the serving E-DCH radio link.
 - 2> if the IE "E-A GCH Info" is included:
 - 3> store the newly received E-AGCH configuration.
 - 2> if the IE "E-HICH information" is included:
 - 3> store this E-HICH configuration for the concerning radio link.
 - 2> if the IE "E-RGCH information" is included:
 - 3> store this E-RGCH configuration for the concerning radio link.
 - 2> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.
 - 2> act on the other IEs contained in the IE "Downlink information for each radio link" as specified in subclause 8.6 applied on this radio link.

. .

If the IE "E-DCH Info" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:

- 1> for FDD:
 - 2> if the IE "E-DPCCH Info" is included:
 - 3> store the newly received E-DPCCH configuration.
 - 2> if the IE "E-DPDCH Info" is included:
- 3> store the newly received E-DPDCH configuration.

. .

1> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.

. .

Whenever the variable HS_DSCH_RECEPTION is set to TRUE, the UE shall:

- 1> perform HS_SCCH reception procedures according to the stored HS-SCCH configuration as stated in:
 - 2> subclause 8.6.6.33 for the IE "HS-SCCH Info".
- 1> perform HS-DSCH reception procedures according to the stored HS-PDSCH configuration as stated in:
 - 2> subclause 8.6.3.1b for the IE "H-RNTI":
 - 2> subclause 8.6.5.6b for the IE "HARQ info";
 - 2> subclause 8.6.6.34 for the IE "Measurement Feedback Info".

Whenever the variable E_DCH_TRANSMISSION is set to TRUE, the UE shall:

1>For FDD:

- 2> perform E_AGCH reception procedures according to the stored E_AGCH configuration as stated in:
 - 3> subclause 8.6.3.14 for the IE "New Primary E-RNTI" and the IE "New Secondary E-RNTI".
- 2> perform E-HICH reception procedures for all radio links in the E-DCH active set;
- 2> perform E-RGCH reception procedures for all radio links in the active set for which an E-RGCH configuration has been provided;
- 2> perform E-DPCCH transmission procedures according to the stored E-DPCCH configuration as stated in:
 - 3> subclause 8.6.6.37 for the IE "E-DPCCH Info".
- 2> perform E-DPDCH transmission procedures according to the stored E-DPDCH configuration as stated in:
 - 3> subclause 8.6.5.16 for the IE "E-DCH Trans mission Time Interval";
 - 3> subclause 8.6.5.17 for the IE "HARQ info for E-DCH";
 - 3> subclause 8.6.6.37 for the IE "E-DPDCH Info".
- 2> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Non-scheduled transmission grant info" is configured shall:
 - 3> obey the scheduling and size restrictions as specified for that MAC-d flow (see subclause 8.6.5.18).
- 2> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Scheduled transmission grant info" is configured shall:
 - 3> be performed in accordance with the received scheduling grant on E-AGCH/E-RGCH (see [15]); and
 - 3> obey the scheduling restrictions as specified for scheduled transmissions (see subclause 8.6.6.37).

1>For TDD:

2>perform E-AGCH reception procedures according to the stored E_AGCH configuration as stated in:

- 3> subclause 8.6.3.14 for the IE "New E-RNTI".
- 2> Perform E-HICH reception;
- 2> for 3.84/7.68 Mcps TDD, perform E-RUCCH transmission procedures according to the stored E-RUCCH configuration as stated in:
 - 3> subclause 8.6.6.37 for the IE "E-RUCCH Info".
- 2> for 1.28 Mcps TDD, perform E-RUCCH transmission procedure according to the stored PRACH configuration (see [60]) and the stored E-RUCCH configuration as stated in:
 - 3> subclause 8.6.6.37 for the IE "E-RUCCH Info".

- NOTE 1: The PRACH configuration is signalled directly to the UE in "E-RUCCH Info" IE in case of E-DCH serving cell change.
 - 2> Perform E-PUCH transmission procedures according to the stored E-PUCH configuration as stated in:
 - 3> subclause 8.6.6.37 for the IE "E-PUCH Info".
 - 2> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Non-scheduled transmission grant info" is configured shall:
 - 3> obey the scheduling and size restrictions as specified for that MAC-d flow (see subclause 8.6.5.18).
 - 2> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Scheduled transmission grant info" is configured shall:
 - 3> be performed in accordance with the received scheduling grant on E-AGCH (see [15]); and
 - 3> obey the scheduling restrictions as specified for scheduled transmissions (see subclause 8.6.6.37).
 - 2> obtain and format the appropriate information on E-UCCH (see [15]). For 1.28 Mcps TDD, when performing transmission on signalling radio bearer before RAB has been established, the UE shall use the lowest E-DCH capability category, as specified in [35], to signal the UL control information on E-UCCH.
- NOTE 2: For 1.28 Mcps TDD, when performing transmission on signalling radio bearer before RAB has been established, UTRAN should use the lowest E-DCH capability category when performing configuration, scheduling and reading the control information on E-UCCH, as it is not possible for Node B to be aware of the UE's E-DCH capability category during this period.

Reference

3GPP TS 25.331 clauses 8.2.2.3, 8.2.2.4, 8.3.1, 8.5.28, 8.6.3.14, 8.6.5.16, 8.6.5.17, 8.6.5.18, 8.6.6.37.

8.3.1.41.3 Test purpose

To confirm that the UE enters the CELL_DCH state after it receives a CELL UPDATE CONFIRM message with a physical channel configuration causing it to start E-DCH transmission and HS_DSCH reception.

To confirm that the UE executes a cell update procedure when the UE transmits uplink data if the UE is in CELL_PCH state.

8.3.1.41.4 Method of test

Initial Condition

System Simulator: 1 cell.

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents)

UE: PS-DCCH +DTCH_HS-DSCH +DTCH_E-DCH (state 6-18) under condition A12 for FDD or A11 for 1.28 Mcps TDD as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD or TDD
- UE supports HS-PDSCH
- UE supports E-DPDCH for FDD or E-PUCH for TDD

Test Procedure

The UE is in the CELL_DCH state and has a radio bearer mapped on E-DCH and HS-DSCH established with active E-DCH transmission and HS-DSCH reception.

The SS trans mits a PHYSICAL CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL_DCH to URA_PCH. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters URA_PCH state.

The SS trans mits a PAGING TYPE 1 message. The UE then enters the CELL_FACH state to transmit a CELL UPDATE message to the SS on the uplink CCCH with the IE "Cell update cause" set to value "Paging response" in response to the paging.

The SS trans mits CELL UPDATE CONFIRM message which includes HS-PDSCH and E-DPDCH for FDD or E-PUCH for 1.28 Mcps TDD physical channel parameters on the downlink DCCH. Then the UE resumes E-DCH transmission and HS-DSCH reception, and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	-	_	PHYSICAL CHANNEL RECONFIGURATION	
2	-	>	PHYSICAL CHANNEL RECONFIGURATION	The UE enters the
			COMPLETE	URA_PCH state
3	-	.	PAGING TYPE 1	
4	-)	CELL UPDATE	The UE enters the
				CELL_FACH state.
5	-	-	CELL UPDATE CONFIRM	
6	-	>	PHYSICAL CHANNEL RECONFIGURATION	The UE enters the
			COMPLETE	CELL_DCH state and
				starts E-DCH
				transmission and HS-
				DSCH reception.

Specific Message Contents

SYSTEM INFORMATION BLOCK TYPE 1

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
-UE Timers and constants in connected mode	
- T312	2

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_FA CH from CELL_DCH in PS" in TS 34.108 with following exceptions:

Information Element	Value/remark	
New C-RNTI	Not Present	
RRC State Indicator	URA_PCH	
UTRAN DRX cycle length coefficient	3	
URA Identity	0000 0000 0000 0001B	

Paging Type 1 (Step 3)

Information Element	Value/remark	
Message Type		
Paging record list	Only 1 entry	
Paging record		
- CHOICE Used paging identity	UTRAN identity	
- U-RNTI	Equal to the U-RNTI assigned earlier.	
- SRNC Identity		
- S-RNTI		
- CN originated page to connected mode UE	Not Present	
BCCH modification info	Not Present	

CELL UPDATE (Step 4)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in cell 1.
- SRNC Identity	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to "Paging response"

CELL UPDATE CONFIRM (Step 5) (FDD)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New H-RNTI	'1010 1010 1010 1010'
New Primary E-RNTI	'1010 1010 1010 1010'
New Secondary E-RNTI	Not Present
RRC State indicator	CELL_DCH
Uplink DPCH info	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A12.
E-DCH Info	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A12.
Downlink HS-PDSCH information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A12.
Downlink information common for all radio links	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A12 except for the following IEs.
- Timing indicator	Initialize
- Default DPCH Offset Value	Arbitrary set to value 0306688 by step of 512
Downlink information per radio link list	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	under condition A12.

CELL UPDATE CONFIRM (Step 5) (TDD)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New H-RNTI	'1010 1010 1010 1010'
New E-RNTI	'1010 1010 1010 1010'
RRC State indicator	CELL_DCH
Uplink DPCH info	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A11.
E-DCH Info	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A11.
Downlink HS-PDSCH information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A11.
Downlink information common for all radio links	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A11 except for the following IEs.
- Timing indicator	Initialize
- Default DPCH Offset Value	Arbitrary set to value 07
Downlink information per radio link list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A11.

8.3.1.41.5 Test requirement

After step 1, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 3, the UE shall transmit a CELL UPDATE message on uplink CCCH.

After step 5, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

8.3.1.41a Cell Update: Transition from URA_PCH to CELL_DCH: Success (start of E-DCH transmission, in the multi-frequency network environment, for 1.28Mcps TDD only)

8.3.1.41a.1 Definition

All UEs which support 1.28Mcps TDD and HS-PDSCH and E-PUCH.

8.3.1.41a.2 Conformance requirement

When the UE receives a PA GING TYPE 1 message, it shall perform the actions as specified below.

If the UE is in connected mode, for each occurrence of the IE "Paging record" included in the message the UE shall:

- 1> if the IE "Used paging identity" is a UTRAN identity and if this U-RNTI is the same as the U-RNTI allocated to the UE:
 - 2> if the optional IE "CN originated page to connected mode UE" is included:
 - 3> indicate reception of paging; and
 - 3> forward the IE "CN domain identity", the IE "Paging cause" and the IE "Paging record type identifier" to the upper layers.
 - 2> otherwise:
 - 3> perform a cell update procedure with cause "paging response" as specified in subclause 8.3.1.2.
 - 2> ignore any other remaining IE "Paging record" that may be present in the message.
- 1> otherwise:
 - 2> ignore that paging record.

. . .

A UE shall initiate the cell update procedure in the following cases:

1> Paging response:

..

- 1> Uplink data transmission:
 - 2> if the UE is in URA_PCH or CELL_PCH state; and
 - 2> if the UE has uplink RLC data PDU or uplink RLC control PDU on RB1 or upwards to transmit:
 - 3> perform cell update using the cause "uplink data transmission".

. . .

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response mes sage on the uplink DCCH using AM RLC.

...

When the UE receives a CELL UPDATE CONFIRM/URA UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or
- if the message is received on DCCH:

the UE shall:

1>act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following:

- 2> if the IE "Frequency info" is included in the message:
 - 3> if the IE "RRC State Indicator" is set to the value "CELL_DCH":
 - 4> act on the IE "Frequency info" as specified in subclause 8.6.6.1 in TS 25.331.

. . .

If the IE "New H-RNTI" is included, the UE shall:

2> store the value in the variable H_RNTI.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

1> use the value of the variable H_RNTI as UE identity in the HS-SCCH reception procedure in the physical layer.

. . .

1> for FDD:

- 2> if the IE "New Primary E-RNTI" and/or the IE "New Secondary E-RNTI" are/is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:
 - 3> store the new value(s) in the variable E_RNTI;
 - 3> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.

1> for TDD:

- 2> if the IE "New E-RNTI" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:
 - 3> store the new value in the variable E_RNTI;
 - 3> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.

When the variable E_DCH_TRANSMISSION is set to TRUE the UE shall:

- 1> for FDD:
 - 2> use the value of the Primary E-RNTI and/or Secondary E-RNTI stored in the variable E_RNTI as UE identities in the E-A GCH reception procedure in the physical layer.
- 1> for TDD:
- 2> use the value of New E-RNTI stored in the variable E_RNTI as the UE identity in the E-AGCH reception procedure and the E-RUCCH transmission procedure in the physical layer.

. . .

If the IE "Downlink HS-PDSCH Information" is included and the UE would enter CELL_DCH state according to subclause 8.6.3.3 applied on the received message, the UE shall:

- 1> if the IE "HS-SCCH Info" is included:
 - 2> act as specified in subclause 8.6.6.33 of TS 25.331.
- 1> if the IE "Measurement Feedback Info" is included:
 - 2> act as specified in subclause 8.6.6.34 of TS 25.331.
- 1> if the IE "HS-DSCH Timeslot Configuration" or "HS-PDSCH Midamble Configuration" is included:
 - 2> store the received configuration;
 - 2> determine the value for the HS_DSCH_RECEPTION variable and take actions as described in subclause 8.5.25.

If the IE "HS-SCCH Info" is included, the UE shall:

1> store the received configuration.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

- 1> in the case of FDD:
 - 2> receive the HS-SCCH(s) according to the IE "HS-SCCH channelisation code" on the serving HS-DSCH radio link applying the scrambling code as received in the IE "DL Scrambling code".
- 1> in the case of TDD:
 - 2> receive the HS-SCCH(s) according to the IEs "Times lot Number", "Channelisation Code" and Midamble configuration IEs.
 - 2> transmit the HS-SICH according to the IEs "Timeslot Number", "Channelisation Code" and Midamble configuration IEs.
 - 2> for HS-SCCH power control the UE shall use the "BLER target" signalled in the first occurrence of the "HS-SCCH Set Configuration", and the UE shall also use the IE "Power Control GAP" for 1.28 Mcps TDD.
 - 2> in 3.84 Mcps TDD and 7.68 Mcps TDD:
 - 3> use the parameters specified in the IE "HS-SICH power control info" for open loop power control as defined in subclause 8.5.7.
 - 2> in 1.28 Mcps TDD:
 - 3> use the IE " PRX_{HS-SICH} " to calculate and set an initial uplink transmission power;
 - 3> use the IE "TPC step size" upon reception of TPC commands for closed loop power control;
 - 3> perform closed loop power control on HS-SICH within the interval indicated in the IE "Power Control GAP";
 - 3> use the IE "Pathloss compensation switch" to determine if the pathloss compensation from the beacon channel estimation should be taken into account for closed loop power control on HS-SICH;
 - 3> use default value of "Uplink synchronisation frequency" and same value of "Uplink synchronisation step size" in "Uplink DPCH info" for HS-SICH upon reception of SS commands for closed loop uplink synchronisation on HS-SICH.

If the IE "Measurement Feedback Info" is included, the UE shall:

1> store the received configuration.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

1> use the information for the channel quality indication (CQI) procedure in the physical layer on the serving HS-DSCH radio link.

. .

If the IE "Downlink information for each radio link" is included in a received message, the UE shall:

- 1> if the UE would enter CELL_DCH state according to subclause 8.6.3.3 applied on the received message:
 - 2> if the IE "Serving HS-DSCH radio link indicator" is set to 'TRUE':
 - 3> consider this radio link as the serving HS-DSCH radio link.
 - 2> if the IE "Serving E-DCH radio link indicator" is set to 'TRUE':
 - 3> consider this radio link as the serving E-DCH radio link.
 - 2> if the IE "E-A GCH Info" is included:
 - 3> store the newly received E-A GCH configuration.
 - 2> if the IE "E-HICH information" is included:
 - 3> store this E-HICH configuration for the concerning radio link.
 - 2> if the IE "E-RGCH information" is included:
 - 3> store this E-RGCH configuration for the concerning radio link.
 - 2> determine the value for the E_DCH_TRA NSMISSION variable and take the corresponding actions as described in subclause 8.5.28.
 - 2> act on the other IEs contained in the IE "Downlink information for each radio link" as specified in subclause 8.6 applied on this radio link.

If the IE "E-DCH Info" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:

- 1> for FDD:
 - 2> if the IE "E-DPCCH Info" is included:
 - 3> store the newly received E-DPCCH configuration.
 - 2> if the IE "E-DPDCH Info" is included:
- 3> store the newly received E-DPDCH configuration.

. .

1> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.

. .

Whenever the variable HS_DSCH_RECEPTION is set to TRUE, the UE shall:

- 1> perform HS_SCCH reception procedures according to the stored HS-SCCH configuration as stated in:
 - 2> subclause 8.6.6.33 for the IE "HS-SCCH Info".
- 1> perform HS-DSCH reception procedures according to the stored HS-PDSCH configuration as stated in:
 - 2> subclause 8.6.3.1b for the IE "H-RNTI";
 - 2> subclause 8.6.5.6b for the IE "HARQ info";

2> subclause 8.6.6.34 for the IE "Measurement Feedback Info".

Whenever the variable E_DCH_TRANSMISSION is set to TRUE, the UE shall:

1>For FDD:

- 2> perform E AGCH reception procedures according to the stored E AGCH configuration as stated in:
 - 3> subclause 8.6.3.14 for the IE "New Primary E-RNTI" and the IE "New Secondary E-RNTI".
- 2> perform E-HICH reception procedures for all radio links in the E-DCH active set;
- 2> perform E-RGCH reception procedures for all radio links in the active set for which an E-RGCH configuration has been provided;
- 2> perform E-DPCCH transmission procedures according to the stored E-DPCCH configuration as stated in:
 - 3> subclause 8.6.6.37 for the IE "E-DPCCH Info".
- 2> perform E-DPDCH transmission procedures according to the stored E-DPDCH configuration as stated in:
 - 3> subclause 8.6.5.16 for the IE "E-DCH Trans mission Time Interval";
 - 3> subclause 8.6.5.17 for the IE "HARQ info for E-DCH";
 - 3> subclause 8.6.6.37 for the IE "E-DPDCH Info".
- 2> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Non-scheduled transmission grant info" is configured shall:
 - 3> obey the scheduling and size restrictions as specified for that MAC-d flow (see subclause 8.6.5.18).
- 2> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Scheduled transmission grant info" is configured shall:
 - 3> be performed in accordance with the received scheduling grant on E-AGCH/E-RGCH (see [15]); and
 - 3> obey the scheduling restrictions as specified for scheduled transmissions (see subclause 8.6.6.37).

1>For TDD:

2>perform E-AGCH reception procedures according to the stored E_AGCH configuration as stated in:

- 3> subclause 8.6.3.14 for the IE "New E-RNTI".
- 2> Perform E-HICH reception;
- 2> for 3.84/7.68 Mcps TDD, perform E-RUCCH transmission procedures according to the stored E-RUCCH configuration as stated in:
 - 3> subclause 8.6.6.37 for the IE "E-RUCCH Info".
- 2> for 1.28 Mcps TDD, perform E-RUCCH transmission procedure according to the stored PRACH configuration (see [60]) and the stored E-RUCCH configuration as stated in:
 - 3> subclause 8.6.6.37 for the IE "E-RUCCH Info".
- NOTE 1: The PRACH configuration is signalled directly to the UE in "E-RUCCH Info" IE in case of E-DCH serving cell change.
 - 2> Perform E-PUCH transmission procedures according to the stored E-PUCH configuration as stated in:
 - 3> subclause 8.6.6.37 for the IE "E-PUCH Info".
 - 2> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Non-scheduled transmission grant info" is configured shall:
 - 3> obey the scheduling and size restrictions as specified for that MAC-d flow (see subclause 8.6.5.18).

- 2> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Scheduled transmission grant info" is configured shall:
 - 3> be performed in accordance with the received scheduling grant on E-AGCH (see [15]); and
 - 3> obey the scheduling restrictions as specified for scheduled transmissions (see subclause 8.6.6.37).
- 2> obtain and format the appropriate information on E-UCCH (see [15]). For 1.28 Mcps TDD, when performing transmission on signalling radio bearer before RAB has been established, the UE shall use the lowest E-DCH capability category, as specified in [35], to signal the UL control information on E-UCCH.
- NOTE 2: For 1.28 Mcps TDD, when performing transmission on signalling radio bearer before RAB has been established, UTRAN should use the lowest E-DCH capability category when performing configuration, scheduling and reading the control information on E-UCCH, as it is not possible for Node B to be aware of the UE's E-DCH capability category during this period.

. .

If, after completion of the procedure, the UE will be in CELL DCH state, the UE shall:

- 1> for FDD, 3.84 Mcps TDD and 7.68 Mcps TDD, if the IE "Frequency info" is included; or
- 1> for 1.28 Mcps TDD, if the IE "Frequency info" is included and the "Second Frequency info" is not included:
 - 2> if the frequency is different from the currently used frequency:
 - 3> store and use the frequency indicated by the IE "Frequency Info";
 - 3> if the received message is used to perform a Timing-maintained hard handover (see subclause 8.3.5.2), and IE "Timing maintained Synchronization indicator" is included:
 - 4> not perform any physical layer synchronisation procedure (FDD only);
 - 3> else:
 - 4> perform the physical layer synchronisation procedure A as specified in [29] (FDD only).
 - 2> if the frequency is the same as the currently used frequency:
 - 3> continue to use the currently used frequency;
 - 3> perform the physical layer synchronisation procedure A as specified in [29] (FDD only).
- 1> for 1.28 Mcps TDD, if both the IE "Frequency info" and the IE "Second Frequency info" are included:
 - 2> the frequency in IE "Frequency info" is used as the primary frequency, and the frequency in IE "Second Frequency info" is used as the secondary frequency;
 - 2> store the primary frequency;
 - 2> if the secondary frequency is different with the currently used frequency:
 - 3> store and use the secondary frequency.
 - 2> if the secondary frequency is the same as the currently used frequency:
 - 3> continue to use the currently used frequency.
- 1> if the IE "Frequency info" is not included and the UE has a currently used frequency:
 - 2> continue to use the currently used frequency;

. .

If the IE "Second Frequency info" is included, the UE shall:

1> act as specified in section 8.6.6.1.

If the IE "FPACH Frequency info" is included, the UE shall:

1> store the FPACH frequency indicated in the IE "FPACH Frequency info".

If the IE "UpPCH Position Info" is included:

1> store and use the UpPCH position indicated by the IE "UpPCH Position Info". The calculation of the uplink access position is described in [33].

If the IE "UpPCH Position Info" is not included:

1> use the UpPTS as the default UpPCH position.

Reference

3GPP TS 25.331 clauses 8.2.2.3, 8.2.2.4, 8.3.1, 8.5.28, 8.6.3.14, 8.6.5.16, 8.6.5.17, 8.6.5.18, 8.6.6.1, 8.6.6.37, 8.6.6.43.

8.3.1.41a.3 Test purpose

To confirm that the UE enters the CELL_DCH state after it receives a CELL UPDATE CONFIRM message with a physical channel configuration causing it to start E-DCH transmission and HS_DSCH reception in the multi-frequency network environment.

To confirm that the UE executes a cell update procedure when the UE transmits uplink data if the UE is in CELL_PCH state, in the multi-frequency network environment.

8.3.1.41a.4 Method of test

Initial Condition

System Simulator: 1 cell, 3 frequency (one is primary frequency, others are secondary frequency)

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents)

UE: PS-DCCH +DTCH_HS-DSCH +DTCH_E-DCH (state 6-18) under condition A11 for 1.28 Mcps TDD as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports TDD
- UE supports HS-PDSCH
- UE supports E-PUCH

Test Procedure

The UE is in the CELL_DCH state and has a radio bearer mapped on E-DCH and HS-DSCH established with active E-DCH transmission and HS-DSCH reception at one secondary frequency of the cell.

The SS trans mits a PHYSICAL CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL_DCH to URA_PCH. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters URA_PCH state.

The SS trans mits a PAGING TYPE 1 message. The UE then enters the CELL_FACH state to transmit a CELL UPDATE message to the SS on the uplink CCCH with the IE "Cell update cause" set to value "Paging response" in response to the paging.

The SS trans mits CELL UPDATE CONFIRM message which includes HS-PDSCH and E-PUCH physical channel parameters on the downlink DCCH. Then the UE resumes E-DCH trans mission and HS-DSCH reception, and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1	-	PHYSICAL CHANNEL RECONFIGURATION	
2	\rightarrow	PHYSICAL CHANNEL RECONFIGURATION	The UE enters the
		COMPLETE	URA_PCH state
3	←	PAGING TYPE 1	
4	\rightarrow	CELL UPDATE	The UE enters the
			CELL_FACH state.
5	←	CELL UPDATE CONFIRM	
6	\rightarrow	PHYSICAL CHANNEL RECONFIGURATION	The UE enters the
		COMPLETE	CELL_DCH state and
			starts E-DCH
			transmission and HS-
			DSCH reception.

Specific Message Contents

SYSTEM INFORMATION BLOCK TYPE 1

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
-UE Timers and constants in connected mode	
- T312	2

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_FA CH from CELL_DCH in PS" in TS 34.108 with following exceptions:

Information Element	Value/remark
New C-RNTI	Not Present
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
URA Identity	0000 0000 0000 0001B

Paging Type 1 (Step 3)

Information Element	Value/remark
Message Type	
Paging record list	Only 1 entry
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	Equal to the U-RNTI assigned earlier.
- SRNC Identity	
- S-RNTI	
- CN originated page to connected mode UE	Not Present
BCCH modification info	Not Present

CELL UPDATE (Step 4)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in cell 1.
- SRNC Identity	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to "Paging response"

CELL UPDATE CONFIRM (Step 5)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New H-RNTI	'1010 1010 1010 1010'
New E-RNTI	'1010 1010 1010 1010'
RRC State indicator	CELL_DCH
Frequency info	
- CHOICE mode	TDD
- UARFCN downlink (Nd)	Set to the primary frequency of the cell
Multi-frequency Info	
- Second Frequency Info	Same as one secondary frequency of the cell
- FPACH Frequency Info	Not present
- UpPCH Position Info	Not present
Uplink DPCH info	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A11.
E-DCH Info	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A11.
Downlink HS-PDSCH information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A11.
Downlink information common for all radio links - Timing indicator	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A11 except for the following IEs. Initialize
- Default DPCH Offset Value	Arbitrary set to value 07
Downlink information per radio link list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A11.

8.3.1.41a.5 Test requirement

After step 1, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 3, the UE shall transmit a CELL UPDATE message on uplink CCCH.

After step 5, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

8.3.1.42 Cell Update: Transition from CELL_PCH to CELL_DCH: Success (frequency modification, start of E-DCH transmission)

8.3.1.42.1 Definition

All UEs which support FDD and HS-PDSCH and E-DPDCH and all UEs which support TDD and HS-PDSCH and E-PUCH..

8.3.1.42.2 Conformance requirement

When the UE receives a PAGING TYPE 1 message, it shall perform the actions as specified below.

If the UE is in connected mode, for each occurrence of the IE "Paging record" included in the message the UE shall:

- 1> if the IE "Used paging identity" is a UTRAN identity and if this U-RNTI is the same as the U-RNTI allocated to the UE:
 - 2> if the optional IE "CN originated page to connected mode UE" is included:

3> indicate reception of paging; and

3> forward the IE "CN do main identity", the IE "Paging cause" and the IE "Paging record type identifier" to the upper layers.

- 2> otherwise:
 - 3> perform a cell update procedure with cause "paging response" as specified in subclause 8.3.1.2.
- 2> ignore any other remaining IE "Paging record" that may be present in the message.
- 1> otherwise:
 - 2> ignore that paging record.

. .

A UE shall initiate the cell update procedure in the following cases:

1> Paging response:

. . .

- 1> Uplink data transmission:
 - 2> if the UE is in URA_PCH or CELL_PCH state; and
 - 2> if the UE has uplink RLC data PDU or uplink RLC control PDU on RB1 or upwards to transmit:
 - 3> perform cell update using the cause "uplink data transmission".

. . .

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

. . .

When the UE receives a CELL UPDATE CONFIRM/URA UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or
- if the message is received on DCCH:

the UE shall:

1>act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following:

- 2> if the IE "Frequency info" is included in the message:
 - 3> if the IE "RRC State Indicator" is set to the value "CELL_DCH":
 - 4> act on the IE "Frequency info" as specified in subclause 8.6.6.1 in TS 25.331.

. . .

If the IE "New H-RNTI" is included, the UE shall:

- 1> if the IE "Downlink HS-PDSCH Information" is also included and the UE would enter CELL_DCH state according to subclause 8.6.3.3 of TS 25.331 applied on the received message:
 - 2> store the value in the variable H_RNTI.

When the variable HS DSCH RECEPTION is set to TRUE the UE shall:

1> use the value of the variable H_RNTI as UE identity in the HS-SCCH reception procedure in the physical layer.

. . .

- 1> for FDD:
 - 2> if the IE "New Primary E-RNTI" and/or the IE "New Secondary E-RNTI" are/is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:
 - 3> store the new value(s) in the variable E_RNTI;
 - 3> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.
- 1> for TDD:
 - 2> if the IE "New E-RNTI" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:
 - 3> store the new value in the variable E_RNTI;
 - 3> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.

When the variable E_DCH_TRANSMISSION is set to TRUE the UE shall:

- 1> for FDD:
 - 2> use the value of the Primary E-RNTI and/or Secondary E-RNTI stored in the variable E_RNTI as UE identities in the E-A GCH reception procedure in the physical layer.
- 1> for TDD:
 - 2> use the value of New E-RNTI stored in the variable E_RNTI as the UE identity in the E-AGCH reception procedure and the E-RUCCH transmission procedure in the physical layer.

. . .

If, after completion of the procedure, the UE will be in CELL_DCH state, the UE shall:

- 1> for FDD, 3.84 Mcps TDD and 7.68 Mcps TDD, if the IE "Frequency info" is included; or
- 1> for 1.28 Mcps TDD, if the IE "Frequency info" is included and the "Second Frequency info" is not included:
 - 2> if the frequency is different from the currently used frequency:
 - 3> store and use the frequency indicated by the IE "Frequency Info";
 - 3> if the received message is used to perform a Timing-maintained hard handover (see subclause 8.3.5.2), and IE "Timing maintained Synchronization indicator" is included:
 - 4> not perform any physical layer synchronisation procedure (FDD only);
 - 3> else:
 - 4> perform the physical layer synchronisation procedure A as specified in [29] (FDD only).

. . .

If the IE "Downlink HS-PDSCH Information" is included and the UE would enter CELL_DCH state according to subclause 8.6.3.3 applied on the received message, the UE shall:

- 1> if the IE "HS-SCCH Info" is included:
 - 2> act as specified in subclause 8.6.6.33 of TS 25.331.
- 1> if the IE "Measurement Feedback Info" is included:
 - 2> act as specified in subclause 8.6.6.34 of TS 25.331.
- 1> if the IE "HS-DSCH Timeslot Configuration" or "HS-PDSCH Midamble Configuration" is included:

- 2> store the received configuration;
- 2> determine the value for the HS_DSCH_RECEPTION variable and take actions as described in subclause 8.5.25.

If the IE "HS-SCCH Info" is included, the UE shall:

1> store the received configuration.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

- 1> in the case of FDD:
 - 2> receive the HS-SCCH(s) according to the IE "HS-SCCH channelisation code" on the serving HS-DSCH radio link applying the scrambling code as received in the IE "DL Scrambling code".
- 1> in the case of TDD:
 - 2> receive the HS-SCCH(s) according to the IEs "Timeslot Number", "Channelisation Code" and Midamble configuration IEs.
 - 2> transmit the HS-SICH according to the IEs "Timeslot Number", "Channelisation Code" and Midamble configuration IEs.
 - 2> for HS-SCCH power control the UE shall use the "BLER target" signalled in the first occurrence of the "HS-SCCH Set Configuration", and the UE shall also use the IE "Power Control GAP" for 1.28 Mcps TDD.
 - 2> in 3.84 Mcps TDD and 7.68 Mcps TDD:
 - 3> use the parameters specified in the IE "HS-SICH power control info" for open loop power control as defined in subclause 8.5.7.
 - 2> in 1.28 Mcps TDD:
 - 3> use the IE " PRX_{HS-SICH} " to calculate and set an initial uplink transmission power;
 - 3> use the IE " TPC step size" upon reception of TPC commands for closed loop power control;
 - 3> perform closed loop power control on HS-SICH within the interval indicated in the IE "Power Control GAP";
 - 3> use the IE "Pathloss compensation switch" to determine if the pathloss compensation from the beacon channel estimation should be taken into account for closed loop power control on HS-SICH;
 - 3> use default value of "Uplink synchronisation frequency" and same value of "Uplink synchronisation step size" in "Uplink DPCH info" for HS-SICH upon reception of SS commands for closed loop uplink synchronisation on HS-SICH.

If the IE "Measurement Feedback Info" is included, the UE shall:

1> store the received configuration.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

1> use the information for the channel quality indication (CQI) procedure in the physical layer on the serving HS - DSCH rad io link.

If the IE "E-DCH Info" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:

- 1> for FDD:
 - 2> if the IE "E-DPCCH Info" is included:
 - 3> store the newly received E-DPCCH configuration.

- 2> if the IE "E-DPDCH Info" is included:
 - 3> store the newly received E-DPDCH configuration.

..

1> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.

. .

Whenever the variable HS_DSCH_RECEPTION is set to TRUE, the UE shall:

- 1> perform HS_SCCH reception procedures according to the stored HS-SCCH configuration as stated in:
 - 2> subclause 8.6.6.33 for the IE "HS-SCCH In fo".
- 1> perform HS-DSCH reception procedures according to the stored HS-PDSCH configuration as stated in:
 - 2> subclause 8.6.3.1b for the IE "H-RNTI";
 - 2> subclause 8.6.5.6b for the IE "HARQ info";
 - 2> subclause 8.6.6.34 for the IE "Measurement Feedback Info".

Whenever the variable E_DCH_TRANSMISSION is set to TRUE, the UE shall:

1>For FDD:

- 2> perform E_AGCH reception procedures according to the stored E_AGCH configuration as stated in:
 - 3> subclause 8.6.3.14 for the IE "New Primary E-RNTI" and the IE "New Secondary E-RNTI".
- 2> perform E-HICH reception procedures for all radio links in the E-DCH active set;
- 2> perform E-RGCH reception procedures for all radio links in the active set for which an E-RGCH configuration has been provided;
- 2> perform E-DPCCH transmission procedures according to the stored E-DPCCH configuration as stated in:
 - 3> subclause 8.6.6.37 for the IE "E-DPCCH Info".
- 2> perform E-DPDCH transmission procedures according to the stored E-DPDCH configuration as stated in:
 - 3> subclause 8.6.5.16 for the IE "E-DCH Trans mission Time Interval";
 - 3> subclause 8.6.5.17 for the IE "HARQ info for E-DCH";
 - 3> subclause 8.6.6.37 for the IE "E-DPDCH Info".
- 2> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Non-scheduled transmission grant info" is configured shall:
 - 3> obey the scheduling and size restrictions as specified for that MAC-d flow (see subclause 8.6.5.18).
- 2> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Scheduled transmission grant info" is configured shall:
 - 3> be performed in accordance with the received scheduling grant on E-AGCH/E-RGCH (see [15]); and
 - 3> obey the scheduling restrictions as specified for scheduled transmissions (see subclause 8.6.6.37).

1>For TDD:

- 2>perform E-A GCH reception procedures according to the stored E_AGCH configuration as stated in:
 - 3> subclause 8.6.3.14 for the IE "New E-RNTI".
- 2> Perform E-HICH reception;

- 2> for 3.84/7.68 Mcps TDD, perform E-RUCCH transmission procedures according to the stored E-RUCCH configuration as stated in:
 - 3> subclause 8.6.6.37 for the IE "E-RUCCH Info".
- 2> for 1.28 Mcps TDD, perform E-RUCCH transmission procedure according to the stored PRACH configuration (see [60]) and the stored E-RUCCH configuration as stated in:
 - 3> subclause 8.6.6.37 for the IE "E-RUCCH Info".
- NOTE 1: The PRA CH configuration is signalled directly to the UE in "E-RUCCH Info" IE in case of E-DCH serving cell change.
 - 2> Perform E-PUCH transmission procedures according to the stored E-PUCH configuration as stated in:
 - 3> subclause 8.6.6.37 for the IE "E-PUCH Info".
 - 2> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Non-scheduled transmission grant info" is configured shall:
 - 3> obey the scheduling and size restrictions as specified for that MAC-d flow (see subclause 8.6.5.18).
 - 2> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Scheduled transmission grant info" is configured shall:
 - 3> be performed in accordance with the received scheduling grant on E-AGCH (see [15]); and
 - 3> obey the scheduling restrictions as specified for scheduled transmissions (see subclause 8.6.6.37).
 - 2> obtain and format the appropriate information on E-UCCH (see [15]). For 1.28 Mcps TDD, when performing transmission on signalling radio bearer before RAB has been established, the UE shall use the lowest E-DCH capability category, as specified in [35], to signal the UL control information on E-UCCH.
- NOTE 2: For 1.28 Mcps TDD, when performing transmission on signalling radio bearer before RAB has been established, UTRAN should use the lowest E-DCH capability category when performing configuration, scheduling and reading the control information on E-UCCH, as it is not possible for Node B to be aware of the UE's E-DCH capability category during this period.

Reference

3GPP TS 25.331 clauses 8.2.2.3, 8.2.2.4, 8.3.1, 8.6.3.1, 8.6.3.1b, 8.6.3.14, 8.6.5.6, 8.6.5.16, 8.6.5.17, 8.6.6.1, 8.6.6.32, 8.6.6.33, 8.6.6.34, 8.6.6.37.

8.3.1.42.3 Test purpose

To confirm that the UE enters the CELL_DCH state after it receives a CELL UPDATE CONFIRM message with a physical channel configuration causing it to start E-DCH transmission and HS-DSCH reception on a different cell and frequency.

To confirm that the UE enters CELL_PCH state on another frequency and stops E-DCH transmission and HS-DSCH reception when it receives a RADIO BEARER RECONFIGURATION message.

8.3.1.42.4 Method of test

Initial Condition

System Simulator: 2 cells - cell 1 is active and cell 6 is inactive.

UE: PS-DCCH +DTCH_HS-DSCH +DTCH_E-DCH (state 6-18) under condition A13 for FDD or A12 for 1.28 Mcps TDD as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD or TDD
- UE supports HS-PDSCH

- UE supports E-DPDCH for FDD or E-PUCH for TDD

Test Procedure

Table 8.3.1.42

Parameter	Parameter Unit Cell 1			Cell 6			
		T0	T1	T2	T0	T1	T2
UTRARF Channel Number		Mid Range			High Range		
		Fre	quency	(f1)	Fre	equency	(f2)
CPICH Ec (FDD)	dBm/3.84MHz	-60	-72	-60	Off	-55	-72
P-CCPCH RSCP (1.28 Mcps TDD)	dBm	-60	-72	-60	Off	-55	-72

Table 8.3.1.42 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The SS has configured its downlink transmission power setting according to columns "T0" in table 8.3.1.42. UE is in state 6-18 as specified in TS34.108 clause 7.4 in cell 1and has a radio bearer established mapped on E-DCH and HS-DSCH established with active E-DCH transmission and HS-DSCH reception.

The SS switches its downlink transmission power settings to columns "T1". The SS transmits a RADIO BEARER RECONFIGURATION message, which invokes the UE to transit from CELL_DCH to CELL_PCH in cell 6. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC, selects cell 6 and enters CELL_PCH state.

The SS trans mits a PAGING TYPE 1 message. The UE then enters the CELL_FACH state to transmit a CELL UPDATE message to the SS on the uplink CCCH with the IE "Cell update cause" set to value "Paging response" in response to the paging.

The SS switches its downlink transmission power settings to columns "T2". The SS transmits CELL UPDATE CONFIRM message, which invokes UE to re-map the SRB's & the PS RAB on E-DCH/HS-DSCH for cell 1. Then the UE establishes HS-DSCH and E-DCH in cell 1, and resumes E-DCH transmission and transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH in cell 1.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	·			The UE is in CELL_DCH state in cell 1 and the SS configures its downlink transmission power setting according to columns "T1" in table 8.3.1.42.
2	+		RADIO BEARER RECONFIGURATION	
3	→		RADIO BEARER RECONFIGURATION COMPLETE	After transmitting this message, the UE enters the CELL_PCH state in cell 6
4	SS			SS sends the L2 ack on the RADIO BEARER RECONFIGURATION COMPLETE message and then waits 5 seconds to allow the UE to read system information before the next step. Note: The SS should continue to keep the dedicated channel configuration during the time when the L2 ack is sent to the UE.
5	+		PAGING TYPE 1	
6	\rightarrow		CELL UPDATE	The UE enters the CELL_FACH state.
7	SS			The SS switches its downlink transmission power settings to columns "T2" in table 8.3.1.42.
8	+		CELL UPDATE CONFIRM	
9	→		RADIO BEARER RECONFIGURATION COMPLETE	The UE changes to cell 1, enters the CELL_DCH state and starts E-DCH transmission and HS-DSCH reception.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 2) (FDD)

Use the same message sub-type titled "Packet to CELL_FA CH from CELL_DCH in PS" in TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
New C-RNTI	Not Present
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
RB information to reconfigure list	
- RB information to reconfigure	(UM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	Not Present
- RB mapping info	1. DD14 . O . II
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1 RACH
 Uplink transport channel type UL Transport channel identity 	Not Present
- Logical channel identity	1
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.10.2.4.4.1
- MAC logical channel priority	1
- Downlink RLC logical channel info	
 Number of downlink RLC logical channels 	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for RRC)
- RB identity - PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	THE COUNTY OF TH
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
Polling infoTimer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
 Last retransmission PDU poll 	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
Receiving window size Downlink RLC status info	128
- Timer status prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1 PACH
- Uplink transport channel type	RACH Not Present
UL Transport channel identity Logical channel identity	Not Present 2
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.10.2.4.4.1
- MAC logical channel priority	2
1 9	1

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Information Element	Value/remark
 Downlink RLC logical channel info Number of downlink RLC logical channels 	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT High priority)
- RB identity	3
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	AMPLO
- CHOICE Uplink RLC mode - Transmission RLC discard	AMRLC
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
 Timer_poll_prohibit 	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window - Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
 One sided RLC re-establishment RB mapping info 	FALSE
Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	3
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.10.2.4.4.1
- MAC logical channel priority	3
 Downlink RLC logical channel info Number of downlink RLC logical channels 	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT Low priority)
- RB identity	4
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	AMPLO
- CHOICE Uplink RLC mode - Transmission RLC discard	AMRLC
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
	·

Information Element	Value/remark
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200 Not Present
- Timer_EPC	TRUE
- Missing PDU indicator	Not Present
- Timer_STATUS_periodic	
- One sided RLC re-establishment	FALSE
- RB mapping info - Information for each multiplexing option	1 DDMuyOntion
	1 RBMuxOption Not Present
- RLC logical channel mapping indicator - Number of uplink RLC logical channels	1
	I RACH
 Uplink transport channel type UL Transport channel identity 	Not Present
- DE Transport channel identity - Logical channel identity	4
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.10.2.4.4.1
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
- RB stop/continue	Not Present
- RB information to reconfigure	(High-speed AM DTCH)
- RB identity	25
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	200
- Timer_status_prohibit	Not Present
- Timer_EPC - Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
One stage theo to collabilities the	1., 202

Information Element	Value/remark
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	7
- CHOICE RLC size list	Explicit list
- RLC size index	Reference to TS34.108 clause 6 Parameter Set
- MAC logical channel priority	8
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
 Downlink transport channel type 	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	7
- RB stop/continue	Not Present
Deleted UL TrCH information	
- Uplink transport channel type	E-DCH
- E-DCH MAC-d flow identity	1
- Uplink transport channel type	E-DCH
- E-DCH MAC-d flow identity	2
Deleted DL TrCH information	
- Downlink transport channel type	HS-DSCH
- DL HS-DSCH MAC-d flow identity	0
Frequency info	500
- CHOICE mode	FDD
- UARFON days for (ALI)	Same uplink UARFCN as used for cell 6
- UARFCN downlink(Nd)	Same downlink UARFCN as used for cell 6
Maximum allowed UL TX power	Not Present

RADIO BEARER RECONFIGURATION (Step 2) (1.28 Mcps TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in TS 34.108 clause 9 with following exceptions:

Not Present RRC State Indicator UTRAND DRX cycle length coefficient RB information to reconfigure - RB identity - PDCP info RLC Loind - RB mapping info - Information for each multiplexing option - RLC loigical channel mapping indicator - Number of uplink RLC togical channels - Uplink transport channel type - UL Transport channel info - RLC cipical channel info - RLC info - RB information to reconfigure - RB identity - PDCP sN info - RLC info - RLC info - PDCP SN info - RLC info -	Information Element	Value/remark
RRC State Indicator URTAN DRX Cycle length coefficient RB information to reconfigure RB mapping info RB mapping info RC Info RB mapping info RC Information for each multiplexing option RC Information for each		
UITRAN DRX cycle length coefficient RB information to reconfigure - RB identity - PDCP info - RDCP info - PDCP SN info - RLC info - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel identity - CHOICE RLC size list - RLC size index - MAC logical channel priority - Downlink RLC logical channels - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel identity - L. Logical channel identity - L. DSCH Transport channel identity - L. Bi information to reconfigure - RB identity - PDCP sN info - PDCP SN		
RB information to reconfigure - RB identity - PDCP Info - PDCP SN Info - PDCP SN Info - RLC logical channel multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel spine - UL Transmission Pt Logical channels - Uplink ransport channel spine - UL Transmission Pt Logical channel identity - Logical channel identity - Downlink RLC logical channel info - Number of uplink RLC mode - Transmission RLC discard - SDU discard mode - Transmission NRC discard - SDU discard mode - MAC NaC and mode - MAC logical channel identity - Logical channel identity - Logical channel identity - Logical channel identity - DL DSCH Transport channel identity - Logical channel identity - DL DSCH Transport channel identity - Logical channel identity - DL DSCH Transport channel identity - Logical channel identity - PDCP Info - PDCP SN Info - RLC info - Not Present No	UTRAN DRX cycle length coefficient	
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PDCP info PDCP SN info RLC info RB mapping info Information for each multiplexing option RLC logical channel mapping indicator Number of uplink RLC logical channels Uplink transport channel identity CHOICE RLC size list RC size index AMAC logical channel priority Downlink RLC logical channel info Number of downlink RLC logical channels Downlink RLC solgical channel info Number of downlink RLC logical channels Downlink RLC solgical channel info Number of downlink RLC logical channels Downlink RLC solgical channel info Number of downlink RLC logical channels Downlink RLC solgical channel info Number of downlink RLC logical channels Not Present 1 PDCP SN info RLC logical channel identity Logical channel identity RB stopycontinue RB information to reconfigure RB identity PDCP SN info RLC logical channel identity SDU discard mode MAX DAT Transmission RLC discard SDU discard mode MAX DAT Transmission window size Timer_RST Not Present	- RB information to reconfigure	(UM DCCH for RRC)
PDCP SN Info RRC info RRC info RRC info RR mapping info - Information for each multiplexing option - RLC logical channel mapping infocator - Number of uplink RLC bogical channels - Uplink transport channel spote - UL Transport channel identity - Logical channel identity - CHOICE Dust instead identity - Downlink RLC logical channels - Downlink RLC logical channels - Downlink RLC logical channels - Downlink transport channel priority - Downlink RLC logical channels - Downlink RLC logical channels - Downlink RLC logical channels - Downlink transport channel identity - DL DSCH Transport channel identity - DL DSCH Transport channel identity - DL DSCH Transport channel identity - RB stophoroution - RB information to reconfigure - RB information window size - Timer RST - POlling info - Timer poll - Poll SDU - Not present - TRUE - Race information for each multiplexing option - Not Present - RACH Not Present - No		1
- RLC info - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - MAC logical channel priority - Downlink RLC logical channels - Downlink RLC logical channel for - Number of downlink RLC logical channels - Downlink RLC logical channel for - Number of downlink RLC logical channels - Downlink transport channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure - RB identity - PDCP info - PPCP SN info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission rRLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Polling info - Timer_poll - Poll_PDU - Poll_PDU - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC Stuts info - Timer_startuz_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - Information for each		
- RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel dentity - Lugical channel identity - Lugical channel identity - Downlink RLC logical channels - Number of downlink RLC logical channels - Dumink RLC logical channel info - Number of downlink RLC logical channels - Dumink resport channel type - DL DCH Transport channel type - DL DCH Transport channel identity - Lugical channel identity - Lugical channel identity - Lugical channel identity - Responsible to reconfigure - RB information for reconfigure - RB informa		
- Information for each multiplexing option RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel identity - Logical channel ediffer the complete of the com		Not Present
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- Number of uplink RLC logical channels - Uplink transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - MAC logical channel priority - Downlink RLC logical channels - Dumink RLC logical channel info - Number of downlink RLC logical channels - Dumink transport channel identity - DL DSCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB stopicontinue - RB information to reconfigure - RB identity - PDCP Sin info - PDCP Sin info - RLC Info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_proficac - CHOICE Downlink RLC mode - CHOICE contine RLC mode - CHOICE con		
Uplink transport channel ignetity - U.Gransport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - MAC logical channel priority - Downlink RLC logical channels - Downlink RLC logical channels - Downlink Transport channel identity - DL DSCH Transport channel identity - U.D ISCH Transport channel identity - U.D ISCH Transport channel identity - Logical channel identity - Res stop-foorniture - RB information to reconfigure - RB information to reconfigure - RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - MAX_DAT - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Max_RST - Max_RST - Max_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Last transmission PDU poll - Poll_Window - Timer_poll_periodc - CHOICE Downlink RLC mode - CHOICE Downlink RLC mode - CHOICE Downlink RLC mode - CHOICE Downlink RLC polical channel identity - Uplink transport channel identity - Uplink transport channel identity - Uplink transport channel identity - Logical channel identity - Uplink transport channel identity - Uplick transport channel identity - Expli		
. UL Transport channel identity . Logical channel identity . CHOICE RLC size list . RLC size index . MAC logical channel priority . Downlink RLC logical channels info . Number of downlink RLC logical channels . Downlink RRLC logical channels . Downlink RRLC logical channels . Downlink ransport channel identity . DL DSCH Transport channel identity . Logical channel identity . RB stop/continue . RB information to reconfigure . RB identity . PDCP SN info . PDCP SN info . CHOICE Uplink RLC mode . Transmission RLC discard . SDU discard mode . MAX_DAT . Transmission rNLC discard . SDU discard mode . MAX_DAT . Transmission window size . Timer_RST . Max_RST . Max_RST . Polling info . Timer_poll . Poll_SDU . Last transmission PDU poll . Poll_Window . Timer_poll . Poll_Window . Timer_status_proribit . Timer_status_proribit . Timer status_proribit . Timer status_		1 *
- Logical channel identity - CHOICE RLC size list - RLC size index - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink Tarsport channel identity - Logical channel identity - Logical channel identity - Restopicontinue - RB information to reconfigure - RB identity - PDCP info - PDCP SN info - CHOICE Uplink RLC mode - MAX_DAT - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Nalx_RST - Polling info - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Poll_SDU - Receiving window size - In-sequence delivery -		
- CHOICE RLC size list - RLC size index - MAC logical channel priority - Downlink RLC logical channels - DL DSCH Transport channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure - RB identity - PDCP SN info - PDCP SN info - PDCP SN info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll - Poll_PDU - Poll_SDU - Poll_SDU - Last transmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - Timer_status_portiodic - CHOICE Downlink RLC mode - Timer_status_proribit - Timer_status_prorib		1.
- RLC size index - MAC logical channel priority - Downlink RLC logical channels - Number of downlink RLC logical channels - Downlink Tarsport channel identity - DL DCH Transport channel identity - Logical channel identity - Restop/continue - RB information to reconfigure - RB identity - PDCP sinfo - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prehidic - Poll_SDU - Poll_SDU - Poll_SDU - Poll_SDU - Poll_SDU - Timer_poll_prehidic - CHOICE Downlink RLC mode - CHOICE Downlink RLC pDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_portibit - Tim		
- MAC logical channel priority - Downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DCH Transport channel identity - DL DCH Transport channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure - RB identity - PDCP Info - PDCP SN info - RLC lorifo - C-HOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_ RST - Max_RST - Polling info - Timer_ poll_prohibit - Timer_ poll_prohibit - Timer_ poll_prohibit - Dell_SDU - Last transmission PDU poll - Poll_SPU - Poll_SPU - Poll_SPU - Poll_Spundink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_ Status_prohibit - Timer_ EPC - Mssing PDU indicator - Timer_ STATUS_periodic - One sided RLC re- establishment - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - OHOICE RLC size list - RLC size intex - RESIONAL respect to the size is to the size is the splicit list - RLC size intex - Policit list - RLC size intex - Downlink RLC size intex - RLC size i		
- Downlink RLC logical channels into - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - Logical channel identity - Logical channel identity - Restop/continue - RB information to reconfigure - RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Polling info - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Poll_SDU - Poll_SDU - Poll_SDU - Poll_SDU - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_status_pr	- MAC logical channel priority	1
- Number of downlink RLC logical channels - Downlink transport channel lype - DL DCH Transport channel identity - L logical channel identity - RB istop/continue - RB information to reconfigure - RB identity - PDCP sin info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - MaX_RST - Polling info - Timer_poll_prohibit - Timer_poll_prohibit - Last transmission PDU poll - Poll_PDU - Poll_BDU - Last transmission PDU poll - Last transmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC mode - CHOICE Downlink RLC pDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - CHOICE RLS ize infex - RLC size infex - RLC size infex - RLC size infex - CHOICE Logical channels - Uplink transport channel identity - CHOICE RLS ize infex - SUN Present - Not Present - Reference to TS34,108 clause 6 Parameter Set - TRUE - RACH - Not Present - RACH - RACH - Not Present - RACH - RA	- Downlink RLC logical channel info	
- DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure - RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Polling info - Timer_poll_prohibit - Timer_poll_Prohibit - Poll_SDU - Poll_SDU - Last transmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC status info - Timer_status_prohibit - Ti	 Number of downlink RLC logical channels 	1
- DL DSCH Transport channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure - RB information to reconfigure - RB identity - PDCP info - PDCP SN info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Polling info - Timer_RST - Polling info - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last transmission PDU poll - Poll_CED Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Inser_status_prohibit - Timer_status_prohibit - Timer_s		
- Logical channel identity - RB information to reconfigure - RB identity - PDCP linfo - PDCP SN info - RLC [info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Polling info - Timer_poll_ prohibit - Timer_poll_ PDU - Poll_PDU - Poll_PDU - Poll_PDU - Last transmission PDU poll - Last tretransmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_ periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_status_prohibit - Timer_status_prohibit - Information for each multiplexing option - RLC logical channel ampping indicator - Number of uplink RLC logical channels - Uplink transport channel identity - Logical channel identity - CHOICE Ize ize index - RE information for each multiplexing option - RLC logical channel identity - CHOICE Losize index - RE information for each multiplexing option - RLC size index - RE information for each multiplexing option - RLC size index - RE information for each multiplexing option - RLC size index - SDU discard - AM RLC - SDU discard - SDU discard - Mod RCC - No discard - AM RLC - AM RLC - SDU discard - SDU disc		
RB stop/continue RB information to reconfigure RAC MRC Not iscard Not discard Not discard Not discard Not discard Not discard Not discard Not present 15 15 128 600 RD R		
- RB information to reconfigure - R identity - PDCP info - PDCP info - PDCP SN info - RLC (info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Poll_PDU - Poll_SDU - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_status_prohibit - Timer_status_prohibit - Timer_status_prohibit - Timer_status_prohibit - Information for each multiplexing option - RLC logical channel ampping indicator - Number of uplink RLC logical channels - Uplink transport channel (spet) - Logical channel identity - Logical channel identity - CHOICE size index - Reference to TS34.108 clause 6 Parameter Set		
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll prohibit - Poll_SDU - Last transmission PDU poll - Poll_Window - Timer_poll_prenodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel letentity - Logical channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - Wot Present - MR RLC - Mod Scard - AM RLC - Mod iscard - Not discard - Not present - TRUE - Reference to TS34.108 clause 6 Parameter Set - TRUE - Not present - TRUE - RBMuxOption - Not Present - TRUE - RACH - Not Present - TRUE - RBMuxOption - RACH - Not Present - TRUE - RACH - RACH - Not Present - TRUE - RA		
- PDCP Info - PDCP SN info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll_Drohibit - Timer_poll_Drohibit - Timer_poll SDU - Poll_SDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel apping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - TRUE - TRUE - Not Present - ARBMuxOption - ARCH - Not Present - Not Present - ARCH - Not Present - Not Present - Not Present - ARCH - ARCH - Not Present - ARCH - ARCH - Not Present - ARCH -		(AM DCCH for RRC)
- PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Polling info - Timer_poll_prohibit - Timer_poll_prohibit - Poll_PDU - Poll_PDU - Poll_PDU - Last transmission PDU poll - Last tretransmission PDU poll - Last tretransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC pDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_poll_prohibit		Not Dragget
- RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll		
- CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Poll_SDU - Poll_PDU - Poll_SDU - Last transmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - Timer_status_prohibit - Not present - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel dentity - Logical channel identity - CHOICE RLC size list - RLC size index - MR RLC - No discard - 128 - 000 - Not present - TRUE - Reference to TS34.108 clause 6 Parameter Set - TRUE - Not present - TRUE - Not presen		Notriesent
- Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_DDU - Last transmission PDU poll - Last retransmission PDU poll - Last retransmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel identity - Logical channel identity - Logical channel identity - Logical channel identity - CHOICE RLC size list - RLC size index No discard 15 128 600 A 4 4 250 TRUE TRUE TRUE Not Present AM RLC Reference to TS34.108 clause 6 Parameter Set TRUE Not present TRUE 1 RBMuxOption Not Present 1 RACH Not Present 1 RACH Not Present 2 Explicit list - RLC size list - CHOICE RLC size list - RLC size index		AMRI C
- SDU discard mode - MAX_DAT 15 - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last transmission PDU poll - Last transmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel identity - Logical channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - SDU discard 15 No discard 15 800 4 4 4 4 4 4 4 4 4 4 4 4		AWITE O
- MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Poll_PDU - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - RE explicit list - RLC size index - RE explicit list - RLC size index - According to clause 6.10.2.4.4.1		No discard
- Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - CHOICE RLC size list - RLC size index - Timer_status - Poll_PDU - Value		
- Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - CHOICE RLC size list - RLC size index 4 4 250 250 Not present TRUE Reference to TS34.108 clause 6 Parameter Set TRUE Reference to TS34.108 clause 6 Parameter Set TRUE 200 Not present TRUE Not Present 1 RBMuxOption Not Present 1 RBMuxOption Not Present 1 RACH Not Present 2 Explicit list - RLC size list - RLC size index According to clause 6.10.2.4.4.1	- Transmission window size	128
- Polling info - Timer_poll prohibit - Timer_poll 250 - Poll_PDU Not present - Poll_SDU 1 - Last transmission PDU poll TRUE - Last retransmission PDU poll TRUE - Poll_Window 99 - Timer_poll_periodic Not Present - CHOICE Downlink RLC mode AM RLC - CHOICE Downlink RLC PDU Size In-sequence delivery TRUE - Receiving window size 128 - Downlink RLC status info - Timer_status_prohibit 200 - Timer_status_prohibit 200 - Timer_STATUS_periodic Not present - RB mapping info - Information for each multiplexing option RLC logical channel mapping indicator Number of uplink RLC logical channel mapping indicator Number of uplink RLC logical channel type UL Transport channel type VL Transport channel identity Not Present - CHOICE RLC size list Explicit list - RLC size index According to clause 6.10.2.4.4.1	- Timer_RST	600
- Timer_poll prohibit 250 - Poll_PDU		4
- Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Poll_Window - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index Not present - RB mapping info - Information for each multiplexing option - RLC logical channel identity - CHOICE RLC size list - RLC size index Not present - Not Present - RACH - Not Present - Explicit list - RCOrding to clause 6.10.2.4.4.1		
- Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_status_prohibit - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel identity - CHOICE RLC size list - RLC size index Not present - TRUE - TRUE - AM RLC - AM RLC - Reference to TS34.108 clause 6 Parameter Set - TRUE - TRUE - TRUE - Not present - TRUE - Not present - RBMuxOption - Not Present - RBMuxOption - Not Present - RACH - RACH - Not Present - RACH		
- Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index 1 TRUE - RHC size index - Mot Present - Not Present - Not Present - RBMuxOption - RLC logical channels - Uplink transport channel identity - Splicit list - RLC size index - RE TRUE - MARLC - Reference to TS34.108 clause 6 Parameter Set - MRLC - MRL		
- Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index TRUE - AM RLC - Reference to TS34.108 clause 6 Parameter Set TRUE - Reference to TS34.108 clause 6 Parameter Set - Not Present - Reference to TS34.108 clause 6 Parameter Set - Num RLC - Reference to TS34.108 clause 6 Parameter Set - Num RLC - Reference to TS34.108 clause 6 Parameter Set - RACH - Not Present - Not Present - RACH - REPC Size list - RACH - REPC Size list - REC size index - AM RLC		
- Last retransmission PDÜ poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - UDInk transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index TRUE - MR REGETENCE to Not present - Not present - Not Present - RBMuxOption - RLC logical channel mapping indicator - Not Present - RACH - Not Present - RACH - Not Present - RACH - RACH - Size list - RLC size list - RLC size index - According to clause 6.10.2.4.4.1		1 -
- Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index 99 Not Present AMRLC Reference to TS34.108 clause 6 Parameter Set TRUE 200 Not present TRUE Not Present 1 RBMuxOption Not Present 1 RACH Not Present 2 Explicit list - RLC size index		
- Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index Not Present TRUE Not present TRUE Not Present 1 RB MuxOption 1 RBMuxOption Not Present 1 RACH Not Present ACCOrding to clause 6.10.2.4.4.1		
- CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - CHOICE RLC size index - Reference to TS34.108 clause 6 Parameter Set TRUE - Reference to TS34.108 clause 6 Parameter Set TRUE - Reference to TS34.108 clause 6 Parameter Set - Reference to TS34.108 clause 6 Parameter Set - TRUE - Not present - 128 - 200 - Not present - Not Present - 1 RBMuxOption - Not Present - 1 RACH - Not Present - 2 Explicit list - RLC size index - According to clause 6.10.2.4.4.1		
- CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - Logical channel identity - CHOICE RLC size list - RLC size index Reference to TS34.108 clause 6 Parameter Set TRUE 128 200 Not present FALSE Reference to TS34.108 clause 6 Parameter Set TRUE 128 128 128 128 1 RUE 1 RUE 1 REMuxOption Not Present 1 RACH Not Present 1 Not Present 1 RACH Not Present 2 Explicit list - RACH Not Present 2 Explicit list - According to clause 6.10.2.4.4.1		
- Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index 128 200 Not present TRUE Not Present 1 RBMuxOption Not Present 1 RACH Not Present 2 Explicit list - Explicit list - According to clause 6.10.2.4.4.1		
- Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - Not present 1 RBMuxOption Not Present 1 RACH Not Present 2 Explicit list - Explicit list - According to clause 6.10.2.4.4.1		
- Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - TRUE - Not Present - RBMuxOption - RBMuxOption - Not Present - Not Present - Not Present - Not Present - Explicit list - Explicit list - RLC size index - According to clause 6.10.2.4.4.1		128
- Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index Not present TRUE Not Present 1 RBMuxOption Not Present 1 RACH Not Present 1 RACH Not Present 2 Explicit list - Explicit list - According to clause 6.10.2.4.4.1		
- Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index TRUE Not Present 1 RBMuxOption Not Present 1 RACH Not Present 2 Explicit list - Explicit list - According to clause 6.10.2.4.4.1		
- Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index Not Present - RBMuxOption Not Present - RBMuxOption Not Present - Not Present - Not Present - Explicit list - Explicit list - RLC size index - According to clause 6.10.2.4.4.1		
- One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index FALSE 1 RBMuxOption Not Present 1 RACH Not Present 2 Explicit list - Explicit list - According to clause 6.10.2.4.4.1		
- RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - Information for each multiplexing option - 1 RBMuxOption - Not Present - RACH - Not Present - Explicit list - Explicit list - According to clause 6.10.2.4.4.1		
- Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index 1 RBMuxOption Not Present 1 RACH Not Present 2 Explicit list - Explicit list - According to clause 6.10.2.4.4.1		1,400
- RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index Not Present 1 Not Present 2 EACH Not Present 2 Explicit list - Explicit list - According to clause 6.10.2.4.4.1		1 RBMuxOption
- Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index 1 RACH Not Present 2 Explicit list - According to clause 6.10.2.4.4.1		
- Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index RACH Not Present 2 Explicit list According to clause 6.10.2.4.4.1		
- UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index Not Present 2 Explicit list - According to clause 6.10.2.4.4.1		RACH
- CHOICE RLC size list - RLC size index Explicit list According to clause 6.10.2.4.4.1	- UL Transport channel identity	Not Present
- RLC size index According to clause 6.10.2.4.4.1	- Logical channel identity	
- MAC logical channel priority 2		
	- MAC logical channel priority	2

Information Floment	Value/remark
Information Element - Downlink RLC logical channel info	value/remark
Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT High priority)
- RB identity	3
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	
- SDU discard mode	No discard
MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
Polling infoTimer_poll_prohibit	250
- Timer_poil_prombit	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- PoII_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
 CHOICE Downlink RLC PDU Size 	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
 Timer_STATUS_periodic One sided RLC re-establishment 	Not Present FALSE
- RB mapping info	FALSE
Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	3
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.10.2.4.4.1
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	Not Proceed
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT Low priority)
- RB identity - PDCP info	Not Present
- PDCP IIII0 - PDCP SN info	Not Present
- RLC info	Not i resem
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4

I.C. and the Figure 1	No. 1
Information Element	Value/remark
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
 Last transmission PDU poll 	TRUE
 Last retransmission PDU poll 	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
 CHOICE Downlink RLC PDU Size 	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
 Receiving window size 	128
- Downlink RLC status info	
Timer_status_prohibit	200
- Timer_EPC	Not Present
 Missing PDU indicator 	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	4
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.10.2.4.4.1
- MAC logical channel priority	4
- Downlink RLC logical channel info	
Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1 *
- RB stop/continue	Not Present
- RB information to reconfigure	(High-speed AM DTCH)
- RB identity	25
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	AMBI O
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
 Timer_poll_prohibit 	250
- Timer_poll	250
- Poll_PDU	Not Present
- Poll_SDU	1
 Last transmission PDU poll 	TRUE
 Last retransmission PDU poll 	TRUE
- Poll_Window	99
 Timer_poll_periodic 	Not Present
- CHOICE Downlink RLC mode	AM RLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
	!

Information Element	Value/remark
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
 Number of uplink RLC logical channels 	1
- Uplink transport channel type	RACH
 UL Transport channel identity 	Not Present
- Logical channel identity	7
- CHOICE RLC size list	Explicit list
- RLC size index	Reference to TS34.108 clause 6 Parameter Set
- MAC logical channel priority	8
- Downlink RLC logical channel info	
 Number of downlink RLC logical channels 	1
 Downlink transport channel type 	FACH
- DL DCH Transport channel identity	Not Present
 DL DSCH Transport channel identity 	Not Present
- Logical channel identity	7
- RB stop/continue	Not Present
Deleted UL TrCH information	
- Uplink transport channel type	E-DCH
- E-DCH MAC-d flow identity	1
- Uplink transport channel type	E-DCH
- E-DCH MAC-d flow identity	2
Deleted DL TrCH information	
- Downlink transport channel type	HS-DSCH
- DL HS-DSCH MAC-d flow identity	0
Frequency info	
- CHOICE mode	TDD
- UARFCN(Nt)	Same UARFCN as used for cell 6
Maximum allowed UL TX power	Not Present

RADIO BEARER RECONFIGURATION (Step 2) (3.84 Mcps TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
New C-RNTI RRC State Indicator	Not Present CELL_PCH
UTRAN DRX cycle length coefficient	3
RB information to reconfigure list	o de la companya de l
- RB information to reconfigure	(UMDCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	Not Present
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
 Uplink transport channel type UL Transport channel identity 	RACH Not Present
- OE Transport channel identity - Logical channel identity	11
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.10.3.4.5.1
- MAC logical channel priority	1
- Downlink RLC logical channel info	
 Number of downlink RLC logical channels 	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
Logical channel identityRB stop/continue	1 Not Present
- RB information to reconfigure	(AM DCCH for RRC)
- RB identity	2
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT - Transmission window size	15 128
- Transmission window size - Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
 Last transmission PDU poll Last retransmission PDU poll 	TRUE TRUE
- Poll_Window	199
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6.10 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	200
- Timer_status_prohibit- Timer_EPC	200 Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1 PACH
- Uplink transport channel type	RACH Not Procent
 UL Transport channel identity Logical channel identity 	Not Present 2
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.10.3.4.5.1
- MAC logical channel priority	2
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Information Element	Value/remark
 Downlink RLC logical channel info Number of downlink RLC logical channels 	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT High priority)
- RB identity	3
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	AMPLO
- CHOICE Uplink RLC mode - Transmission RLC discard	AMRLC
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE TRUE
Last retransmission PDU pollPoll_Window	99
- Ton_window - Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6.10 Parameter Set
- In-sequence delivery	TRUE
 Receiving window size 	128
 Downlink RLC status info 	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE Not Present
 Timer_STATUS_periodic One sided RLC re-establishment 	FALSE
- RB mapping info	ALGE
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	3
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.10.3.4.5.1
 MAC logical channel priority Downlink RLC logical channel info 	3
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT Low priority)
- RB identity	4 Not Propert
- PDCP info - PDCP SN info	Not Present Not Present
- PDCP SN INIO - RLC info	INOT LESCH
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No dis card
- MAX_DAT	15
 Transmission window size 	128
- Timer_RST	600
- Max_RST	4

Information Element	Value/remark
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6.10 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200 Not Present
- Timer_EPC	TRUE
- Missing PDU indicator	Not Present
- Timer_STATUS_periodic	
- One sided RLC re-establishment	FALSE
- RB mapping info - Information for each multiplexing option	1 DDMuyOntion
- RLC logical channel mapping indicator	1 RBMuxOption Not Present
- Number of uplink RLC logical channels	1
	I RACH
 Uplink transport channel type UL Transport channel identity 	Not Present
- DE Transport channel identity - Logical channel identity	4
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.10.3.4.5.1
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
- RB stop/continue	Not Present
- RB information to reconfigure	(High-speed AM DTCH)
- RB identity	25
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99 Net Brosent
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size	AMRLC Reference to TS34.108 clause 6.10 Parameter Set
- In-sequence delivery	TRUE 128
- Receiving window size	120
- Downlink RLC status info	200
- Timer_status_prohibit	Not Present
- Timer_EPC - Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
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Information Element	Value/remark
- RB mapping info	
 Information for each multiplexing option 	1 RBMuxOption
 RLC logical channel mapping indicator 	Not Present
 Number of uplink RLC logical channels 	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	7
- CHOICE RLC size list	Explicit list
- RLC size index	Reference to TS34.108 clause 6.10 Parameter Set
- MAC logical channel priority	8
- Downlink RLC logical channel info	
 Number of downlink RLC logical channels 	1
 Downlink transport channel type 	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	7
- RB stop/continue	Not Present
Deleted UL TrCH information	
- Uplink transport channel type	E-DCH
- E-DCH MAC-d flow identity	1
- Uplink transport channel type	E-DCH
- E-DCH MAC-d flow identity	2
Deleted DL TrCH information	
- Downlink transport channel type	HS-DSCH
- DL HS-DSCH MAC-d flow identity	0
Frequency info	
- CHOICE mode	TDD
- UARFCN(Nt)	Same UARFCN as used for cell 6
Maximum allowed UL TX power	Not Present

RADIO BEARER RECONFIGURATION (Step 2) (7.68 Mcps TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in TS 34.108 clause 9 with following exceptions:

I formed a Florida	Mala da sa la sa l
Information Element	Value/remark
New C-RNTI RRC State Indicator	Not Present CELL_PCH
JTRAN DRX cycle length coefficient	3
RB information to reconfigure list	3
- RB information to reconfigure	(UM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	Not Present
- RB mapping info	
 Information for each multiplexing option 	1 RBMuxOption
 RLC logical channel mapping indicator 	Not Present
 Number of uplink RLC logical channels 	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
 Logical channel identity CHOICE RLC size list 	1 Fundamental Control of the Control
- RLC size index	Explicit list According to clause 6.11.6.4.5.1
MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for RRC)
- RB identity	2
- PDCP info	Not Present
- PDCP SN info	Not Present
 RLC info CHOICE Uplink RLC mode 	AM RLC
- Transmission RLC discard	AIVIRLO
- SDU discard mode	No discard
- MAX DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
 Timer_poll_prohibit 	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
 Last transmission PDU poll Last retransmission PDU poll 	TRUE TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6.11 Parameter Set
- In-sequence delivery	TRUE
 Receiving window size 	128
 Downlink RLC status info 	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
 - Timer_STATUS_periodic - One sided RLC re-establishment 	Not Present FALSE
- One sided REC re-establishment - RB mapping info	FALSE
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	2
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.11.6.4.5.1
- MAC logical channel priority	2

Information Element	Value/remark
- Downlink RLC logical channel info	value/i eiliaik
Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT High priority)
- RB identity	3
- PDCP info	Not Present
- PDCP SN info - RLC info	Not Present
	AM RLC
- CHOICE Uplink RLC mode - Transmission RLC discard	AWIKLO
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
 Timer_poll_prohibit 	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99 Not Present
 Timer_poll_periodic CHOICE Downlink RLC mode 	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6.11 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
 Missing PDU indicator 	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	4 DDM:wOntion
 Information for each multiplexing option RLC logical channel mapping indicator 	1 RBMuxOption Not Present
Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	3
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.11.6.4.5.1
 MAC logical channel priority 	3
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH Not Present
 DL DCH Transport channel identity DL DSCH Transport channel identity 	Not Present
- Logical channel identity	3
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT Low priority)
- RB identity	4
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	No. disposed
- SDU discard mode	No discard
- MAX_DAT - Transmission window size	15 128
- Transmission window size - Timer_RST	600
- Max_RST	4
Wax_INOT	1.

Information Element	Value/remark
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
 Last transmission PDU poll 	TRUE
 Last retransmission PDU poll 	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6.11 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	174202
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	4
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.11.6.4.5.1
	-
MAC logical channel priority Downlink RLC logical channel info	4
Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
	Not Present
- DL DCH Transport channel identity	
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	Not Dresent
- RB stop/continue	Not Present
- RB information to reconfigure	(High-speed AM DTCH)
- RB identity	25
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	AMPLO
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	N. P. I
- SDU discard mode	No discard
MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	050
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6.11 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE

Information Element	Value/remark
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	7
- CHOICE RLC size list	Explicit list
- RLC size index	Reference to TS34.108 clause 6.11 Parameter Set
- MAC logical channel priority	8
- Downlink RLC logical channel info	
 Number of downlink RLC logical channels 	1
 Downlink transport channel type 	FACH
 DL DCH Transport channel identity 	Not Present
 DL DSCH Transport channel identity 	Not Present
 Logical channel identity 	7
- RB stop/continue	Not Present
Deleted UL TrCH information	
- Uplink transport channel type	E-DCH
- E-DCH MAC-d flow identity	1
- Uplink transport channel type	E-DCH
- E-DCH MAC-d flow identity	2
Deleted DL TrCH information	
- Downlink transport channel type	HS-DSCH
- DL HS-DSCH MAC-d flow identity	0
Frequency info	
- CHOICE mode	TDD
- UARFCN(Nt)	Same UARFCN as used for cell 6
Maximum allowed UL TX power	Not Present

Paging Type 1 (Step 5)

Information Element	Value/remark
Message Type	
Paging record list	Only 1 entry
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	Equal to the U-RNTI assigned earlier.
- SRNC Identity	
- S-RNTI	
- CN originated page to connected mode UE	Not Present
BCCH modification info	Not Present

CELL UPDATE (Step 6)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in cell 1.
- SRNC Identity	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to "Paging response"

CELL UPDATE CONFIRM (Step 8) (FDD)

Information Element	Value/remark
New H-RNTI	'0101 0101 0101 0101'
New Primary E-RNTI	'0101 0101 0101 0101'
New Secondary E-RNTI	Not Present
RRC State indicator	CELL_DCH
RB information to reconfigure list	
- RB RB information to reconfigure	(UM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	Not Present
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	1
- E-DCH MAC-d flow identity	1
- DDI	1
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for RRC)
- RB identity	2
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	AMBLO
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	500
- Max_RST	4
- Polling info	400
- Timer_poll_prohibit	100
- Timer_poll - Poll_PDU	100 Not present
	'
- Poll_SDU - Last transmission PDU poll	TRUE
- Last transmission PDU poll - Last retransmission PDU poll	TRUE
- Lastretransmission PDO poil - Poll_Window	99
- Poli_vilidow - Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE DOWNLINK RLC Mode - CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	120
- Timer_status_prohibit	100
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
Number of uplink RLC logical channels	1
Transor or apiline relations to the state of	i ·

- Uplink transport channel type	E-DCH
- Logical channel identity	2
- E-DCH MAC-d flow identity	
	1
- DDI	2
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT High priority)
- RB identity	3
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	/ WITCE O
- SDU discard mode	No discard
- MAX DAT	15
- Transmission window size	128
- Timer_RST	500
- Max_RST	4
	4
- Polling info	100
- Timer_poll_prohibit	100
- Timer_poll	100
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	100
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	3
- E-DCH MAC-d flow identity	1
- DDI	3
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	3
- Downlink RLC logical channel info	-
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
- RB stop/continue	Not Present
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- RB information to reconfigure	(AM DCCH for NAS DT Low priority)
- RB identity	4
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	100
- Timer_poll	100
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	100
- Timer_status_prohibit	100
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	4 BBM - 0 .:
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
Number of uplink RLC logical channels Uplink transport channel type	1 E-DCH
	4
Logical channel identity E-DCH MAC-d flow identity	1
- DDI	4
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	4
- Downlink RLC logical channel info	-
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
- RB stop/continue	Not Present
- RB information to reconfigure	(High-speed AM DTCH)
- RB identity	25
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	256
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	100
- Timer_poll	100
•	

- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	1
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	768
- Downlink RLC status info	
- Timer_status_prohibit	100
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	7
- E-DCH MAC-d flow identity	2
- DDI	5
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	336 bits
- Include in scheduling info	TRUE
- MAC logical channel priority	8
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	HS-DSCH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- DL HS-DSCH MAC-d flow identity	0
- Logical channel identity	7
- RB stop/continue	Not Present
Added or Reconfigured UL TrCH information	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition A13.
Added or Reconfigured DL TrCH information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition
Fraguenavinto	A13.
Frequency info CHOICE channel requirement	Set to the frequency of cell 1 Same as the set defined in RADIO BEARER SETUP
Choice transerrequirement	message found in TS 34.108 clause 9 under condition A13.
E-DCH Info	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A13.
Downlink HS-PDSCH Information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A13.
Downlink information common for all radio links	
- Downlink information for all radio link	
- CHOICE DPCH info	
- Downlink DPCH info for all RL	
- Timing Indication	Initialize
- Downlink DPCH power control information	IIIIIIIIII26
- DPC mode	0 (Single)
- CHOICE mode	FDD
- Power offset PPilot-DPDCH	0
- DL rate matching restriction information	Not Present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	Reference to TS34.108 clause 6.10 Parameter Set
- CHOICE SF	Reference to TS34.108 clause 6.10 Parameter Set
0110102 01	1 10.5.5.100 to 100 1.100 diadoc 0.101 diameter det

- CHOICE mode	FDD
- DPCH compressed mode info	Not Present
- TX Diversity mode	None
- SSDT information	Not present
- Default DPCH Offset Value	Arbitrary set to value 0306688 by step of 512
- MAC-hs reset indicator	Not Present
Downlink information for each radio link list	
- Downlink information for each radio link	
- Choice mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to the primary scrambling code of cell 1
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Serving HS-DSCH radio link indicator	TRUE
- Serving E-DCH radio link indicator	TRUE
- CHOICE DPCH info	
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	Set to value Default DPCH Offset Value (as currently stored in SS) mod 38400
- Secondary CPICH info	Not Present
- DL channelisation code	
- Secondary scrambling code	1
- Spreading factor	Reference to clause 6.10 Parameter Set
- Code number	0
- Scrambling code change	OMIT
- TPC combination index	0
- Closed loop timing adjustment mode	Not Present
- E-AGCH Info	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A13.
- E-HICH Information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A13.
- E-RGCH Information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A13.

CELL UPDATE CONFIRM (Step 8) (1.28 Mcps TDD)

Information Element	Value/remark
New H-RNTI	'0101 0101 0101 0101'
New E-RNTI	'0101 0101 0101 0101'
RRC State indicator	CELL_DCH
RB information to reconfigure list	
- RB RB information to reconfigure	(UM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	Not Present
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	1
- E-DCH MAC-d flow identity	1
- DDI	1
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for RRC)
- RB identity	2
- PDCP info - PDCP SN info	Not Present
	Not Present
- RLC info - CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	AWIRLC
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	500
- Max_RST	4
- Polling info	'
- Timer_poll_prohibit	100
- Timer_poll	100
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	100
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	1 DDM - 0 C
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1 E-DCH
- Uplink transport channel type	E-DOU

- Logical channel identity	2
- E-DCH MAC-d flow identity	1
- DDI	2
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT High priority)
- RB identity	3
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	Not resent
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	AWINEO
- Transmission RLC discard - SDU discard mode	No discard
- SDO discala filode - MAX_DAT	15
- Transmission window size	128
- Transmission window size - Timer_RST	500
- Max_RST	4
- Polling info	100
- Timer_poll_prohibit	100
- Timer_poll	100
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	100
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	3
- E-DCH MAC-d flow identity	1
- DDI	3
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT Low priority)
1 D information to recornigate	1 (W D D I I I I I I I I I I I I I I I I I

PPDCP Info	- RB identity	4
PDCP SN Info		•
R.C. Info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT 15 - Transmission window size 128 - Timer_RST 500 - Timer_RST 500 - Timer_RST 500 - Timer_RST - Polling info - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Poll_PDU Not present - Poll_PDU Not present - Poll_PDU		
- CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - NMX DAT - Transmission windows ize - Timer.RST - Transmission windows ize - Timer.RST - Polling info - Timer.poll.prohibit - Poil. PDU - Poil. SDU - Poil. SDU - Last transmission PDU poil - Poil. Window - Timer. Poil. Periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC mode - CHOICE Downlink RLC mode - CHOICE Downlink RLC poil. Reference to TS34.108 clause 6 Parameter Set - In-sequence delivery - Receiving window size - Insequence delivery - Receiving window size - Timer. STATUS_periodic - One sided RLC ree setablishment - Timer. Status_periodic - One sided RLC ree setablishment - RLC logical channel mapping indicator - RLC logical channel mapping indicator - Ruce discard and in		NOTE TO SOME
- Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Max_RST - Polling info - Timer_poll_ prohibit - Timer_poll_ prohibit - Poll_PDU - Timer_EDU - Masing_PDU Indicator - Timer_EDU - Masing_PDU Indicator - Timer_EDU - Masing_PDU Indicator - Timer_EDU - Not Present - RB mapping_info - Poll_PDU - RLC logical channel mapping_indicator - Number of uplink RLC logical channels - Uplink transport channel type - Uplink transport channel type - Uplink transport channel type - Uplink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channel info - Downlink RLC logical channel info - Number of downlink RLC logical channel info - PLO CH Transport channel info - PLO CH Transport channel info - PLO CH Transport channel info - PDCP Info - Number of downlink RLC logical channel info - PDCP Info - Timer_poll_Prohibit		AMRIC
- SDU discard mode - No discard - NAX DAT 15 - Transmission window size 128 - Timer, RST 500 - NAX RST - Polling info - Timer, poll. prohibit 100 - Timer, poll. prohibit 100 - Poll. Poll. SDU 1 - Last transmission PDU poll 1 - Timer poll Poll Poll Poll Poll Poll Poll Poll		AWINEO
- MAX_DAT		No discord
- Transmission window size		
- Timer RST - Max, RST - Polling info - Timer poll prohibit - Timer poll prohibit - Timer poll prohibit - Poll PDU - Poll PDU - Poll PDU - Poll SDU - Last transmission PDU poll - Last treransmission PDU poll - Poll Window - Timer poll periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC pDU size - In-sequence delivery - Receiving window size - Downlink RLC status into - Timer status, prohibit - Timer status, prohibit - Timer Status, prohibit - Timer Status, prohibit - RLC pDU size ist - In-sequence delivery - TRUE - Max may be statistically prohibit - Timer Status, prohibit - Timer poll prohibit - Timer poll - Time		
- Max RST		
- Polling info - Timer poll prohibit - Timer poll prohibit - Poll_PDU - Poll_PDU - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retrasmission PDU poll - Last retrasmission PDU poll - Last retrasmission PDU poll - Poll_Window - Timer_poll_Periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Receiving window size - Timer_status_prohibit - Timer_status_prohibit - Timer_status_prohibit - Timer_status_prohibit - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink RLC allow identity - Logical channel identity - E-DCH MAC-d flow identity - RLC PDU size list - RLC PDU size - Include in scheduling info - MAC logical channel priori - Downlink RLC logical channel info - Number of dwink RLC logical channels - Downlink RLC logical channel info - MAC logical channel priority - Downlink RLC logical channel info - MAC logical channel info - MAC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - MAC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - RB information to reconfigure - Timer_poll_ prohibit		
- Timer, poll prohibit - Timer, poll - Poll PDU - Poll SDU - Poll SDU - Last transmission PDU poll - Poll Window 99 - Timer_poll_periode - Poll Window - Timer Status prohibit - Timer_poll_periode - Timer_poll_periode - Missing PDU indicator - Timer_poll_periode - Poll Window - Po		4
- Timer, poll - Poll, PDU - Poll, PDU - Poll, PDU - Poll, SDU - Last transmission PDU poll - Last tretramismission PDU poll - Poll, Window - Timer, poll, periode - Poll, Window - Timer, poll, periode - CHOICE Downlink RLC Prode - CHOICE Downlink RLC Prode - CHOICE Downlink RLC Prode - In-sequence delivery - Receiving window size - In-sequence delivery - Receiving window size - Downlink RLC status into - Timer status, prohibit - Timer, STATUS, periodic - Missing PDU indicator - Timer, STATUS, periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC (ogical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel identity - E-DCH MAC-d flow identity - PDD - RLC PDU size - RLC PDU size - Include in scheduling info - MAC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - MAC logical channel info - MAC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - MAC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of ownlink RLC logical channel info - Number of ownlink RLC logical channel info - MAC logical channel info - Number of ownlink RLC logical cha		
- Poll PDU - Poll SDU 1 - Last transmission PDU poll - Poll Window -		
Poll SDU	- Timer_poll	100
- Last transmission PDU poll - Last transmission PDU poll - Poll_Window - Timer_poll_periodc - HORCE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_status_prohibit - Timer_status_prohibit - Timer_STATUS_periodic - Messing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RLC Branding Info - RLC logical channel mapping indicator - Number of uprink RLC logical channels - Uplink transport channel type - Logical channel identity - E-DCH MAC-diffow identity - DDU - RLC PDU size ist - RLC PDU size ist - RLC PDU size ist - RLC PDU size - Indice in scheduling info - Number of downlink RLC logical channels - Downlink RLC logical channel identity - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channel info - Number of downlink RLC logical channel info - DLD SCH Transport channel identity - Logical channel identity - RB istop/continue - RB information to reconfigure - RB identity - RB istop/continue - RB identity - RB istop/continue - RB identity - RB istop/continue - RB information to reconfigure - RB identity - RB istop/continue - RB identity - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Sou discard - Max_RST - Pobling info - Timer_poll	- Poll_PDU	Not present
- Last retransmission PDU poll		1
- Last retransmission PDU poll	- Last transmission PDU poll	TRUE
- Poll, Window - Timer, poll, periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Receiving window size - Receiving window size - Timer, Status, prohibit - Timer, poll, prohib		
- Timer_poll_periodic		
- CHOICE Downlink RLC PDU Size - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC Status info - Timer status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - RLC PDU size - RLC PDU size - RLC PDU size - Include in scheduling info - Number of downlink RLC logical channels - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - RLC PDU size - Include in scheduling info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - RLC PDU size - Include in scheduling info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channels - Downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - RLC PDU size		
- CHOICE Downlink RIC PDU Size - In-sequence delivery - Receiving window size - Downlink RIC status info - Timer Status prohibit - Timer EPC - Missing PDU indicator - Timer Status prohibit - One sided RIC re-establishment - RB mapping info - Information for each multiplexing option - RIC logical channel mapping indicator - Number of uplink RIC logical channels - Uplink transport channel type - E-DCH MAC-d flow identity - DID - RIC PDU size - Include in scheduling info - MAC logical channel priority - Downlink RIC logical channel info - Number of divenilink RIC logical channel info - Number of divenilink RIC logical channels - RIC PDU size - RIC PDU size - RIC PDU size - Include in scheduling info - Number of downlink RIC logical channel info - Downlink transport channel identity - DL DSCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB information to reconfigure - RB information to reconfigu		
- In-sequence delivery		
- Receiving window size		
- Downlink RLC status info - Timer_status_prohibit - Timer_status_prohibit - Timer_status_prohibit - Timer_status_prohibit - Timer_status_prohibit - Timer_status_prohibit - Missing PDU indicator - TRUE - Timer_status_periodic - One sided RLC re-establishment - RB mapping info - RLC logical chancer - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel indentity - E-DCH MAC-diffow identity - DDI - RLC PDU size list - RLC PDU size list - RLC PDU size - Include in scheduling info - MAC logical channel priority - Downlink RLC logical channels info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel ligentity - DL DSCH Transport channel ligentity - Logical channel identity - LD LDCH Transport channel identity - LOgical channel identity - RB stop/continue - RB information to reconfigure - RB identity - RB identity - PDCP SN info - PDCP SN info - CHOICE Uplink RLC mode - Transmission window size - SDU discard mode - MAX_DAT - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll - Timer_poll 100		
- Timer_EPC	- Receiving window size	128
- Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel information to reconfigure - RLC PDU size list - RLC PDU size list - RLC PDU size list - RLC PDU size - RLC PDU size - MAC Logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink Transport channel info - Number of downlink RLC logical channels - Downlink transport channel info - Number of downlink RLC logical channels - DL DCH Transport channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure - RB information		
- Missing PDU indicator	- Imer_status_prohibit	
- Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping Info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel type - Logical channel type - E-DCH - Logical channel type - E-DCH MAC-d flow identity - DDI - RLC PDU size list - RLC PDU size list - RLC PDU size - Include in scheduling info - MAC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - DL DCH Transport channel lype - DL DCH Transport channel identity - DL DSCH Transport channel identity - RB stop/continue - RB information to reconfigure - RB i		
- One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel identity - E-DCH - Logical channel identity - E-DCH MAC-d flow identity - DDI - RLC PDU size list - RLC PDU size ist - RLC PDU size - Include in scheduling info - Number of downlink RLC logical channels - Downlink RLC logical channel identity - Dunnink RLC logical channel identity - Downlink RLC logical channel identity - DL DL Transport channel identity - DL DSCH Transport channel identity - RB stop/continue - RB information to reconfigure - RB information to reconfigure - RB identity - PDCP SN info - CHOICE Uplink RLC mode - MAX_DAT - Transmission window size - MAX_DAT - Polling into - Timer_RST - Polling into - Timer_poll - Time		_
- RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel identity - E-DCH - Logical channel identity - E-DCH MAC-d flow identity - E-DCH MAC-d flow identity - RLC PDU size ist - RLC PDU size ist - RLC PDU size - RLC PDU size - RLC PDU size - Include in scheduling info - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Duplink transport channel identity - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure -		
- Information for each multiplexing option - RLC logical channel mapping indicator - Number of up link RLC logical channels - Uplink transport channel type - Logical channel identity - E-DCH MAC-d flow identity - E-DCH MAC-d flow identity - DDI - RLC PDU size list - RLC PDU size list - RLC PDU size - Include in scheduling info - FALSE - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure - RB identity - RB information to RB identity - RB identit	- One sided RLC re-establishment	FALSE
- RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel identity - E-DCH - Logical channel identity - E-DCH MAC-d flow identity - DDI - RLC PDU size list - RLC PDU size - RLC Stopkcontinue - R	- RB mapping info	
- RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel identity - E-DCH - Logical channel identity - E-DCH MAC-d flow identity - DDI - RLC PDU size list - RLC PDU size - RLC Stopkcontinue - R		1 RBMuxOption
- Number of uplink RLC logical channels - Uplink transport channel type - Logical channel identity - E-DCH MAC-d flow identity - DDI - RLC PDU size list - RLC PDU size - RLC Include in scheduling info - Number of downling info - Number of downling info - RLC logical channel priority - DDCH - DL DCH Transport channel info - RLC info - RB stop/continue - RB stop/continue - RB identity - RB stop/continue - RB identity - RCC info - RCC Info - CHOICE Uplink RLC mode - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Folling info - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll		
- Uplink transport channel type - Logical channel identity - E-DCH MAC-d flow identity - DDI - RLC PDU size list - RLC PDU size ist - RLC PDU size - Include in scheduling info - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - RB stop/continue - RB information to reconfigure - RB information to reconfigure - RB information to reconfigure - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - MAX_DAT - Transmission window size - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll - Timer_p		
- Logical channel identity - E-DCH MAC-d flow identity - DDI - RLC PDU size list - RLC PDU size - RLC PDU size - RLC PDU size - RLC PDU size - Include in scheduling info - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Lugical channel identity - RB stop/continue - RB information to reconfigure - RB information to reconfigure - RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Polling info - Timer_poll_prohibit		
- E-DCH MAC-d flow identity - DDI		
- DDI - RLC PDU size ist 1 RLC PDU size 144 bits - RLC PDU size 144 bits 145		
- RLC PDU size list - RLC PDU size - RLC PDU size - Include in scheduling info - MAC logical channel priority - Downlink RLC logical channels - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure - RB information to reconfigure - RB identity - PDCP SN info - PDCP SN info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll		
- RLC PDU size - Include in scheduling info - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure - RB identity - RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - SDU discard mode - MAX_DAT - Transmission window size - MAX_RST - Polling info - Timer_poll_prohibit - Timer_poll		
- Include in scheduling info - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure - RB identity - RB identity - PDCP info - PDCP SN info - PLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - SDU info - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll		
- MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure - RB information to reconfigure - RB identity - PDCP info - PDCP SN info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll		
- Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure - RB identity - RB identity - RB identity - PDCP info - PDCP SN info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll -		
- Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure - RB identity - RB identity - PDCP info - PDCP SN info - CHOICE Uplink RLC mode - SDU discard mode - MAX_DAT - Transmission RLC discard - MAX_DAT - Transmission window size - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll - DCH -		4
- Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure - RB information to reconfigure - RB identity - PDCP info - PDCP SN info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll		
- DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure - RB identity - PDCP info - PDCP SN info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Polling info - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll - Timer_poll		
- DL DSCH Transport channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure - RB identity - PDCP info - PDCP info - PDCP SN info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Polling info - Timer_poll_prohibit - Timer_poll		
- Logical channel identity - RB stop/continue - RB information to reconfigure - RB information to reconfigure - RB identity - RB identity - RB identity - PDCP info - PDCP SN info - PDCP SN info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll		
- RB stop/continue - RB information to reconfigure - RB identity - RB identity - PDCP info - PDCP SN info - PDCP SN info - CHOICE Uplink RLC mode - SDU discard mode - MAX_DAT - Transmission window size - Transmission window size - Timer_RST - Polling info - Polling info - Timer_poll_prohibit - Timer_poll - Timer_pol		Not Present
- RB information to reconfigure (High-speed AM DTCH) - RB identity 25 - PDCP info Not Present - PDCP SN info Not Present - RLC info - CHOICE Uplink RLC mode AM RLC - Transmission RLC discard - SDU discard mode No discard - MAX_DAT 15 - Transmission window size 256 - Timer_RST 500 - Max_RST 4 - Polling info - Timer_poll_prohibit 100 - Timer_poll 100		4
- RB information to reconfigure (High-speed AM DTCH) - RB identity 25 - PDCP info Not Present - PDCP SN info Not Present - RLC info - CHOICE Uplink RLC mode AM RLC - Transmission RLC discard - SDU discard mode No discard - MAX_DAT 15 - Transmission window size 256 - Timer_RST 500 - Max_RST 4 - Polling info - Timer_poll_prohibit 100 - Timer_poll 100		
- RB identity 25 - PDCP info Not Present - PDCP SN info Not Present - RLC info - RLC info - CHOICE Uplink RLC mode AM RLC - Transmission RLC discard - SDU discard mode No discard - MAX_DAT 15 - Transmission window size 256 - Timer_RST 500 - Max_RST 4 - Polling info - Timer_poll_prohibit 100 - Timer_poll - Timer_poll 100	- RB information to reconfigure	(High-speed AM DTCH)
- PDCP info - PDCP SN info - PDCP SN info - RLC info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Timer_		
- PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Timer		Not Present
- RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll		
- CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll		
- Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll		AMRIC
- SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll		
- MAX_DAT		No discard
- Transmission window size 256 - Timer_RST 500 - Max_RST 4 - Polling info - Timer_poll_prohibit 100 - Timer_poll 100		
- Timer_RST 500 - Max_RST 4 - Polling info - Timer_poll_prohibit 100 - Timer_poll 100		
- Max_RST		
- Polling info - Timer_poll_prohibit 100 - Timer_poll 100		
- Timer_poll_prohibit 100 - Timer_poll 100		4
- Timer_poll 100		100
- Poll_PDU Not Present		
	- Poll_PDU	Not Present

- Poll_SDU	11
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	768
- Downlink RLC status info	100
- Timer_status_prohibit	100
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	17202
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	7
- E-DCH MAC-d flow identity	2
- DDI	5
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	336 bits
- Include in scheduling info	TRUE
- MAC logical channel priority	8
- Downlink RLC logical channel info	0
Number of downlink RLC logical channels	1
- Downlink transport channel type	HS-DSCH
- DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- DL HS-DSCH MAC-d flow identity	0
- Logical channel identity	7
- RB stop/continue	Not Present
Added or Reconfigured UL TrCH information	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition A12.
Added or Decentiqueed DL TrCU information	Same as the set defined in RADIO BEARER SETUP
Added or Reconfigured DL TrCH information	message found in TS 34.108 clause 9 under condition
	A12.
Frequency info	Set to the frequency of cell 1
CHOICE channel requirement	Same as the set defined in RADIO BEARER SETUP
CHOICE charmer requirement	
	message found in TS 34.108 clause 9 under condition A12.
E-DCH Info	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition
	A12.
Downlink HS-PDSCH Information	Same as the set defined in RADIO BEARER SETUP
Downlink 110 1 Doort Infolitiation	message found in TS 34.108 clause 9 under condition
	A12.
Downlink information common for all radio links	,
- Downlink information continuor for all radio links	
- CHOICE DPCH info	
- Downlink DPCH info for all RL	
- Downlink DPCH into for all RE - Timing Indication	Initialize
Downlink information for each radio link list	II
- Downlink information for each radio link	
	TDD
- Choice mode	עטו
- Primary CCPCH info	1 29 Mone TDD
- CHOICE TDD option - TSTD indicator	1.28 Mcps TDD FALSE
- Cell parameters ID	Set to Cell parameters ID of cell 1
- SCTD indicator	FALSE
- Downlink DPCH info for each RL	Same as the set defined in RADIO BEARER SETUP
1	message found in TS 34.108 clause 9 under condition

	A12.
- E-AGCH Info	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A12.
- E-HICH Information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A12.
- E-RGCH Information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A12.

CELL UPDATE CONFIRM (Step 8) (3.84 Mcps TDD and 7.68Mcps TDD)

Information Floment	Value/romark
Information Element New H-RNTI	Value/remark
New E-RNTI	'0101 0101 0101 0101' '0101 0101 0101 01
RRC State indicator	CELL DCH
	CELL_DCH
RB information to reconfigure list - RB RB information to reconfigure	(UMDCCH for BBC)
- RB RB information to reconligure	(UM DCCH for RRC)
- RB identity - PDCP info	Not Present
- PDCP IIII0 - PDCP SN info	
- PDCP SN INIO - RLC info	Not Present Not Present
	Not Present
- RB mapping info - Information for each multiplexing option	1 RBMuxOption
	Not Present
- RLC logical channel mapping indicator	
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	1
- E-DCH MAC-d flow identity	1
- DDI	1
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for RRC)
- RB identity	2
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	100
- Timer_poll	100
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	100
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
· · · · · · · · · · · · · · · · · · ·	

	2
- Logical channel identity - E-DCH MAC-d flow identity	1 1
- DDI	2
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT High priority)
- RB identity	3
	1 - 7
- PDCP info - PDCP SN info	Not Present Not Present
	Not Present
- RLC info	AMBLO
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	100
- Timer_poll	100
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	100
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	-
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	3
- E-DCH MAC-d flow identity	1
- DDI	3
- RLC PDU size list	1 RLC PDU size
- RLC PDU Size list - RLC PDU size	1 RLC PDU SIZE
	FALSE
- Include in scheduling info	
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
I a mi a a l'ala anno a l'infantiti :	3
- Logical channel identity	
- Logical channel identity - RB stop/continue - RB information to reconfigure	Not Present (AM DCCH for NAS DT Low priority)

- RB identity	4
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	1.000
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer RST	500
- Max_RST	4
- Polling info	7
- Timer_poll_prohibit	100
- Timer_poil_profiloit - Timer_poll	100
- Poll_PDU	Not present
- POII_PDU - POII_SDU	Not present
	TDUE
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	100
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	4
- E-DCH MAC-d flow identity	1
- DDI	4
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
- RB stop/continue	Not Present
- RB information to reconfigure	(High-speed AM DTCH)
- RB identity	(Fight-speed AWIDTCH)
- RB identity - PDCP info	Not Present
- PDCP Info - PDCP SN info	Not Present Not Present
	INULFIESEIIL
- RLC info	AMPLO
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	No dia cond
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	256
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	100
- Timer_poll	100
- Poll_PDU	Not Present

- Poll SDU	T 1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	768
- Downlink RLC status info	
- Timer_status_prohibit	100
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	7
- E-DCH MAC-d flow identity	2
- DDI	5
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	336 bits
- Include in scheduling info	TRUE
- MAC logical channel priority	8
- Downlink RLC logical channel info	0
Number of downlink RLC logical channels	1
- Downlink transport channel type	HS-DSCH
- DCH Transport channel identity	Not Present
	Not Present
- DL DSCH Transport channel identity - DL HS-DSCH MAC-d flow identity	Not Present 0
	-
- Logical channel identity	7
- RB stop/continue	Not Present Same as the set defined in RADIO BEARER SETUP
Added or Reconfigured UL TrCH information	
	message found in TS 34.108 clause 9 under condition A12.
Added as December of DL Trolling to see a first	
Added or Reconfigured DL TrCH information	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition A12.
Frequency info	
CHOICE channel requirement	Set to the frequency of cell 1 Same as the set defined in RADIO BEARER SETUP
CHOICE channel requirement	
	message found in TS 34.108 clause 9 under condition
F DCU Info	A12.
E-DCH Info	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition A12.
Downlink HS-PDSCH Information	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition A12.
Downlink information common for all radio links	nic.
- Downlink information common for all radio links	
- Downlink information for all radio link - CHOICE DPCH info	
- Downlink DPCH info for all RL	
	Initialize
- Timing Indication Downlink information for each radio link list	IIIIIIaii2 C
- Downlink information for each radio link iist	
	TDD
- Choice mode	TDD
- Primary CCPCH info	2.04 and 7.60 Mana TDD
- CHOICE TDD option	3.84 and 7.68 Mcps TDD
- CHOICE sync case	Sync Case 2
LIMORIOT	
- Timeslot	0
- TSTD indicator	0 FALSE
	0

- Downlink DPCH info for each RL	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition
	A12.
- E-AGCH Info	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition
	A12.
- E-HICH Information	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition
	A12.
- E-RGCH Information	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition
	A12.

8.3.1.42.5 Test requirement

After step 2, the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 5, the UE shall transmit a CELL UPDATE message on the uplink CCCH.

After step 8, the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC in cell 1.

8.3.1.42a Cell Update: Transition from CELL_PCH to CELL_DCH: Success (frequency modification, start of E-DCH transmission, F-DPCH Configured)

8.3.1.42a.1 Definition

All UEs which support FDD, HS-PDSCH, E-DPDCH and fully support F-DPCH.

8.3.1.42a.2 Conformance requirement

same conformance requirement as in clause 8.3.1.42.2

8.3.1.42a.3 Test purpose

same test purpose as in clause 8.3.1.42.3

8.3.1.42a.4 Method of test

Initial Condition

System Simulator: 2 cells - cell 1 is active and cell 6 is inactive.

UE: PS-DCCH +DTCH_HS-DSCH +DTCH_E-DCH (state 6-18) under condition A14 as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports HS-PDSCH
- UE supports E-DPDCH
- UE fully supports F-DPCH

Test Procedure

Same test procedure as in clause 8.3.1.42.4

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 2)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
New C-RNTI	Not Present
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
RB information to reconfigure list	
- RB information to reconfigure	(UM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	Not Present
 RB mapping info Information for each multiplexing option 	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	1
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.10.2.4.4.1
- MAC logical channel priority	1
- Downlink RLC logical channel info	
 Number of downlink RLC logical channels 	1
 Downlink transport channel type 	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for RRC)
- RB identity - PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	Not resent
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	0.50
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU - Last transmission PDU poll	1 TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic - One sided RLC re-establishment	Not Present FALSE
- One sided RLC re-establishment - RB mapping info	FALSE
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	2
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.10.2.4.4.1
 MAC logical channel priority 	2

Information Element	Value/remark
- Downlink RLC logical channel info	Value/Terriark
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
 DL DSCH Transport channel identity 	Not Present
- Logical channel identity	2
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT High priority)
- RB identity - PDCP info	3 Not Present
- PDCP IIII0 - PDCP SN info	Not Present
- RLC info	14011 1000111
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
Polling infoTimer_poll_prohibit	250
- Timer_poil_profilibit	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
 Last retransmission PDU poll 	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
 CHOICE Downlink RLC PDU Size In-sequence delivery 	Reference to TS34.108 clause 6 Parameter Set TRUE
- Receiving window size	128
- Downlink RLC status info	120
- Timer_status_prohibit	200
- Timer_EPC	Not present
 Missing PDU indicator 	TRUE
 Timer_STATUS_periodic 	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	1 DDMuvOntion
 Information for each multiplexing option RLC logical channel mapping indicator 	1 RBMuxOption Not Present
Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	3
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.10.2.4.4.1
- MAC logical channel priority	3
- Downlink RLC logical channel info	1
 Number of downlink RLC logical channels Downlink transport channel type 	1 FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT Low priority)
- RB identity	4
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info - CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	INITIALO
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4

I Constitution of the control of the	No. 1				
Information Element	Value/remark				
- Polling info	350				
- Timer_poll_prohibit	250				
- Timer_poll	250 Not propert				
- Poll_PDU	Not present				
- Poll_SDU	1				
- Last transmission PDU poll	TRUE TRUE				
- Last retransmission PDU poll					
- Poll_Window	99				
- Timer_poll_periodic	Not Present				
- CHOICE Downlink RLC mode	AMRLC				
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set TRUE				
- In-sequence delivery					
- Receiving window size	128				
- Downlink RLC status info	200				
- Timer_status_prohibit- Timer_EPC	200 Not Present				
	TRUE				
- Missing PDU indicator	Not Present				
 Timer_STATUS_periodic One sided RLC re-establishment 	FALSE				
- RB mapping info	FALSE				
- RB mapping mo - Information for each multiplexing option	1 RBMuxOption				
- RLC logical channel mapping indicator	Not Present				
- Number of uplink RLC logical channels	1				
- Uplink transport channel type	IRACH				
- UL Transport channel identity	Not Present				
- Logical channel identity	4				
- CHOICE RLC size list	Explicit list				
- RLC size index	According to clause 6.10.2.4.4.1				
- MAC logical channel priority	4				
- Downlink RLC logical channel info					
- Number of downlink RLC logical channels	1				
- Downlink transport channel type	FACH				
- DL DCH Transport channel identity	Not Present				
- DL DSCH Transport channel identity	Not Present				
- Logical channel identity	4				
- RB stop/continue	Not Present				
- RB information to reconfigure	(High-speed AM DTCH)				
- RB identity	25				
- PDCP info	Not Present				
- PDCP SN info	Not Present				
- RLC info					
- CHOICE Uplink RLC mode	AMRLC				
- Transmission RLC discard					
- SDU discard mode	No discard				
- MAX_DAT	15				
- Transmission window size	128				
- Timer_RST	600				
- Max_RST	4				
- Polling info					
- Timer_poll_prohibit	250				
- Timer_poll	250				
- Poll_PDU	Not Present				
- Poll_SDU	1				
 Last transmission PDU poll 	TRUE				
- Last retransmission PDU poll	TRUE				
- Poll_Window	99				
- Timer_poll_periodic	Not Present				
- CHOICE Downlink RLC mode	AMRLC				
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set				
- In-sequence delivery	TRUE				
- Receiving window size	128				
- Downlink RLC status info	200				
- Timer_status_prohibit	200 Net Brosent				
- Timer_EPC	Not Present				
- Missing PDU indicator	TRUE				
 Timer_STATUS_periodic One sided RLC re-establishment 	Not Present				
One sided UFO 16-62 (ab) (3) [1] [6] [6]	FALSE				

Information Element	Value/remark			
- RB mapping info				
 Information for each multiplexing option 	1 RBMuxOption			
 RLC logical channel mapping indicator 	Not Present			
- Number of uplink RLC logical channels	1			
- Uplink transport channel type	RACH			
- UL Transport channel identity	Not Present			
- Logical channel identity	7			
- CHOICE RLC size list	Explicit list			
- RLC size index	Reference to TS34.108 clause 6 Parameter Set			
- MAC logical channel priority	8			
- Downlink RLC logical channel info				
 Number of downlink RLC logical channels 	1			
 Downlink transport channel type 	FACH			
 DL DCH Transport channel identity 	Not Present			
 DL DSCH Transport channel identity 	Not Present			
- Logical channel identity	7			
- RB stop/continue	Not Present			
Deleted UL TrCH information				
 Uplink transport channel type 	E-DCH			
- E-DCH MAC-d flow identity	1			
- Uplink transport channel type	E-DCH			
- E-DCH MAC-d flow identity	2			
Deleted DL TrCH information				
- Downlink transport channel type	HS-DSCH			
- DL HS-DSCH MAC-d flow identity	0			
- Downlink transport channel type	HS-DSCH			
- DL HS-DSCH MAC-d flow identity	1			
Frequency info				
- CHOICE mode	FDD			
- UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 6			
- UARFCN downlink(Nd)	Same downlink UARFCN as used for cell 6			
Maximum allowed UL TX power	Not Present			

Paging Type 1 (Step 5)

Information Element	Value/remark		
Message Type			
Paging record list	Only 1 entry		
Paging record			
- CHOICE Used paging identity	UTRAN identity		
- U-RNTI	Equal to the U-RNTI assigned earlier.		
- SRNC Identity			
- S-RNTI			
- CN originated page to connected mode UE	Not Present		
BCCH modification info	Not Present		

CELL UPDATE (Step 6)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in cell 1.
- SRNC Identity	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to "Paging response"

CELL UPDATE CONFIRM (Step 8)

Information Element	Value/remark				
w H-RNTI '0101 0101 0101'					
New Primary E-RNTI	'0101 0101 0101 0101'				
New Secondary E-RNTI	Not Present				
RRC State indicator	CELL_DCH				
RB information to reconfigure list					
- RB RB information to reconfigure	(UM DCCH for RRC)				
- RB identity	1				
- PDCP info	Not Present				
- PDCP SN info	Not Present				
- RLC info	Not Present				
- RECITIO - RB mapping info	Not Present				
- Information for each multiplexing option	1 RBMuxOption				
- RLC logical channel mapping indicator	Not Present				
- Number of uplink RLC logical channels	1				
- Uplink transport channel type	E-DCH				
- Logical channel identity	1				
- E-DCH MAC-d flow identity	1				
- DDI	1				
- RLC PDU size list	1 RLC PDU size				
- RLC PDU size	144 bits				
- Include in scheduling info	FALSE				
- MAC logical channel priority	1				
- Downlink RLC logical channel info					
- Number of downlink RLC logical channels	1				
- Downlink transport channel type	HS-DSCH				
- DL DCH Transport channel identity	Not Present				
- DL DSCH Transport channel identity	Not Present				
- DL HS-DSCH MAC-d flow identity	1				
- Logical channel identity	Not Decore				
- RB stop/continue	Not Present				
- RB information to reconfigure	(AM DCCH for RRC)				
- RB identity	2				
- RB identity - PDCP info	2 Not Present				
- RB identity - PDCP info - PDCP SN info	2				
- RB identity - PDCP info - PDCP SN info - RLC info	2 Not Present Not Present				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode	2 Not Present				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard	2 Not Present Not Present AM RLC				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode	2 Not Present Not Present				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT	Not Present Not Present AM RLC No discard 15				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode	2 Not Present Not Present AMRLC No discard				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size	Not Present Not Present AM RLC No discard 15				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT	Not Present Not Present AM RLC No discard 15 128				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST	Not Present Not Present AMRLC No discard 15 128 500				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info	Not Present Not Present AMRLC No discard 15 128 500				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit	Not Present Not Present AMRLC No discard 15 128 500 4				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll	2 Not Present Not Present AMRLC No discard 15 128 500 4 100 100				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - POll PDU	Not Present Not Present AMRLC No discard 15 128 500 4 100 Not present				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU	2 Not Present Not Present AMRLC No discard 15 128 500 4 100 100 Not present 1				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll	Not Present Not Present AMRLC No discard 15 128 500 4 100 100 Not present 1 TRUE				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll	2 Not Present Not Present AMRLC No discard 15 128 500 4 100 100 Not present 1 TRUE TRUE				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Poll_Window	2 Not Present Not Present AMRLC No discard 15 128 500 4 100 100 Not present 1 TRUE TRUE 99				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Poll_Window - Timer_poll_periodic	2 Not Present Not Present AMRLC No discard 15 128 500 4 100 100 Not present 1 TRUE TRUE 99 Not Present				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode	2 Not Present Not Present AM RLC No discard 15 128 500 4 100 100 Not present 1 TRUE TRUE TRUE 99 Not Present AM RLC				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size	Not Present				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery	Not Present				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size	Not Present				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info	Not Present				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit	Not Present				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC	Not Present				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator	Not Present				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC	Not Present				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator	Not Present				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - POIl_PDU - POIl_SDU - Last transmission PDU poll - Last retransmission PDU poll - Last retransmission PDU poll - POIL_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic	2				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info	Not Present Not Present AM RLC No discard 15 128 500 4 100 100 Not present 1 TRUE TRUE 99 Not Present AM RLC Reference to TS34.108 clause 6 Parameter Set TRUE 128 100 Not present TRUE TRUE TRUE TRUE Not Present TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE				
- RB identity - PDCP info - PDCP SN info - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - POII_SDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment	2				

- Number of uplink RLC logical channels	11				
- Uplink transport channel type	E-DCH				
- Logical channel identity	2				
- E-DCH MAC-d flow identity	1				
- DDI	2				
- RLC PDU size list	1 RLC PDU size				
- RLC PDU size	144 bits				
- Include in scheduling info	FALSE				
- MAC logical channel priority	2				
- Downlink RLC logical channel info					
- Number of downlink RLC logical channels	1				
- Downlink transport channel type	HS-DSCH				
- DL DCH Transport channel identity	Not Present				
- DL DSCH Transport channel identity	Not Present				
- DL HS-DSCH MAC-d flow identity	1				
- Logical channel identity	2				
- RB stop/continue	Not Present				
- RB information to reconfigure	(AM DCCH for NAS DT High priority)				
- RB identity	3				
- PDCP info	Not Present				
- PDCP SN info	Not Present				
- RLC info					
- CHOICE Uplink RLC mode	AMRLC				
- Transmission RLC discard					
- SDU discard mode	No discard				
- MAX_DAT	15				
- Transmission window size	128				
- Timer_RST	500				
- Max_RST	4				
- Polling info					
- Timer_poll_prohibit	100				
- Timer_poll	100				
- Poll_PDU	Not present				
- Poll_SDU	1				
- Last transmission PDU poll	TRUE				
- Last retransmission PDU poll	TRUE				
- Poll_Window	99				
- Timer_poll_periodic	Not Present				
- CHOICE Downlink RLC mode	AMRLC				
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set				
- In-sequence delivery	TRUE				
- Receiving window size	128				
- Downlink RLC status info					
- Timer_status_prohibit	100				
- Timer_EPC	Not present				
- Missing PDU indicator	TRUE				
- Timer_STATUS_periodic	Not Present				
- One sided RLC re-establishment	FALSE				
- RB mapping info					
- Information for each multiplexing option	1 RBMuxOption				
- RLC logical channel mapping indicator	Not Present				
- Number of uplink RLC logical channels	1				
- Uplink transport channel type	E-DCH				
- Logical channel identity	3				
- E-DCH MAC-d flow identity	1				
- DDI	3				
- RLC PDU size list	1 RLC PDU size				
- RLC PDU size	144 bits				
- Include in scheduling info	FALSE				
- MAC logical channel priority	3				
- Downlink RLC logical channel info					
- Number of downlink RLC logical channels	1				
- Downlink transport channel type	HS-DSCH				
- DL DCH Transport channel identity	Not Present				
- DL DSCH Transport channel identity	Not Present				
- DE DSCH Transport Charmer Identity					

- DL HS-DSCH MAC-d flow identity	11					
- Logical channel identity	3					
- RB stop/continue	Not Present					
- RB information to reconfigure	(AM DCCH for NAS DT Low priority)					
- RB identity	4					
- PDCP info	Not Present					
- PDCP SN info	Not Present Not Present					
- RLC info	INOUFIESEIIU					
- CHOICE Uplink RLC mode	AMPLC					
- Transmission RLC discard	AMRLC					
- SDU discard mode	No discard					
- MAX DAT						
	15					
- Transmission window size	128					
- Timer_RST	500					
- Max_RST	4					
- Polling info						
- Timer_poll_prohibit	100					
- Timer_poll	100					
- Poll_PDU	Not present					
- Poll_SDU	1					
- Last transmission PDU poll	TRUE					
- Last retransmission PDU poll	TRUE					
- Poll_Window	99					
- Timer_poll_periodic	Not Present					
- CHOICE Downlink RLC mode	AMRLC					
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set					
- In-sequence delivery	TRUE					
- Receiving window size	128					
- Downlink RLC status info						
- Timer_status_prohibit	100					
- Timer_EPC	Not Present					
- Missing PDU indicator	TRUE					
- Timer_STATUS_periodic	Not Present					
- One sided RLC re-establishment	FALSE					
- RB mapping info						
- Information for each multiplexing option	1 RBMuxOption					
- RLC logical channel mapping indicator	Not Present					
- Number of uplink RLC logical channels	1					
- Uplink transport channel type	E-DCH					
- Logical channel identity	4					
- E-DCH MAC-d flow identity	1					
- DDI	4					
- RLC PDU size list	1 RLC PDU size					
- RLC PDU size ist	144 bits					
- Include in scheduling info	FALSE					
- MAC logical channel priority	4					
- Downlink RLC logical channel info						
- Number of downlink RLC logical channels	1					
- Downlink transport channel type	HS-DSCH					
- DL DCH Transport channel identity	Not Present					
- DL DSCH Transport channel identity	Not Present					
- DL HS-DSCH MAC-d flow identity	1					
- Logical channel identity	4					
- RB stop/continue	Not Present					
- RB information to reconfigure	(High-speed AM DTCH)					
- RB identity	25					
- PDCP info	Not Present					
- PDCP SN info	Not Present					
- RLC info						
- CHOICE Uplink RLC mode	AMRLC					
- Transmission RLC discard						
- SDU discard mode	No discard					
- MAX_DAT	15					
- Transmission window size	256					
	500					
- Timer_RST	1 500					

- Max_RST	1 4				
- Polling info					
- Timer_poll_prohibit	100				
- Timer_poll	100				
- Poll_PDU	Not Present				
- Poll_SDU	1				
- Last transmission PDU poll	TRUE				
- Last retransmission PDU poll	TRUE				
- Poll_Window	99				
- Timer_poll_periodic	Not Present				
	AMRLC				
- CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size					
	Reference to TS34.108 clause 6 Parameter Set				
- In-sequence delivery	TRUE				
- Receiving window size	768				
- Downlink RLC status info	100				
- Timer_status_prohibit	100				
- Timer_EPC	Not Present				
- Missing PDU indicator	TRUE				
- Timer_STATUS_periodic	Not Present				
- One sided RLC re-establishment	FALSE				
- RB mapping info					
- Information for each multiplexing option	1 RBMuxOption				
- RLC logical channel mapping indicator	Not Present				
- Number of uplink RLC logical channels	1				
- Uplink transport channel type	E-DCH				
- Logical channel identity	7				
- E-DCH MAC-d flow identity	2				
- DDI	5				
- RLC PDU size list	1 RLC PDU size				
- RLC PDU size	336 bits				
- Include in scheduling info	TRUE				
- MAC logical channel priority	8				
- Downlink RLC logical channel info					
- Number of downlink RLC logical channels	1				
- Downlink transport channel type	HS-DSCH				
- DL DCH Transport channel identity	Not Present				
- DL DSCH Transport channel identity	Not Present				
- DL HS-DSCH MAC-d flow identity	0				
- Logical channel identity	7				
- RB stop/continue	Not Present				
Added or Reconfigured UL TrCH information	Same as the set defined in RADIO BEARER SETUP				
-	message found in TS 34.108 clause 9 under condition A14.				
Added or Reconfigured DL TrCH information	Same as the set defined in RADIO BEARER SETUP				
	message found in TS 34.108 clause 9 under condition				
	A14.				
Frequency info	Set to the frequency of cell 1				
CHOICE channel requirement	Same as the set defined in RADIO BEARER SETUP				
22.0 <u>2</u> 3333quilonion	message found in TS 34.108 clause 9 under condition				
	A14.				
E-DCH Info	Same as the set defined in RADIO BEARER SETUP				
	message found in TS 34.108 clause 9 under condition				
	A14.				
Downlink HS-PDSCH Information	Same as the set defined in RADIO BEARER SETUP				
25	message found in TS 34.108 clause 9 under condition				
	A14.				
Downlink information common for all radio links					
- Downlink information for all radio link					
- CHOICE DPCH info	F-DPCH				
- Downlink F-DPCH info for all RL	1 51 011				
- Timing Indication	Initialize				
- Downlink F-DPCH power control information					
- DPC mode	0 (single)				
- TPC command error rate target	0.04				
- CHOICE mode	FDD				
- DPCH compressed mode info	Not Present				
Di Oil compressed mode mo	HOLI TOOUTE				

- TX Diversity mode	None
- Default DPCH Offset Value	Arbitrary set to value 0306688 by step of 512
- MAC-hs reset indicator	Not Present
Downlink information for each radio link list	
- Downlink information for each radio link	
- Choice mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to the primary scrambling code of cell 1
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Serving HS-DSCH radio link indicator	TRUE
- Serving E-DCH radio link indicator	TRUE
- CHOICE DPCH info	F-DPCH
- Downlink F-DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- F-DPCH frame offset	Set to value Default F-DPCH Offset Value (as currently
	stored in SS) mod 38400
- Secondary CPICH info	Not Present
- Secondary scrambling code	Not Present
- Code number	12
- TPC combination index	0
- Closed loop timing adjustment mode	Not Present
- E-AGCH Info	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition
	A14.
- E-HICH Information	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition
	A14.
- E-RGCH Information	Same as the set defined in RADIO BEARER SETUP
	message found in TS 34.108 clause 9 under condition
	A14.

8.3.1.42a.5 Test requirement

same test requirement as in clause 8.3.1.42.5

8.3.1.42b Cell Update: Transition from CELL_PCH to CELL_DCH: Success (frequency modification, start of E-DCH transmission in the multi-frequency network environment, for 1.28Mcps TDD only)

8.3.1.42b.1 Definition

All UEs which support 1.28Mcps TDD and HS-PDSCH and E-PUCH..

8.3.1.42b.2 Conformance requirement

When the UE receives a PAGING TYPE 1 message, it shall perform the actions as specified below.

If the UE is in connected mode, for each occurrence of the IE "Paging record" included in the message the UE shall:

- 1> if the IE "Used paging identity" is a UTRAN identity and if this U-RNTI is the same as the U-RNTI allocated to the UE:
 - 2> if the optional IE "CN originated page to connected mode UE" is included:

3> indicate reception of paging; and

3> forward the IE "CN do main identity", the IE "Paging cause" and the IE "Paging record type identifier" to the upper layers.

2> otherwise:

- 3> perform a cell update procedure with cause "paging response" as specified in subclause 8.3.1.2.
- 2> ignore any other remaining IE "Paging record" that may be present in the message.

- 1> otherwise:
 - 2> ignore that paging record.

..

A UE shall initiate the cell update procedure in the following cases:

1> Paging response:

...

- 1> Uplink data transmission:
 - 2> if the UE is in URA_PCH or CELL_PCH state; and
 - 2> if the UE has uplink RLC data PDU or uplink RLC control PDU on RB1 or upwards to transmit:
 - 3> perform cell update using the cause "uplink data transmission".

. . .

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

. . .

When the UE receives a CELL UPDATE CONFIRM/URA UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or
- if the message is received on DCCH:

the UE shall:

1>act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following:

- 2> if the IE "Frequency info" is included in the message:
 - 3> if the IE "RRC State Indicator" is set to the value "CELL_DCH":
 - 4> act on the IE "Frequency info" as specified in subclause 8.6.6.1 in TS 25.331.

. . .

If the IE "New H-RNTI" is included, the UE shall:

- 1> if the IE "Downlink HS-PDSCH Information" is also included and the UE would enter CELL_DCH state according to subclause 8.6.3.3 of TS 25.331 applied on the received message:
 - 2> store the value in the variable H_RNTI.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

1> use the value of the variable H_RNTI as UE identity in the HS-SCCH reception procedure in the physical layer.

. . .

1> for FDD:

2> if the IE "New Primary E-RNTI" and/or the IE "New Secondary E-RNTI" are/is included and the UE will be in CELL DCH state after completion of this procedure, the UE shall:

- 3> store the new value(s) in the variable E_RNTI;
- 3> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.

1> for TDD:

- 2> if the IE "New E-RNTI" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:
 - 3> store the new value in the variable E_RNTI;
 - 3> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.

When the variable E_DCH_TRANSMISSION is set to TRUE the UE shall:

- 1> for FDD:
 - 2> use the value of the Primary E-RNTI and/or Secondary E-RNTI stored in the variable E_RNTI as UE identities in the E-A GCH reception procedure in the physical layer.
- 1> for TDD:
 - 2> use the value of New E-RNTI stored in the variable E_RNTI as the UE identity in the E-AGCH reception procedure and the E-RUCCH transmission procedure in the physical layer.

. .

If the IE "Downlink HS-PDSCH Information" is included and the UE would enter CELL_DCH state according to subclause 8.6.3.3 applied on the received message, the UE shall:

- 1> if the IE "HS-SCCH Info" is included:
 - 2> act as specified in subclause 8.6.6.33 of TS 25.331.
- 1> if the IE "Measurement Feedback Info" is included:
 - 2> act as specified in subclause 8.6.6.34 of TS 25.331.
- 1> if the IE "HS-DSCH Timeslot Configuration" or "HS-PDSCH Midamble Configuration" is included:
 - 2> store the received configuration;
 - 2> determine the value for the HS_DSCH_RECEPTION variable and take actions as described in subclause 8.5.25.

If the IE "HS-SCCH Info" is included, the UE shall:

1> store the received configuration.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

- 1> in the case of FDD:
 - 2> receive the HS-SCCH(s) according to the IE "HS-SCCH channelisation code" on the serving HS-DSCH radio link applying the scrambling code as received in the IE "DL Scrambling code".
- 1> in the case of TDD:
 - 2> receive the HS-SCCH(s) according to the IEs "Times lot Number", "Channelisation Code" and Midamble configuration IEs.
 - 2> transmit the HS-SICH according to the IEs "Timeslot Number", "Channelisation Code" and Midamble configuration IEs.
 - 2> for HS-SCCH power control the UE shall use the "BLER target" signalled in the first occurrence of the "HS-SCCH Set Configuration", and the UE shall also use the IE "Power Control GAP" for 1.28 Mcps TDD.

- 2> in 3.84 Mcps TDD and 7.68 Mcps TDD:
 - 3> use the parameters specified in the IE "HS-SICH power control info" for open loop power control as defined in subclause 8.5.7.
- 2> in 1.28 Mcps TDD:
 - 3> use the IE " PRX_{HS-SICH} " to calculate and set an initial uplink transmission power;
 - 3> use the IE "TPC step size" upon reception of TPC commands for closed loop power control;
 - 3> perform closed loop power control on HS-SICH within the interval indicated in the IE "Power Control GAP";
 - 3> use the IE "Pathloss compensation switch" to determine if the pathloss compensation from the beacon channel estimation should be taken into account for closed loop power control on HS-SICH;
- 3> use default value of "Uplink synchronisation frequency" and same value of "Uplink synchronisation step size" in "Uplink DPCH info" for HS-SICH upon reception of SS commands for closed loop uplink synchronisation on HS-SICH.

If the IE "Measurement Feedback Info" is included, the UE shall:

1> store the received configuration.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

1> use the information for the channel quality indication (CQI) procedure in the physical layer on the serving HS - DSCH rad io link.

. . .

If the IE "E-DCH Info" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:

- 1> for FDD:
 - 2> if the IE "E-DPCCH Info" is included:
 - 3> store the newly received E-DPCCH configuration.
 - 2> if the IE "E-DPDCH Info" is included:
 - 3> store the newly received E-DPDCH configuration.

. . .

1> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.

Whenever the variable HS_DSCH_RECEPTION is set to TRUE, the UE shall:

- 1> perform HS SCCH reception procedures according to the stored HS-SCCH configuration as stated in:
 - 2> subclause 8.6.6.33 for the IE "HS-SCCH Info".
- 1> perform HS-DSCH reception procedures according to the stored HS-PDSCH configuration as stated in:
 - 2> subclause 8.6.3.1b for the IE "H-RNTI";
 - 2> subclause 8.6.5.6b for the IE "HARQ info";
 - 2> subclause 8.6.6.34 for the IE "Measurement Feedback Info".

Whenever the variable E_DCH_TRANSMISSION is set to TRUE, the UE shall:

1>For FDD:

- 2> perform E_A GCH reception procedures according to the stored E_AGCH configuration as stated in:
 - 3> subclause 8.6.3.14 for the IE "New Primary E-RNTI" and the IE "New Secondary E-RNTI".
- 2> perform E-HICH reception procedures for all radio links in the E-DCH active set;
- 2> perform E-RGCH reception procedures for all radio links in the active set for which an E-RGCH configuration has been provided;
- 2> perform E-DPCCH transmission procedures according to the stored E-DPCCH configuration as stated in:
 - 3> subclause 8.6.6.37 for the IE "E-DPCCH Info".
- 2> perform E-DPDCH transmission procedures according to the stored E-DPDCH configuration as stated in:
 - 3> subclause 8.6.5.16 for the IE "E-DCH Trans mission Time Interval";
 - 3> subclause 8.6.5.17 for the IE "HARQ info for E-DCH";
 - 3> subclause 8.6.6.37 for the IE "E-DPDCH Info".
- 2> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Non-scheduled transmission grant info" is configured shall:
 - 3> obey the scheduling and size restrictions as specified for that MAC-d flow (see subclause 8.6.5.18).
- 2> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Scheduled transmission grant info" is configured shall:
 - 3> be performed in accordance with the received scheduling grant on E-AGCH/E-RGCH (see [15]); and
 - 3> obey the scheduling restrictions as specified for scheduled transmissions (see subclause 8.6.6.37).

1>For TDD:

- 2>perform E-A GCH reception procedures according to the stored E_AGCH configuration as stated in:
 - 3> subclause 8.6.3.14 for the IE "New E-RNTI".
- 2> Perform E-HICH reception;
- 2> for 3.84/7.68 Mcps TDD, perform E-RUCCH transmission procedures according to the stored E-RUCCH configuration as stated in:
 - 3> subclause 8.6.6.37 for the IE "E-RUCCH Info".
- 2> for 1.28 Mcps TDD, perform E-RUCCH transmission procedure according to the stored PRACH configuration (see [60]) and the stored E-RUCCH configuration as stated in:
 - 3> subclause 8.6.6.37 for the IE "E-RUCCH Info".
- NOTE 1: The PRACH configuration is signalled directly to the UE in "E-RUCCH Info" IE in case of E-DCH serving cell change.
 - 2> Perform E-PUCH transmission procedures according to the stored E-PUCH configuration as stated in:
 - 3> subclause 8.6.6.37 for the IE "E-PUCH Info".
 - 2> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Non-scheduled transmission grant info" is configured shall:
 - 3> obey the scheduling and size restrictions as specified for that MAC-d flow (see subclause 8.6.5.18).
 - 2> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Scheduled transmission grant info" is configured shall:

- 3> be performed in accordance with the received scheduling grant on E-AGCH (see [15]); and
- 3> obey the scheduling restrictions as specified for scheduled transmissions (see subclause 8.6.6.37).
- 2> obtain and format the appropriate information on E-UCCH (see [15]). For 1.28 Mcps TDD, when performing transmission on signalling radio bearer before RAB has been established, the UE shall use the lowest E-DCH capability category, as specified in [35], to signal the UL control information on E-UCCH.
- NOTE 2: For 1.28 Mcps TDD, when performing transmission on signalling radio bearer before RAB has been established, UTRAN should use the lowest E-DCH capability category when performing configuration, scheduling and reading the control information on E-UCCH, as it is not possible for Node B to be aware of the UE's E-DCH capability category during this period.

. .

If, after completion of the procedure, the UE will be in CELL_DCH state, the UE shall:

- 1> for FDD, 3.84 Mcps TDD and 7.68 Mcps TDD, if the IE "Frequency info" is included; or
- 1> for 1.28 Mcps TDD, if the IE "Frequency info" is included and the "Second Frequency info" is not included:
 - 2> if the frequency is different from the currently used frequency:
 - 3> store and use the frequency indicated by the IE "Frequency Info";
 - 3> if the received message is used to perform a Timing-maintained hard handover (see subclause 8.3.5.2), and IE "Timing maintained Synchronization indicator" is included:
 - 4> not perform any physical layer synchronization procedure (FDD only);
 - 3> else:
 - 4> perform the physical layer synchronisation procedure A as specified in [29] (FDD only).
 - 2> if the frequency is the same as the currently used frequency:
 - 3> continue to use the currently used frequency;
 - 3> perform the physical layer synchronisation procedure A as specified in [29] (FDD only).
- 1> for 1.28 Mcps TDD, if both the IE "Frequency info" and the IE "Second Frequency info" are included:
 - 2> the frequency in IE "Frequency info" is used as the primary frequency, and the frequency in IE "Second Frequency info" is used as the secondary frequency;
 - 2> store the primary frequency;
 - 2> if the secondary frequency is different with the currently used frequency:
 - 3> store and use the secondary frequency.
 - 2> if the secondary frequency is the same as the currently used frequency:
 - 3> continue to use the currently used frequency.
- 1> if the IE "Frequency info" is not included and the UE has a currently used frequency:
 - 2> continue to use the currently used frequency;

If the IE "Second Frequency info" is included, the UE shall:

1> act as specified in section 8.6.6.1.

If the IE "FPACH Frequency info" is included, the UE shall:

1> store the FPACH frequency indicated in the IE "FPACH Frequency info".

If the IE "UpPCH Position Info" is included:

1> store and use the UpPCH position indicated by the IE "UpPCH Position Info". The calculation of the uplink access position is described in [33].

If the IE "UpPCH Position Info" is not included:

1> use the UpPTS as the default UpPCH position.

Reference

3GPP TS 25.331 clauses 8.2.2.3, 8.2.2.4, 8.3.1, 8.6.3.1, 8.6.3.1b, 8.6.3.14, 8.6.5.6, 8.6.5.16, 8.6.5.17, 8.6.6.1, 8.6.6.32, 8.6.6.33, 8.6.6.34, 8.6.6.37.

8.3.1.42b.3 Test purpose

To confirm that the UE enters the CELL_DCH state after it receives a CELL UPDATE CONFIRM message with a physical channel configuration causing it to start E-DCH transmission and HS-DSCH reception on a different cell and frequency in the multi-frequency network environment.

To confirm that the UE enters CELL_PCH state on another frequency and stops E-DCH transmission and HS-DSCH reception when it receives a RADIO BEARER RECONFIGURATION message in the multi-frequency network environment.

8.3.1.42b.4 Method of test

Initial Condition

System Simulator:

2 cells

-cell 1 is active, 3 frequency (one is primary frequency, others are secondary frequency)

- cell 6 is inactive, 1 frequency.

UE: PS-DCCH +DTCH_HS-DSCH +DTCH_E-DCH (state 6-18) under condition A12 for 1.28 Mcps TDD as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports TDD
- UE supports HS-PDSCH
- UE supports E-PUCH

Test Procedure

Table 8.3.1.42b

Parameter	Unit	Cell 1		Cell 1		1 Cell 6	
		T0	T1	T2	T0	T1	T2
UTRARF Channel Number			id Rang requen	•		ligh Ran requen	
P-CCPCH RSCP (1.28 Mcps TDD)	dBm	-60	-72	-60	Off	-55	-72

Table 8.3.1.42b illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The SS has configured its downlink transmission power setting according to columns "T0" in table 8.3.1.42b. UE is in state 6-18 as specified in TS34.108 clause 7.4 in cell 1 and has a radio bearer established mapped on E-DCH and HS-DSCH established with active E-DCH transmission and HS-DSCH reception at one secondary frequency.

The SS switches its downlink transmission power settings to columns "T1". The SS transmits a RADIO BEARER RECONFIGURATION message, which invokes the UE to transit from CELL_DCH to CELL_PCH in cell 6. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC, selects cell 6 and enters CELL_PCH state.

The SS trans mits a PAGING TYPE 1 message. The UE then enters the CELL_FACH state to transmit a CELL UPDATE message to the SS on the uplink CCCH with the IE "Cell update cause" set to value "Paging response" in response to the paging.

The SS switches its downlink transmission power settings to columns "T2". The SS transmits CELL UPDATE CONFIRM message, which invokes UE to re-map the SRB's & the PS RAB on E-DCH/HS-DSCH for cell 1. Then the UE establishes HS-DSCH and E-DCH at one secondary frequency in cell 1, and resumes E-DCH transmission and transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH in cell 1.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1			The UE is in CELL_DCH state in cell 1 and the SS configures its downlink transmission power setting according to columns "T1" in table 8.3.1.42b.
2	←	RADIO BEARER RECONFIGURATION	
3	→	RADIO BEARER RECONFIGURATION COMPLETE	After transmitting this message, the UE enters the CELL_PCH state in cell 6
4	SS		SS sends the L2 ack on the RADIO BEARER RECONFIGURATION COMPLETE message and then waits 5 seconds to allow the UE to read system information before the next step. Note: The SS should continue to keep the dedicated channel configuration during the time when the L2 ack is sent to the UE.
5	←	PAGING TYPE 1	
6	→	CELL UPDATE	The UE enters the CELL_FACH state.
7	SS		The SS switches its downlink transmission power settings to columns "T2" in table 8.3.1.42b.
8	+	CELL UPDATE CONFIRM	
9	→	RADIO BEARER RECONFIGURATION COMPLETE	The UE changes to cell 1, enters the CELL_DCH state and starts E-DCH transmission and HS-DSCH reception.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 2)

Use the same message sub-type titled "Packet to CELL_DCH from CELL_PCH in PS" in TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark		
New C-RNTI	Not Present		
RRC State Indicator	CELL_PCH		
JTRAN DRX cycle length coefficient	3		
RB information to reconfigure list	(UMDOOULE-RDO)		
 RB information to reconfigure RB identity 	(UM DCCH for RRC)		
- PDCP info	Not Present		
- PDCP SN info	Not Present		
- RLC info	Not Present		
- RB mapping info			
- Information for each multiplexing option	1 RBMuxOption		
 RLC logical channel mapping indicator 	Not Present		
 Number of uplink RLC logical channels 	1		
- Uplink transport channel type	RACH		
 UL Transport channel identity Logical channel identity 	Not Present		
- CHOICE RLC size list	Explicit list		
- RLC size index	According to clause 6.10.2.4.4.1		
- MAC logical channel priority	1		
- Downlink RLC logical channel info			
 Number of downlink RLC logical channels 	1		
 Downlink transport channel type 	FACH		
- DL DCH Transport channel identity	Not Present		
- DL DSCH Transport channel identity	Not Present		
 Logical channel identity RB stop/continue 	1 Not Present		
- RB information to reconfigure	(AM DCCH for RRC)		
- RB identity	2		
- PDCP info	Not Present		
- PDCP SN info	Not Present		
- RLC info			
- CHOICE Uplink RLC mode	AMRLC		
- Transmission RLC discard	No disposed		
- SDU discard mode - MAX_DAT	No discard 15		
- MAX_DAT - Transmission window size	128		
- Timer_RST	600		
- Max_RST	4		
- Polling info			
Timer_poll_prohibit	250		
- Timer_poll	250		
- Poll_PDU	Not present		
Poll_SDULast transmission PDU poll	1 TRUE		
- Last transmission PDU poll	TRUE		
- Poll_Window	99		
- Timer_poll_periodic	Not Present		
- CHOICE Downlink RLC mode	AM RLC		
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set		
- In-sequence delivery	TRUE		
 Receiving window size Downlink RLC status info 	128		
- Timer_status_prohibit	200		
- Timer_status_profilibit - Timer_EPC	Not present		
- Missing PDU indicator	TRUE		
- Timer_STATUS_periodic	Not Present		
- One sided RLC re-establishment	FALSE		
- RB mapping info			
- Information for each multiplexing option	1 RBMuxOption		
- RLC logical channel mapping indicator	Not Present		
- Number of uplink RLC logical channels	1 PACH		
 Uplink transport channel type UL Transport channel identity 	RACH Not Present		
- DE Transport channel identity - Logical channel identity	2		
- CHOICE RLC size list	Explicit list		
- RLC size index	According to clause 6.10.2.4.4.1		
- MAC logical channel priority	2		

Information Floment	Value/remark			
Information Element - Downlink RLC logical channel info	value/remark			
- Number of downlink RLC logical channels	1			
- Downlink transport channel type	FACH			
- DL DCH Transport channel identity	Not Present			
- DL DSCH Transport channel identity	Not Present			
- Logical channel identity	2			
- RB stop/continue	Not Present			
- RB information to reconfigure	(AM DCCH for NAS DT High priority)			
- RB identity	3			
- PDCP info	Not Present			
- PDCP SN info	Not Present			
- RLC info				
- CHOICE Uplink RLC mode	AM RLC			
- Transmission RLC discard	No diagonal			
- SDU discard mode - MAX_DAT	No discard			
- Transmission window size	128			
- Timer_RST	600			
- Max_RST	4			
- Polling info				
- Timer_poll_prohibit	250			
- Timer_poll	250			
- Poll_PDU	Not present			
- PoII_SDU	1			
 Last transmission PDU poll 	TRUE			
 Last retransmission PDU poll 	TRUE			
- Poll_Window	99			
- Timer_poll_periodic	Not Present			
- CHOICE Downlink RLC mode	AMRLC			
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set			
 In-sequence delivery Receiving window size 	TRUE 128			
- Downlink RLC status info	120			
- Timer_status_prohibit	200			
- Timer_EPC	Not present			
- Missing PDU indicator	TRUE			
- Timer_STATUS_periodic	Not Present			
- One sided RLC re-establishment	FALSE			
- RB mapping info				
 Information for each multiplexing option 	1 RBMuxOption			
 RLC logical channel mapping indicator 	Not Present			
- Number of uplink RLC logical channels	1			
- Uplink transport channel type	RACH			
- UL Transport channel identity	Not Present			
 Logical channel identity CHOICE RLC size list 	3 Explicit list			
- RLC size index	Explicit list According to clause 6.10.2.4.4.1			
- MAC logical channel priority	3			
- Downlink RLC logical channel info				
- Number of downlink RLC logical channels	1			
- Downlink transport channel type	FACH			
- DL DCH Transport channel identity	Not Present			
 DL DSCH Transport channel identity 	Not Present			
 Logical channel identity 	3			
- RB stop/continue	Not Present			
- RB information to reconfigure	(AM DCCH for NAS DT Low priority)			
- RB identity	4			
- PDCP info	Not Present Not Present			
- PDCP SN info - RLC info	INOT LESCH			
- CHOICE Uplink RLC mode	AM RLC			
- Transmission RLC discard	,			
- SDU discard mode	No discard			
- MAX_DAT	15			
- Transmission window size	128			
- Timer_RST	600			
- Max_RST	4			

I Constitution of the control of the	No. of the second			
Information Element	Value/remark			
- Polling info				
- Timer_poll_prohibit	250			
- Timer_poll	250			
- Poll_PDU	Not present			
- Poll_SDU	1			
- Last transmission PDU poll	TRUE			
- Last retransmission PDU poll	TRUE			
- Poll_Window	99			
- Timer_poll_periodic	Not Present			
- CHOICE Downlink RLC mode	AMRLC TOOLLOO			
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set			
- In-sequence delivery	TRUE			
- Receiving window size	128			
- Downlink RLC status info				
- Timer_status_prohibit	200_			
- Timer_EPC	Not Present			
- Missing PDU indicator	TRUE			
- Timer_STATUS_periodic	Not Present			
- One sided RLC re-establishment	FALSE			
- RB mapping info				
- Information for each multiplexing option	1 RBMuxOption			
- RLC logical channel mapping indicator	Not Present			
- Number of uplink RLC logical channels	1			
- Uplink transport channel type	RACH			
- UL Transport channel identity	Not Present			
- Logical channel identity	4			
- CHOICE RLC size list	Explicit list			
- RLC size index	According to clause 6.10.2.4.4.1			
- MAC logical channel priority	4			
- Downlink RLC logical channel info				
- Number of downlink RLC logical channels	1			
- Downlink transport channel type	FACH			
- DL DCH Transport channel identity	Not Present			
- DL DSCH Transport channel identity	Not Present			
- Logical channel identity	4			
- RB stop/continue	Not Present			
- RB information to reconfigure	(High-speed AM DTCH)			
- RB identity	25			
- PDCP info	Not Present			
- PDCP SN info	Not Present			
- RLC info	AMADIC			
- CHOICE Uplink RLC mode	AMRLC			
- Transmission RLC discard	No dia cord			
- SDU discard mode - MAX_DAT	No discard 15			
- MAA_DAT - Transmission window size	128			
- Timer_RST	600			
- Max_RST	4			
- Polling info				
- Timer_poll_prohibit	250			
- Timer_poll	250			
- Poll_PDU	Not Present			
- Poll_SDU	1			
- Last transmission PDU poll	TRUE			
- Last retransmission PDU poll	TRUE			
- Poll_Window	99			
- Timer_poll_periodic	Not Present			
- CHOICE Downlink RLC mode	AMRLC			
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set			
- In-sequence delivery	TRUE			
- Receiving window size	128			
- Downlink RLC status info	-			
- Timer_status_prohibit	200			
- Timer_EPC	Not Present			
- Missing PDU indicator	TRUE			
- Timer_STATUS_periodic	Not Present			
- One sided RLC re-establishment	FALSE			
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Information Element	Value/remark	
- RB mapping info		
 Information for each multiplexing option 	1 RBMuxOption	
- RLC logical channel mapping indicator	Not Present	
 Number of uplink RLC logical channels 	1	
- Uplink transport channel type	RACH	
 UL Transport channel identity 	Not Present	
- Logical channel identity	7	
- CHOICE RLC size list	Explicit list	
- RLC size index	Reference to TS34.108 clause 6 Parameter Set	
- MAC logical channel priority	8	
- Downlink RLC logical channel info		
- Number of downlink RLC logical channels	1	
 Downlink transport channel type 	FACH	
- DL DCH Transport channel identity	Not Present	
 DL DSCH Transport channel identity 	Not Present	
- Logical channel identity	7	
- RB stop/continue	Not Present	
Deleted UL TrCH information		
- Uplink transport channel type	E-DCH	
- E-DCH MAC-d flow identity	1	
- Uplink transport channel type	E-DCH	
- E-DCH MAC-d flow identity	2	
Deleted DL TrCH information		
- Downlink transport channel type	HS-DSCH	
- DL HS-DSCH MAC-d flow identity	0	
Frequency info	TDD	
- CHOICE mode	TDD	
- UARFCN(Nt)	Same UARFCN as used for cell 6	
Maximum allowed UL TX power	Not Present	

Paging Type 1 (Step 5)

Information Element	Value/remark
Message Type	
Paging record list	Only 1 entry
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	Equal to the U-RNTI assigned earlier
- SRNC Identity	
- S-RNTI	
- CN originated page to connected mode UE	Not Present
BCCH modification info	Not Present

CELL UPDATE (Step 6)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in cell 1
- SRNC Identity	Check to see if set to value assigned in cell 1
Cell Update Cause	Check to see if set to "Paging response"

CELL UPDATE CONFIRM (Step 8)

Information Element	Value/remark		
New H-RNTI	'0101 0101 0101 0101'		
New E-RNTI	'0101 0101 0101 0101'		
RRC State indicator	CELL_DCH		
RB information to reconfigure list			
- RB RB information to reconfigure	(UM DCCH for RRC)		
- RB identity	1		
- PDCP info	Not Present		
- PDCP SN info	Not Present		
- RLC info	Not Present		
- RB mapping info			
- Information for each multiplexing option	1 RBMuxOption		
- RLC logical channel mapping indicator	Not Present		
- Number of uplink RLC logical channels	1		
- Uplink transport channel type	E-DCH		
- Logical channel identity	1		
- E-DCH MAC-d flow identity	1		
- DDI	1		
- RLC PDU size list	1 RLC PDU size		
- RLC PDU size	144 bits		
- Include in scheduling info	FALSE		
- MAC logical channel priority	1		
- Downlink RLC logical channel info			
- Number of downlink RLC logical channels	1		
- Downlink transport channel type	DCH		
- DL DCH Transport channel identity	10		
- DL DSCH Transport channel identity	Not Present		
- Logical channel identity	1		
- RB stop/continue	Not Present		
- RB information to reconfigure	(AM DCCH for RRC)		
- RB identity	2		
- PDCP info	Not Present		
- PDCP SN info	Not Present		
- RLC info	AMBLO		
- CHOICE Uplink RLC mode - Transmission RLC discard	AMRLC		
	No disposal		
- SDU discard mode - MAX DAT	No discard		
- MAA_DAT - Transmission window size	128		
- Transmission window size - Timer_RST	500		
- Max_RST - Polling info	4		
- Timer_poll_prohibit	100		
- Timer_poil_profilbit - Timer_poll	100		
- Poll_PDU	Not present		
- POII_PDU - POII_SDU	1		
- Last transmission PDU poll	TRUE		
- Last retransmission PDU poll	TRUE		
- Poll_Window	99		
- Timer_poll_periodic	Not Present		
- CHOICE Downlink RLC mode	AMRLC		
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set		
- In-sequence delivery	TRUE		
- Receiving window size	128		
- Downlink RLC status info			
- Timer_status_prohibit	100		
- Timer_EPC	Not present		
- Missing PDU indicator	TRUE		
- Timer_STATUS_periodic	Not Present		
- One sided RLC re-establishment	FALSE		
- RB mapping info			
- Information for each multiplexing option	1 RBMuxOption		
- RLC logical channel mapping indicator	Not Present		
- Number of uplink RLC logical channels	1		
- Uplink transport channel type	E-DCH		
	· · · · · · · · · · · · · · · · · · ·		

F.E.DCH MAC-31 flow identity	- Logical channel identity	2		
. DDI . RLC PDU size list . RLC PDU size . RLSE . MAC logical channel pronty . Downlink RLC logical channels . Downlink RLC logical channels . Downlink RLC logical channels . Downlink tarsport channel loentity . DL DCH Transport channel identity . DL DCH Transport channel identity . Logical channel identity . RLC logical channel identity . RLC globy channel gl				
R.I.C. PDU size				
- RLC PDU size - Induction is chedulating info - Induction is chedulating info - MAC logical channel priority - Downlink RLC logical channels - Number of downlink RLC logical channels - Downlink Karpsport channel info - Number of downlink RLC logical channels - Downlink Karpsport channel identity - DL DSCH Transport channel identity - Logical channel identity - Logical channel identity - RB stop/continue - RB information to reconfigure - RB i		-		
Include in scheduling info				
- MAC logical channel priority				
- Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel lype - DL DCH Transport channel lype - DL DCH Transport channel lype - DL DSCH Transport channel identity - Logical channel identity - Logical channel identity - RB siop/continue - RB information to reconfigure - RB information to reach multiplexing option - RLC logical channel spope - Logical channel information - RB information to reach multiplexing option - RLC logical channel information - RB information to reach multiplexing option - RLC PDU size Ist - RC PDU size Ist - RLC PDU size Ist - RB information to reach multiplexing option - RLC logical channel from the put of the reconfigure - RB information to reach multiplexing option - RLC logical channel from the put of the reconfigure - RB information to reach multiplexing option - RLC PDU size Ist - RLC PDU size	- MAC logical channel priority			
- Number of downlink RLC logical channels 1	- Downlink RLC logical channel info			
- Downlink transport channel lype - DL DSCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - Logical channel identity - Restop/continue - RB stop/continue - RB information to reconfigure - RB information in the subject to the subject to reconfigure - RB information in the subject to reconfigure - RB information in the subject to reconfigure - RB information in the subject to reconfigure - RB mapping info - Information for each multiplexing option - RLC logical channel inforument - RLC PDU size - Logical channel mapping indicator - RLC PDU size in the reconfigure - RB information in the subject to reconfigure - RB information in the subject in the subject to reconfigure - RLC PDU size in the reconfigure - RLC PDU size in the reconfigure - RLC PDU size in the reconfigure - Dumink RLC opcial channel info - Number of downlink RLC opcial channel info - Number of down		1		
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- RB Information to reconfigure - PDCP SN Info - PDCP SN Info - RLC Info - RLC Info - CHOICE Uplink RLC mode - MARLC - Transmission RLC discard - SDU discard mode - MAX DAT - Transmission window size - Timer, RST - Transmission window size - Timer, RST - Polling Info - Timer, poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Poll_SDU - Poll_SDU - Poll_SDU - Poll_SDU - Last transmission PDU poll - RUE - POll_Window - Timer_poll_periodic - CHOICE Downlink RLC PDU Size - Reference to TS34.108 clause 6 Parameter Set - Reference delivery - Receiving window size - Researing window size - Timer_pol - Timer_pol - Timer_pol - Timer_pol - Researing window size - Reference to TS34.108 clause 6 Parameter Set - In-sequence delivery - Receiving window size - Timer_set poll_bridator - Timer_pol - Timer_pol - Timer_pol - Researing window size - Reference to TS34.108 clause 6 Parameter Set - Reference to TS34.108 clause 6 Parameter - Reference to TS34.108				
RB identity				
- PDCP info Not Present - PDCP SN info Not Present - RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT 15 - Transmission window size 128 - Timer_RST 500 - Max_RST 4 - Polling info - Timer_poll_prohibit - Timer_poll_prohibit 100 - Poll SDU 100 - Poll IPDU Not present - Poll_poll_prohibit 100 - Poll_poll_poll_prohibit 100 - Poll_poll_poll_poll 170 - Poll_poll_poll_poll_poll_poll_poll_poll_				
- PDCP SN info - RLC (info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Transmission window size - Timer_RST - Polling info - Timer_poll_prohibit - Timer_poll_prohibit - Timer_poll_prohibit - Poll_SDU - Poll_SDU - Poll_SDU - Poll_SDU - Poll_SDU - Last transmission PDU poll - Last transmission PDU poll - Poll_Window - Timer_poll_preduc - Poll_Window - Timer_poll_prohibit - CHOICE Downlink RLC mode - CHOICE Downlink RLC mode - CHOICE Downlink RLC mode - In-sequence delivery - Receiving window size - In-sequence delivery - Receiving window size - Timer_status_prohibit - Timer_status_prohibit - Timer_status_prohibit - Timer_status_prohibit - Most present - Missing PDU indicator - Timer_status_prohibit - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - RLC PDU size - RLC				
- RLC info - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX DAT - Transmission window size - Timer. RST - Timer. RST - Polling info - Timer poll prohibit - Timer poll for thibit - Poll. SDU - Poll. SDU - Poll. SDU - Last retransmission PDU poll - Last retransmission PDU poll - Poll. Window - Timer. Doll periodic - CHOICE Downlink RLC mode - CHOICE Downlink RLC mode - CHOICE Downlink RLC mode - Timer, status_prohibit - Timer, status_prohibi				
- CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Transmission window size - Timer_RST - Polling into - Timer_poll_prohibit - Timer_poll 100 - Poll_PDU 100 - Poll_PDU 100 - Poll_PDU 100 - Poll_PDU 100 - Poll_SDU 1 - Last ransmission PDU poll 178UE - Last ransmission PDU poll 178UE - Poll_Window 99 - Poll_Window 99 - Poll_Window 99 - Poll_PDU 100 - CHOICE Downlink RLC mode AMRLC - CHOICE Downlink RLC mode AMRLC - CHOICE Downlink RLC mode AMRLC - Lin-sequence delivery TIRUE - Receiving window size 128 - Downlink RLC status into 128 - Downlink RLC mode 128 - Downlink RLC mode 178 - Timer_status_prohibit 100 - Timer_EPC Not present 178 - Timer_STATUS_periodic Not Present 178 - Timer_STATUS_periodic Not Present 178 - RB mapping info 1 RBMxOption 1 RBMxOption 1 RBLSE 1 RBMxOption 1 RLC poll size 1 RLC pol		Not Present		
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- Timer_RST				
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- Timer_poll - Poll_PDU - Poll_PDU - Poll_Status transmission PDU poll - Last transmission PDU poll - Last tretransmission PDU poll - Last retransmission PDU poll - Poll_Window - Poll_Window - Poll_Poll_Poll_Poll_Poll_Poll_Poll_Poll				
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- CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_status_prohibit - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel type - Logical channel identity - DDD - RLC PDU size - Downlink RLC logical channels - RLC PDU size - DOWNlink RLC side channel info - MAC logical channel priority - Downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Du DSCH Transport channel identity - DL DSCH Transport channel identity - RB stop/continue - RB stop/continue - Not Present	- Poll_Window			
- CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_status_prohibit - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel type - Logical channel identity - DDD - RLC PDU size - Downlink RLC logical channels - RLC PDU size - DOWNlink RLC side channel info - MAC logical channel priority - Downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Du DSCH Transport channel identity - DL DSCH Transport channel identity - RB stop/continue - RB stop/continue - Not Present	- Timer_poll_periodic	Not Present		
- In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Not present - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel identity - DDI - RLC PDU size - RLC PDU size - Include in scheduling info - MAC logical channel priority - Number of downlink RLC logical channels - Include in scheduling info - MAC logical channel priority - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - RB stop/continue - Not Present	- CHOICE Downlink RLC mode	AMRLC		
- Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Mot present - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel identity - RLC PDU size - RLC PDU size - RLC PDU size - Include in scheduling info - MAC logical channel priority - Number of downlink RLC logical channels - RLC PDU size - RLC PDU size - RLC PDU size - Include in scheduling info - Number of downlink RLC logical channels - Number of downlink RLC logical channels - Downlink RLC logical channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - RB stop/continue - Not Present - RD Present - Not Present - Not Present - Not Present - RD Stop/continue - Not Present	- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set		
- Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC Not present - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel identity - PDDI - RLC PDU size - RLC PDU size - Include in scheduling info - MAC logical channel priority - Number of downlink RLC logical channels - RLC PDU size - RLC PDU size - RLC PDU size - NAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel identity - DL DCH Transport channel identity - RLS stop/continue - Not Present - RLS stop/continue - Not Present	- In-sequence delivery	TRUE		
- Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Mot present - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel identity - Logical channel identity - RLC PDU size list - RLC PDU size list - RLC PDU size - Include in scheduling info - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - Logical channel identity - Logical channel identity - Logical channel identity - Logical channel identity - Not Present - RB stop/continue - Not Present		128		
- Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel info - RLC PDU size list - RLC PDU size - Include in scheduling info - MAC logical channel info - Number of downlink RLC logical channels - Mumber of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - RB stop/continue Not Present				
- Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel info - RLC PDU size list - RLC PDU size - Include in scheduling info - MAC logical channel info - Number of downlink RLC logical channels - Mumber of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - RB stop/continue Not Present	- Timer status prohibit	100		
- Missing PDU indicator - Timer_STATUS_periodic - One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel identity - E-DCH MAC-d flow identity - DDI - RLC PDU size list - RLC PDU size - NMC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB stop/continue - Not Present - RB stop/continue - Not Present - Not Present - RB stop/continue - Not Present				
- Timer_STATUS_periodic Not Present - One sided RLC re-establishment FALSE - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator Not Present - Number of uplink RLC logical channels - Uplink transport channel type E-DCH - Logical channel identity 3 - E-DCH MAC-d flow identity 1 - DDI 3 - RLC PDU size list 1 RLC PDU size - RLC PDU size 144 bits - Include in scheduling info FALSE - MAC logical channel info - Number of downlink RLC logical channels 1 - Downlink RLC logical channel info - Number of downlink RLC logical channels 1 - Du DCH Transport channel type DCH - DL DCH Transport channel identity 10 - DL DSCH Transport channel identity 3 - RB stop/continue Not Present				
- One sided RLC re-establishment - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel identity - E-DCH - Logical channel identity - DDI - RLC PDU size list - RLC PDU size - RLC PDU size - RLC PDU size - Include in scheduling info - Number of downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel iype - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - Logical channel identity - Logical channel identity - Logical channel identity - RB stop/continue - Not Present				
- RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel identity - Logical channel identity - DDI - RLC PDU size list - RLC PDU size - RLC PDU size - RLC PDU size - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel identity - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - Logical channel identity - RB stop/continue - RB stop/continue - Not Present				
- Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel identity - E-DCH - Logical channel identity - DDI - RLC PDU size list - RLC PDU size - RLC PDU size - Include in scheduling info - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - Logical channel identity - RB stop/continue - RB stop/continue - Not Present				
- RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - Logical channel identity - E-DCH - Logical channel identity - DDI - RLC PDU size list - RLC PDU size - RLC PDU size - RLC PDU size - Include in scheduling info - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - Logical channel identity - RB stop/continue - RB stop/continue - Not Present		1 RBMuxOntion		
- Number of uplink RLC logical channels - Uplink transport channel type - Logical channel identity 3 - E-DCH MAC-d flow identity 1 - DDI 3 - RLC PDU size list - RLC PDU size - RLC PDU size - RLC PDU size 144 bits - Include in scheduling info - MAC logical channel priority 3 - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - Logical channel identity - Logical channel identity - Logical channel identity - RB stop/continue Not Present				
- Uplink transport channel type - Logical channel identity 3 - E-DCH MAC-d flow identity 1 - DDI 3 - RLC PDU size list 1 RLC PDU size - RLC PDU size 144 bits - Include in scheduling info FALSE - MAC logical channel priority 3 - Downlink RLC logical channel info - Number of downlink RLC logical channels 1 - Downlink transport channel type DCH - DL DCH Transport channel identity 10 - DL DSCH Transport channel identity - Logical channel identity - Logical channel identity - Logical channel identity - RB stop/continue Not Present				
- Logical channel identity - E-DCH MAC-d flow identity - DDI - RLC PDU size list - RLC PDU size - RLC PDU size - RLC PDU size - RLC PDU size - Include in scheduling info - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB stop/continue - RB stop/continue 1 - DDD SCH Transport channel identity - RB stop/continue - Not Present				
- E-DCH MAC-d flow identity - DDI - RLC PDU size list - RLC PDU size - RLC PDU size - RLC PDU size 144 bits - Include in scheduling info FALSE - MAC logical channel priority 3 - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type DCH - DL DCH Transport channel identity 10 - DL DSCH Transport channel identity - Logical channel identity - Logical channel identity - RB stop/continue Not Present				
- DDI - RLC PDU size list - RLC PDU size - RLC PDU size - RLC PDU size 144 bits - Include in scheduling info - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB stop/continue 3 1 RLC PDU size 1 RALSE 1 PALSE - DALSE - DOWNLINK RLC logical channels 1 - DOCH - DL DCH Transport channel identity Not Present Not Present				
- RLC PDU size list 1 RLC PDU size 144 bits - Include in scheduling info FALSE - MAC logical channel priority 3 - Downlink RLC logical channel info - Number of downlink RLC logical channels 1 - Downlink transport channel type DCH - DL DCH Transport channel identity 10 - DL DSCH Transport channel identity Not Present - Logical channel identity 3 - RB stop/continue Not Present				
- RLC PDU size 144 bits - Include in scheduling info FALSE - MAC logical channel priority 3 - Downlink RLC logical channel info - Number of downlink RLC logical channels 1 - Downlink transport channel type DCH - DL DCH Transport channel identity 10 - DL DSCH Transport channel identity Not Present - Logical channel identity 3 - RB stop/continue Not Present				
- Include in scheduling info - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB stop/continue FALSE 3 BOCH NOT Present Not Present Not Present				
- MAC logical channel priority 3 - Downlink RLC logical channel info - Number of downlink RLC logical channels 1 - Downlink transport channel type DCH - DL DCH Transport channel identity 10 - DL DSCH Transport channel identity Not Present - Logical channel identity 3 - RB stop/continue Not Present				
- Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB stop/continue Not Present Not Present				
- Number of downlink RLC logical channels 1 - Downlink transport channel type DCH - DL DCH Transport channel identity 10 - DL DSCH Transport channel identity Not Present - Logical channel identity 3 - RB stop/continue Not Present		3		
- Downlink transport channel type DCH - DL DCH Transport channel identity 10 - DL DSCH Transport channel identity Not Present - Logical channel identity 3 - RB stop/continue Not Present				
- DL DCH Transport channel identity 10 - DL DSCH Transport channel identity Not Present - Logical channel identity 3 - RB stop/continue Not Present				
- DL DSCH Transport channel identity - Logical channel identity - RB stop/continue Not Present Not Present				
- Logical channel identity 3 - RB stop/continue Not Present				
- RB stop/continue Not Present				
- RB information to reconfigure (AM DCCH for NAS DT Low priority)	·	N (B)		

- RB identity	4		
- PDCP info	Not Present		
- PDCP SN info	Not Present		
- RLC info	Hotticoont		
- CHOICE Uplink RLC mode	AMRLC		
- Transmission RLC discard	TWITES		
- SDU discard mode	No discard		
- MAX_DAT	No discard		
- Transmission window size	128		
- Timer RST	500		
- Max_RST	4		
- Polling info	T		
- Timer_poll_prohibit	100		
- Timer_poll	100		
- Poll_PDU	Not present		
- POII_PDU - POII_SDU	Not present		
	TDUE		
- Last transmission PDU poll	TRUE TRUE		
- Last retransmission PDU poll			
- Poll_Window	99		
- Timer_poll_periodic	Not Present		
- CHOICE Downlink RLC mode	AMRLC		
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set		
- In-sequence delivery	TRUE		
- Receiving window size	128		
- Downlink RLC status info			
- Timer_status_prohibit	100		
- Timer_EPC	Not Present		
- Missing PDU indicator	TRUE		
- Timer_STATUS_periodic	Not Present		
- One sided RLC re-establishment	FALSE		
- RB mapping info			
- Information for each multiplexing option	1 RBMuxOption		
- RLC logical channel mapping indicator	Not Present		
- Number of uplink RLC logical channels	1		
- Uplink transport channel type	E-DCH		
- Logical channel identity	4		
- E-DCH MAC-d flow identity	1		
- DDI	4		
- RLC PDU size list	1 RLC PDU size		
- RLC PDU size	144 bits		
- Include in scheduling info	FALSE		
- MAC logical channel priority	4		
- Downlink RLC logical channel info			
- Number of downlink RLC logical channels	1		
- Downlink transport channel type	DCH		
- DL DCH Transport channel identity	10		
- DL DSCH Transport channel identity	Not Present		
- Logical channel identity	4		
- RB stop/continue	Not Present		
- RB information to reconfigure	(High-speed AM DTCH)		
- RB identity	25		
- PDCP info	Not Present		
- PDCP SN info	Not Present		
- RLC info			
- CHOICE Uplink RLC mode	AMRLC		
- Transmission RLC discard			
- SDU discard mode	No discard		
- MAX_DAT	15		
- MAX_DAT - Transmission window size	256		
- Timer_RST - Max_RST	500		
	<u> </u>		
- Polling info	100		
- Timer_poll_prohibit	100		
- Timer_poll - Poll_PDU	100 Not Present		
	I NOT Present		

- Poll SDU	1		
- Last transmission PDU poll	TRUE		
- Last retransmission PDU poll	TRUE		
- Poll_Window	99		
- Timer_poll_periodic	Not Present		
- CHOICE Downlink RLC mode	AMRLC		
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set		
- In-sequence delivery	TRUE		
- Receiving window size	768		
- Downlink RLC status info	700		
- Timer_status_prohibit	100		
- Timer_EPC	Not Present		
- Missing PDU indicator	TRUE		
- Timer_STATUS_periodic	Not Present		
- One sided RLC re-establishment	FALSE		
- RB mapping info	FALSE		
	1 RBMuxOption		
Information for each multiplexing option RLC logical channel mapping indicator	Not Present		
- Number of uplink RLC logical channels	1		
- Uplink transport channel type	E-DCH		
- Logical channel identity	7		
- E-DCH MAC-d flow identity	2		
- DDI	5		
- RLC PDU size list	1 RLC PDU size		
- RLC PDU size	336 bits		
- Include in scheduling info	TRUE		
- MAC logical channel priority	8		
- Downlink RLC logical channel info			
- Number of downlink RLC logical channels	1		
- Downlink transport channel type	HS-DSCH		
- DL DCH Transport channel identity	Not Present		
- DL DSCH Transport channel identity	Not Present		
- DL HS-DSCH MAC-d flow identity	0		
- Logical channel identity	7		
- RB stop/continue	Not Present		
Added or Reconfigured UL TrCH information	Same as the set defined in RADIO BEARER SETUP		
	message found in TS 34.108 clause 9 under condition		
	A12.		
Added or Reconfigured DL TrCH information	Same as the set defined in RADIO BEARER SETUP		
	message found in TS 34.108 clause 9 under condition		
	A12.		
Frequency info			
- UARFCN (Nt)	Same as primary frequency of the cell 1		
Multi-frequency Info			
- Second Frequency Info	Same as one secondary frequency of the cell 1		
- FPACH Frequency Info	Not present		
- UpPCH Position Info	Not present		
CHOICE channel requirement	Same as the set defined in RADIO BEARER SETUP		
	message found in TS 34.108 clause 9 under condition		
	A12.		
E-DCH Info	Same as the set defined in RADIO BEARER SETUP		
	message found in TS 34.108 clause 9 under condition		
	A12.		
Downlink HS-PDSCH Information	Same as the set defined in RADIO BEARER SETUP		
	message found in TS 34.108 clause 9 under condition		
	A12.		
Downlink information common for all radio links			
- Downlink information for all radio link			
- CHOICE DPCH info			
- Downlink DPCH info for all RL			
- Timing Indication	Initialize		
Downlink information for each radio link list			
- Downlink information for each radio link			
- Choice mode	TDD		
- Primary CCPCH info			
- CHOICE TDD option	1.28 Mcps TDD		
· · · · · · · · · · · · · · · · · · ·			

- TSTD indicator	FALSE		
- Cell parameters ID	Set to Cell parameters ID of cell 1		
- SCTD indicator	FALSE		
- Downlink DPCH info for each RL	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A12.		
- E-AGCH Info	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A12.		
- E-HICH Information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A12.		
- E-RGCH Information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A12.		

8.3.1.42b.5 Test requirement

After step 2, the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 5, the UE shall transmit a CELL UPDATE message on the uplink CCCH.

After step 8, the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC in cell 1.

8.3.1.43 Cell Update: Radio Link Failure, with active E-DCH transmission

8.3.1.43.1 Definition

All UEs which support FDD or TDD and HS-PDSCH and E-DPDCH for FDD or E-PUCH for TDD, and fully support F-DPCH (FDD only).

8.3.1.43.2 Conformance requirement

1> Radio link failure:

. .

3> if the UE is in CELL_DCH state and the criteria for radio link failure are met as specified in subclause 8.5.6 of TS 25.331; or

. . .

4> perform cell update using the cause "radio link failure".

When initiating the URA update or cell update procedure, the UE shall:

- 1> if any IEs related to HS-DSCH are stored in the UE:
 - 2> clear any stored IE "Downlink HS-PDSCH information";
 - 2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25.
- 1> if any IEs related to E-DCH are stored in the UE:
 - 2> clear any stored IE "E-DCH info";
 - 2> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.

In CELL_DCH State, after receiving N313 consecutive "out of sync" indications from layer 1 for the established DPCCH or F-DPCH physical channel in FDD, and the physical channels associated with mapped DCCHs in TDD, the UE shall:

- 1> start timer T313;
- 1> upon receiving N315 successive "in sync" indications from layer 1 and upon change of UE state:
 - 2> stop and reset timer T313.
- 1> if T313 expires:
 - 2> consider it as a "Radio link failure".

Periods in time where neither "in sync" nor "out of sync" is reported by layer 1 do not affect the evaluation of the number of consecutive (resp. successive) "in sync" or "out of sync" indications.

When a radio link failure occurs, the UE shall:

- 1> clear the dedicated physical channel configuration;
- 1> perform actions as specified for the ongoing procedure;
- 1> if no procedure is ongoing or no actions are specified for the ongoing procedure:
 - 2> perform a cell update procedure according to subclause 8.3.1 using the cause "radio link failure".

Reference

3GPP TS 25.331 clauses 8.3.1.2, 8.5.6.

8.3.1.43.3 Test purpose

- 1. To confirm that the UE detects the radio link failure condition when the F-DPCH physical channel is established (FDD only).
- 2. To confirm that the UE stops the E-DCH transmission and performs a Cell Update procedure after radio link failure.
- 3. To confirm that the UE keeps the radio bearer mapping option and transport channel configuration for E-DCH after the radio link failure. To confirm that the UE resumes the E-DCH trans mission after the Cell Update procedure.

8.3.1.43.4 Method of test

Initial Condition

System Simulator: 1 cell - Cell 1

UE: PS-DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD or 1.28 Mcps TDD
- UE supports HS-PDSCH
- UE supports E-DPDCH for FDD or E-PUCH for 1.28 Mcps TDD
- UE fully supports F-DPCH (FDD only)

Test Procedure

Table 8.3.1.43

Parameter	Unit	Cell 1	
		T0	T1
UTRARF Channel Number		Mid Range Test	
		Frequency	
CPICH Ec (FDD)	dBm/3.84MHz	-60	OFF
P-CCPCH RSCP (TDD)	dBm	-60	OFF

Table 8.3.1.43 illustrates the downlink power to be applied to Cell 1 at various time instants of the test execution. Column marked "T0" denote the initial conditions.

The UE is in CELL_DCH state and only signalling radio bearers have been established. The SS initiates P26 to make the UE move to state 6-18 as specified in TS 34.108 clause 7.4. The UE is now in the CELL_DCH state and has radio bearers mapped on E-DCH and HS-DSCH established with active E-DCH transmission and HS-DSCH reception. The SS configures its downlink transmission power settings according to column "T1" in table 8.3.1.43. After expiry of timer T313, the UE shall detect a radio link failure in Cell 1.

The SS waits for 10s (see Note 1) and then configures its downlink transmission power settings according to column "T0" in table 8.3.1.43. The UE shall then enter CELL_FACH state and transmit a CELL UPDATE message on the uplink CCCH in Cell 1.

The SS trans mits a CELL UPDATE CONFIRM message, which requests the UE to transit to CELL_DCH state and provides the physical channel configuration to resume the interrupted radio bearer mapped on E-DCH / HS-DSCH. The UE sets up the physical channels associated to E-DCH / HS-DSCH, enters CELL_DCH state and sends a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS calls for generic procedure C.3 to check that the UE is in CELL_DCH state.

NOTE 1: The 10s delay guarantees the expiry of timer T313 (default value = 3s) and the non-expiry of timer T315 (default value = 180s).

Expected sequence

Step	Direction	Message	Comment
	UE SS		
0	$\leftarrow \rightarrow$	P26	See below for the specific message content
			used in RADIO BEARER SETUP message.
1			The SS configures Cell 1 according to the
			"T1" power settings in table 8.3.1.43.
			The SS starts to listen to the uplink CCCH of
			Cell 1.
2			The UE detects the radio link failure and
			stops transmission of E-DCH.
3	\rightarrow	CELL UPDATE	10s after step 1, the SS configures Cell 1
			according to the "T0" power settings in table
			8.3.1.43.
			The UE shall camp on Cell 1 and transmit a
			Cell Update message with the IE "Cell
			update cause" set to "radio link failure".
4	←	CELL UPDATE CONFIRM	The SS orders the UE to re-establish the E-
			DCH / HS-DSCH configuration.
5	\rightarrow	PHYSICAL CHANNEL RECONFIGURATION	
		COMPLETE	
6	$\leftarrow \rightarrow$	CALL C.3	If the test result of C.3 indicates that UE is in
			CELL_DCH state, the test passes,
			otherwise it fails.

Specific Message Contents

RADIO BEARER SETUP (Step 0) (FDD and 1.28Mcps TDD)

Use the same message as specified for "Packet to CELL_DCH / E-DCH / HS-DSCH using one multiple xing option (1/1) and SRBs mapped on E-DCH/HS-DSCH" in 34.108, with the exception of the following IEs:

Information Element	Value/remark
RB information to be affected	
- RB identity	1 (UM DCCH for RRC)
- RB mapping info	, , , , , , , , , , , , , , , , , , ,
 Information for each multiplexing option 	2 RBMuxOptions
 RLC logical channel mapping indicator 	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	1
- E-DCH MAC-d flow identity	1
- DDI	1
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	1
 Downlink RLC logical channel info 	
- Number of RLC logical channels	1
- Downlink transport channel type	HS-DSCH
 DL DCH Transport channel identity 	Not present
- DL DSCH Transport channel identity	Not present
- DL HS-DSCH MAC-d flow identity	1
- Logical channel identity	1
 RLC logical channel mapping indicator 	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	1
- CHOICE RLC size list	Explicit List
- RLC size index	According to clause 6.10.2.4.1.2 (standalone 3.4 kbps
MAC la giant about a ministr	signalling radio bearer)
- MAC logical channel priority	1
- Downlink RLC logical channel info - Number of RLC logical channels	1
- Number of RLC logical channels - Downlink transport channel type	1 FACH
- DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RB identity	2 (AM DCCH for RRC)
- RB mapping info	Z (iiii B G G T T G T K K G)
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	2
- E-DCH MAC-d flow identity	1
- DDI	2
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	HS-DSCH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- DL HS-DSCH MAC-d flow identity	
- Logical channel identity	Not Propert
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	
- Uplink transport channel type	RACH Not Present
- UL Transport channel identity	Not Present 2
- Logical channel identity - CHOICE RLC size list	Explicit List
- RLC size index	According to clause 6.10.2.4.1.2 (standalone 3.4 kbps
INEO SIZO INGON	signalling radio bearer)
- MAC logical channel priority	2
- Downlink RLC logical channel info	[
- Number of RLC logical channels	1
3	The state of the s

	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- RB identity	3 (AM DCCH for NAS High Priority)
- RB mapping info	
 Information for each multiplexing option 	2 RBMuxOptions
 RLC logical channel mapping indicator 	Not Present
 Number of uplink RLC logical channels 	1
 Uplink transport channel type 	E-DCH
- Logical channel identity	3
- E-DCH MAC-d flow identity	1
- DDI	3
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	HS-DSCH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- DL HS-DSCH MAC-d flow identity	1
- Logical channel identity	3
- Uplink transport channel type	RACH
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- UL Transport channel identity	Not Present
- Logical channel identity	3
- CHOICE RLC size list	Explicit List
- RLC size index	According to clause 6.10.2.4.1.2 (standalone 3.4 kbps
- INEO SIZE INGEX	signalling radio bearer)
- MAC logical channel priority	3
- Downlink RLC logical channel info	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DCH Transport channel identity	Not Present
	Not Present
- DL DSCH Transport channel identity	1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
- Logical channel identity	3
- RB identity	4 (AM DCCH for NAS Low Priority)
- RB mapping info	O D D M
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1 5 5011
- Uplink transport channel type	E-DCH
- Logical channel identity	4
- E-DCH MAC-d flow identity	
- DDI	4
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	HS-DSCH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- DL HS-DSCH MAC-d flow identity	1
- Logical channel identity	4
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
 Uplink transport channel type 	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	4
- CHOICE RLC size list	Explicit List
- RLC size index	According to clause 6.10.2.4.1.2 (standalone 3.4 kbps
	signalling radio bearer)
- MAC logical channel priority	4

Downlink RLC logical channel info Number of RLC logical channels	1	
- Downlink transport channel type	FACH	
- DL DCH Transport channel identity	Not Present	
- DL DSCH Transport channel identity	Not Present	
- Logical channel identity	4	

RADIO BEARER SETUP (Step 0) (3.84Mcps TDD and 7.68Mcps TDD)

Use the same message as specified for "Packet to CELL_DCH / E-DCH / HS-DSCH using one multiple xing option (1/1) and SRBs mapped on E-DCH/HS-DSCH" in 34.108, with the exception of the following IEs:

Information Element	Value/remark
RB information to be affected	
- RB identity	1 (UM DCCH for RRC)
- RB mapping info	
 Information for each multiplexing option 	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	1
- E-DCH MAC-d flow identity - DDI	1
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
 Downlink transport channel type 	HS-DSCH
- DL DCH Transport channel identity	Not present
- DL DSCH Transport channel identity	Not present
- DL HS-DSCH MAC-d flow identity	
- Logical channel identity	Not Present
 RLC logical channel mapping indicator Number of RLC logical channels 	Not Present
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	1
- CHOICE RLC size list	Explicit List
- RLC size index	According to clause 6.10.3.4.1.2 for 3.84Mcps and
	6.11.6.4.1.2 and 7.68Mcps (standalone 3.4 kbps
	signalling radio bearer)
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of RLC logical channels	1 FACH
 Downlink transport channel type DL DCH Transport channel identity 	Not Present
- DL DSCH Transport channel identity - DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RB identity	2 (AM DCCH for RRC)
- RB mapping info	(
- Information for each multiplexing option	2 RBMuxOptions
 RLC logical channel mapping indicator 	Not Present
 Number of uplink RLC logical channels 	1
- Uplink transport channel type	E-DCH
- Logical channel identity	2
- E-DCH MAC-d flow identity	1
- DDI - RLC PDU size list	2 1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	HS-DSCH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- DL HS-DSCH MAC-d flow identity	1 2
 Logical channel identity RLC logical channel mapping indicator 	Not Present
Number of RLC logical channels	Not Present
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	2
- CHOICE RLC size list	Explicit List
- RLC size index	According to clause 6.10.3.4.1.2 for 3.84Mcps and
	6.11.6.4.1.2 and 7.68Mcps (standalone 3.4 kbps
	signalling radio bearer)
 MAC logical channel priority 	2

Decombined DLO to mixed about a line	
- Downlink RLC logical channel info	4
- Number of RLC logical channels	1 FACH
Downlink transport channel type DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity - DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- RB identity	3 (AM DCCH for NAS High Priority)
- RB mapping info	(with both to thight honly)
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	3
- E-DCH MAC-d flow identity	1
- DDI	3
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	3
- Downlink RLC logical channel info	4
- Number of RLC logical channels	1 He Dech
- Downlink transport channel type	HS-DSCH Not Present
DL DCH Transport channel identity DL DSCH Transport channel identity	Not Present
- DL DSCH Transport charmer identity - DL HS-DSCH MAC-d flow identity	1
- Logical channel identity	3
- Uplink transport channel type	RACH
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- UL Transport channel identity	Not Present
- Logical channel identity	3
- CHOICE RLC size list	Explicit List
- RLC size index	According to clause 6.10.3.4.1.2 for 3.84Mcps and
	6.11.6.4.1.2 and 7.68Mcps (standalone 3.4 kbps
	signalling radio bearer)
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
DL DSCH Transport channel identity Logical channel identity	Not Present
- RB identity	4 (AM DCCH for NAS Low Priority)
- RB mapping info	4 (AW DOCT TO NAS LOW I Holly)
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	4
- E-DCH MAC-d flow identity	1
- DDI	4
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of RLC logical channels	ne pech J
- Downlink transport channel type	HS-DSCH Not Present
- DL DCH Transport channel identity - DL DSCH Transport channel identity	Not Present
- DL DSCH Transport channel identity - DL HS-DSCH MAC-d flow identity	1
- DE HS-DSCH MAC-d flow identity - Logical channel identity	4
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	4
- CHOICE RLC size list	Explicit List
•	

- RLC size index	According to clause 6.10.3.4.1.2 for 3.84Mcps and 6.11.6.4.1.2 and 7.68Mcps (standalone 3.4 kbps signalling radio bearer)
 MAC logical channel priority 	4
 Downlink RLC logical channel info 	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
 DL DCH Transport channel identity 	Not Present
 DL DSCH Transport channel identity 	Not Present
- Logical channel identity	4

CELL UPDATE (Step 3)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in Cell 1.
- SRNC Identity	Check to see if set to value assigned in Cell 1.
Cell Update Cause	Check to see if set to "Radio link failure"

CELL UPDATE CONFIRM (Step 4) (FDD)

Information Element	Value/remark
New H-RNTI	'1010 1010 1010 1010'
New Primary E-RNTI	'1010 1010 1010 1010'
New Secondary E-RNTI	Not Present
RRC State indicator	CELL_DCH
CHOICE channel requirement	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A14.
E-DCH Info	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A14.
Downlink HS-PDSCH information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A14.
Downlink information common for all radio links	
- Downlink F-DPCH info common for all RL	
- Timing Indication	Initialise
- Downlink F-DPCH power control information	
- DPC mode	0 (single)
- TPC command error rate target	0.04
- CHOICE mode	FDD
- DPCH compressed mode info	Not Present
- TX Diversity mode	None
- Default DPCH Offset Value	Arbitrary set to value 0306688 by step of 512
- MAC-hs reset indicator	
Downlink information per radio link list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A14.

CELL UPDATE CONFIRM (Step 4) (1.28 Mcps TDD)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New H-RNTI	'1010 1010 1010 1010'
New E-RNTI	'1010 1010 1010 1010'
RRC State indicator	CELL_DCH
CHOICE channel requirement	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	under condition A13.
E-DCH Info	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	under condition A13.
Downlink HS-PDSCH information	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	under condition A13.
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing indicator	Initialize
- CFN-targetSFN frame offset	Not Present
- Downlink DPCH power control information	
- CHOICE mode	TDD
- TPC Step Size	1
- MAC-d HFN initial value	Not Present
- CHOICE mode	TDD
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- TSTD indicator	FALSE
- Default DPCH Offset Value	Arbitrary set to value 07
- MAC-hs reset indicator	TRUE
Downlink information per radio link list	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	under condition A13.

CELL UPDATE CONFIRM (Step 4) (3.84Mcps TDD and 7.68Mcps TDD)

Information Element	Value/remark
New H-RNTI	'1010 1010 1010 1010'
New E-RNTI	'1010 1010 1010 1010'
RRC State indicator	CELL_DCH
CHOICE channel requirement	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	under condition A13.
E-DCH Info	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9 under condition A13.
Described IIC DDCCI information	
Downlink HS-PDSCH information	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9 under condition A13.
Downlink information common for all radio links	under condition A13.
- Downlink DPCH info common for all RL	
- Timing indicator	Initialize
- CFN-targetSFN frame offset	Not Present
- Downlink DPCH power control information	
- CHOICE mode	TDD
- TPC Step Size	1
- MAC-d HFN initial value	Not Present
- CHOICE mode	TDD
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps or 7.68Mcps TDD
- CHOICE sync case	Sync case 2
- Timeslot	0

Information Element	Value/remark
- Default DPCH Offset Value	Arbitrary set to value 07
- MAC-hs reset indicator	TRUE
Downlink information per radio link list	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	under condition A13.

8.3.1.43.5 Test requirement

After step 2, the UE shall transmit a CELL UPDATE message.

After step 4, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and start transmission on E-DCH.

8.3.1.44 Cell Update: Transition from CELL_PCH to CELL_DCH: Success (frequency modification, start of discontinuous uplink transmission)

8.3.1.44.1 Definition

All UEs which support FDD and UL DTX.

8.3.1.44.2 Conformance requirement

When the UE receives a PAGING TYPE 1 message, it shall perform the actions as specified below.

If the UE is in connected mode, for each occurrence of the IE "Paging record" included in the message the UE shall:

- 1> if the IE "Used paging identity" is a UTRAN identity and if this U-RNTI is the same as the U-RNTI allocated to the UE:
 - 2> if the optional IE "CN originated page to connected mode UE" is included:
 - 3> indicate reception of paging; and
 - 3> forward the IE "CN domain identity", the IE "Paging cause" and the IE "Paging record type identifier" to the upper layers.
 - 2> otherwise:
 - 3> perform a cell update procedure with cause "paging response" as specified in subclause 8.3.1.2.
 - 2> ignore any other remaining IE "Paging record" that may be present in the message.
- 1> otherwise:
 - 2> ignore that paging record.

. . .

A UE shall initiate the cell update procedure in the following cases:

- 1> Paging response:
 - ..
- 1> Uplink data transmission:
 - 2> if the UE is in URA PCH or CELL PCH state; and
 - 2> if the UE has uplink RLC data PDU or uplink RLC control PDU on RB1 or upwards to transmit:
 - 3> perform cell update using the cause "uplink data transmission".

. . .

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

. . .

When the UE receives a CELL UPDATE CONFIRM/URA UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U RNTI; or
- if the message is received on DCCH:

the UE shall:

1>act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following:

- 2> if the IE "Frequency info" is included in the message:
 - 3> if the IE "RRC State Indicator" is set to the value "CELL_DCH":
 - 4> act on the IE "Frequency info" as specified in subclause 8.6.6.1 in TS 25.331.

. . .

If the IE "New H-RNTI" is included, the UE shall:

- 1> if the IE "Downlink HS-PDSCH Information" is also included and the UE would enter CELL_DCH state according to subclause 8.6.3.3 of TS 25.331 applied on the received message:
 - 2> store the value in the variable H_RNTI.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

1> use the value of the variable H_RNTI as UE identity in the HS-SCCH reception procedure in the physical layer.

. .

If the IE "New Primary E-RNTI" and/or the IE "New Secondary E-RNTI" is included, the UE shall:

1> store the new value(s) in the variable E_RNTI;

When the variable E_DCH_TRANSMISSION is set to TRUE the UE shall:

1> use the value of the Primary E-RNTI and/or Secondary E-RNTI stored in the variable E_RNTI as identities in the E-A GCH reception procedure in the physical layer.

. . .

If, after completion of the procedure, the UE will be in CELL_DCH state, the UE shall:

- 1> if the IE "Frequency info" is included:
 - 2> if the frequency is different from the currently used frequency:
 - 3> store and use the frequency indicated by the IE "Frequency Info"; and
 - 3> perform the physical layer synchronisation procedure A as specified in TS 25.214 (FDD only).

. . .

If the IE "Downlink HS-PDSCH Information" is included and the UE would enter CELL_DCH state according to subclause 8.6.3.3 applied on the received message, the UE shall:

- 1> if the IE "HS-SCCH Info" is included:
 - 2> act as specified in subclause 8.6.6.33 of TS 25.331.

- 1> if the IE "Measurement Feedback Info" is included:
 - 2> act as specified in subclause 8.6.6.34 of TS 25.331.
- 1> if the IE "HS-DSCH Timeslot Configuration" or "HS-PDSCH Midamble Configuration" is included:
 - 2> store the received configuration;
 - 2> determine the value for the HS_DSCH_RECEPTION variable and take actions as described in subclause 8.5.25.

If the IE "HS-SCCH Info" is included, the UE shall:

1> store the received configuration.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

- 1> in the case of FDD:
 - 2> receive the HS-SCCH(s) according to the IE "HS-SCCH channelisation code" on the serving HS-DSCH radio link applying the scrambling code as received in the IE "DL Scrambling code".

If the IE "Measurement Feedback Info" is included, the UE shall:

1> store the received configuration.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

1> use the information for the channel quality indication (CQI) procedure in the physical layer on the serving HS-DSCH radio link.

. .

If the IE "E-DCH Info" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:

- 1> if the IE "E-DPCCH Info" is included:
 - 2> store the newly received E-DPCCH configuration.
- 1> if the IE "E-DPDCH Info" is included:
 - 2> store the newly received E-DPDCH configuration.
- 1> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.

. . .

Whenever the variable HS_DSCH_RECEPTION is set to TRUE, the UE shall:

- $1{>}\ perform\ HS_SCCH\ configuration\ as\ stated\ in:$
 - 2> subclause 8.6.6.33 for the IE "HS-SCCH Info".
- 1> perform HS-DSCH reception procedures according to the stored HS-PDSCH configuration as stated in:
 - 2> subclause 8.6.3.1b for the IE "H-RNTI";
 - 2> subclause 8.6.5.6b for the IE "HARQ info";
 - 2> subclause 8.6.6.34 for the IE "Measurement Feedback Info".

Whenever the variable E DCH TRANSMISSION is set to TRUE, the UE shall:

- 1> perform E_A GCH reception procedures according to the stored E_AGCH configuration as stated in:
 - 2> subclause 8.6.3.14 of TS 25.331 for the IE "New Primary E-RNTI" and the IE "New Secondary E-RNTI".

- 1> perform E-HICH reception procedures for all radio links in the active set for which an E-HICH configuration has been provided;
- 1> perform E-RGCH reception procedures for all radio links in the active set for which an E-RGCH configuration has been provided;
- 1> perform E-DPCCH trans mission procedures according to the stored E-DPCCH configuration as stated in:
 - 2> subclause 8.6.6.37 of TS 25.331 for the IE "E-DPCCH Info";
- 1> perform E-DPDCH transmission procedures according to the stored E-DPDCH configuration as stated in:
 - 2> subclause 8.6.5.16 of TS 25.331 for the IE "E-DCH Transmission Time Interval";
 - 2> subclause 8.6.5.17 of TS 25.331 for the IE "HARQ info for E-DCH";
 - 2> subclause 8.6.6.37 of TS 25.331 for the IE "DPDCH Info".
- 1> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Non-scheduled transmission grant info" is configured shall:
 - 2> obey the scheduling and size restrictions as specified for that MAC-d flow (see subclause 8.6.5.18 of TS 25.331).
- 1> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Scheduled transmission grant info" is configured shall:
 - 2> be performed in accordance with the received scheduling grant on E-AGCH/E-RGCH (see [15]); and
 - 2> obey the scheduling restrictions as specified for scheduled transmissions (see subclause 8.6.6.37 of TS 25.331).

• • •

If the IE "DTX-DRX timing information" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:

- 1> if the CHOICE "timing" is set to "New timing":
 - 2> store the contents of the IE in the variable DTX_DRX_PARAMS.
- 1> determine the value for the DTX_DRX_STATUS variable and take the corresponding actions as described in subclause 8.5.34.

. . .

If the IE "DTX-DRX information" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:

- 1> store the contents of the IE in the variable DTX_DRX_PARAMS;
- 1> determine the value for the DTX_DRX_STATUS variable and take the corresponding actions as described in subclause 8.5.34;
- 1> if the value of the IE "UE DTX cycle 2" is not an integer multiple of the value of the IE "UE DTX cycle 1"; or
- 1> if the value of the IE "UE DTX cycle 2" is not an integer multiple or a divisor of the value of the IE "CQI Feedback cycle, k"; or
- 1> if the value of the IE "UE DPCCH burst 1" is greater than the value of the IE "UE DTX cycle 1"; or
- 1> if the value of the IE "UE DPCCH burst 2" is greater than the value of the IE "UE DTX cycle 2"; or
- 1> if the IE "UE DTX long preamble length" is set to 4 or 15 slots and the value of the IE "Inactivity Threshold for UE DTX cycle 2" is less than 4 TTIs (for 10ms E-DCH TTI) or 8 TTIs (for 2ms E-DCH TTI); or

- 1> if the IE "UE DRX cycle" is not an integer multiple or a divisor of the value of the IE "UE DTX cycle 1"; or
- 1> if the IE "DRX Information" is included in this message while the IE "DTX information" is not included in this message; or
- 1> if the value of the IE "UE DTX cycle 1" is not an integer multiple or a divisor of the value of the IE "MAC DTX cycle":
 - 2> the UE behaviour is unspecified.

Reference

3GPP TS 25.331 clauses 8.2.2.3, 8.2.2.4, 8.3.1, 8.6.3.1,8.6.3.1b,8.6.3.14, 8.6.5.6,8.6.5.16, 8.6.5.17, 8.6.6.1, 8.6.6.32, 8.6.6.33, 8.6.6.34, 8.6.6.37, 8.6.6.38, 8.6.6.39.

8.3.1.44.3 Test purpose

To confirm that the UE enters the CELL_DCH state after it receives a CELL UPDATE CONFIRM message with a physical channel configuration causing it to start E-DCH transmission, HS-DSCH reception and configure UL DTX on a different cell and frequency.

To confirm that the UE enters CELL_PCH state on another frequency and stops E-DCH transmission and HS-DSCH reception when it receives a RADIO BEARER RECONFIGURATION message.

8.3.1.44.4 Method of test

Initial Condition

System Simulator: 2 cells - cell 1 is active and cell 6 is inactive.

UE: PS-DCCH +DTCH_HS-DSCH +DTCH_E-DCH (state 6-18), with UL DTX configured, under condition A20 as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports discontinuous uplink transmission.

Test Procedure

Table 8.3.1.44

Parameter	Unit		Cell 1			Cell 6	
		T0	T1	T2	T0	T1	T2
UTRARF Channel Number		M	id Rang	je	Н	ligh Ran	ge
		Fre	quency	(f1)	Fre	equency	(f2)
CPICH Ec	dBm/3.84MHz	-60	-72	-60	Off	-55	-72

 $Table\ 8.3.1.44\ illustrates\ the\ downlink\ power\ to\ be\ applied\ for\ the\ 2\ cells\ at\ various\ time\ instants\ of\ the\ test\ execution.$

The SS has configured its downlink transmission power setting according to columns "T0" in table 8.3.1.44. UE is in state 6-18 under condition A20 as specified in TS34.108 clause 7.4 in cell 1and has a radio bearer established mapped on E-DCH and HS-DSCH established with active E-DCH (DTX) transmission and HS-DSCH reception.

The SS switches its downlink transmission power settings to columns "T1". The SS transmits a RADIO BEARER RECONFIGURATION message, which invokes the UE to transit from CELL_DCH to CELL_PCH in cell 6. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC, selects cell 6 and enters CELL_PCH state.

The SS trans mits a PAGING TYPE 1 message. The UE then enters the CELL_FACH state to transmit a CELL UPDATE message to the SS on the uplink CCCH with the IE "Cell update cause" set to value "Paging response" in response to the paging.

The SS switches its downlink transmission power settings to columns "T2". The SS transmits CELL UPDATE CONFIRM message, which invokes UE to re-map the SRB's and the PS RAB on E-DCH/HS-DSCH for cell 1. Then the UE establishes HS-DSCH and E-DCH and configures UL DTX in cell 1, and resumes E-DCH transmission and transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH in cell 1.

The SS waits to allow sufficient time for DTX cycle 2 to be active, and CQI DTX Timer to expire, and then verifies that the time between 11 consecutive CQI indications is 320ms for 2ms TTI and 400ms for 10ms TTI.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1			The UE is in CELL_DCH state in cell 1, with UL DTX configured, and the SS changes its downlink transmission power setting according to columns "T1" in table 8.3.1.44.
2	←	RADIO BEARER RECONFIGURATION	
3	→	RADIO BEARER RECONFIGURATION COMPLETE	After transmitting this message, the UE enters the CELL_PCH state in cell 6
4	SS		SS sends the L2 ack on the RADIO BEARER RECONFIGURATION COMPLETE message and then waits 5 seconds to allow the UE to read system information before the next step. Note: The SS should continue to keep the dedicated channel configuration during the time when the L2 ack is sent to the UE.
5	\rightarrow	PAGING TYPE 1	
6	\rightarrow	CELL UPDATE	The UE enters the CELL_FACH state.
7	SS		The SS switches its downlink transmission power settings to columns "T2" in table 8.3.1.44.
8	←	CELL UPDATE CONFIRM	
9	→	RADIO BEARER RECONFIGURATION COMPLETE	The UE changes to cell 1, enters the CELL_DCH state and starts E-DCH transmission, with UL DTX, and HS-DSCH reception.
10	SS		The SS waits to allow sufficient time for DTX cycle 2 to be active, and CQI DTX Timer to expire, and then verifies that the time between 11 consecutive CQI indications is 320ms if 2ms TTI or 400ms if 10ms TTI is used (i.e. duration of 10 consecutive DTX cycle 2).

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 2)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
New C-RNTI	Not Present
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
RB information to reconfigure list	
- RB information to reconfigure	(UM DCCH for RRC)
- RB identity	1 Nat Brook
- PDCP info - PDCP SN info	Not Present Not Present
- RLC info	Not Present
- RB mapping info	Not resem
- Information for each multiplexing option	1 RBMuxOption
 RLC logical channel mapping indicator 	Not Present
 Number of uplink RLC logical channels 	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
 Logical channel identity CHOICE RLC size list 	1 Explicit list
- RLC size index	According to clause 6.10.2.4.4.1
- MAC logical channel priority	1
- Downlink RLC logical channel info	
 Number of downlink RLC logical 	1
channels	
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
 DL DSCH Transport channel identity Logical channel identity 	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for RRC)
- RB identity	2
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	AMBI O
- CHOICE Uplink RLC mode - Transmission RLC discard	AM RLC
- SDU discard mode	No discard
- MAX DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll - Poll_PDU	250 Not propert
- Poll_SDU	Not present 1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
 Timer_poll_periodic 	Not Present
- CHOICE Downlink RLC mode	AMRLC
 CHOICE Downlink RLC PDU Size In-sequence delivery 	Reference to TS34.108 clause 6 Parameter Set TRUE
- Receiving window size	128
- Downlink RLC status info	120
- Timer_status_prohibit	200
- Timer_EPC	Not present
 Missing PDU indicator 	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
 RB mapping info Information for each multiplexing option 	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
 UL Transport channel identity 	Not Present
- Logical channel identity	2
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.10.2.4.4.1

Information Element	Value/remark
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of downlink RLC logical	1
channels	FACIL
- Downlink transport channel type	FACH Not Propert
DL DCH Transport channel identity DL DSCH Transport channel identity	Not Present Not Present
- Logical channel identity	2
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT High priority)
- RB identity	13
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
 Transmission window size 	128
- Timer_RST	600
- Max_RST	4
- Polling info	0.50
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU - Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	199
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
 Downlink RLC status info 	
 Timer_status_prohibit 	200
- Timer_EPC	Not present
 Missing PDU indicator 	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	4 DDM: Ontion
 Information for each multiplexing option RLC logical channel mapping indicator 	1 RBMuxOption
Number of uplink RLC logical channels	Not Present
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	3
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.10.2.4.4.1
 MAC logical channel priority 	3
 Downlink RLC logical channel info 	
 Number of downlink RLC logical 	1
channels	
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	Not Present
- RB stop/continue - RB information to reconfigure	Not Present
- RB information to reconligure - RB identity	(AM DCCH for NAS DT Low priority)
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15

Information Element	Value/remark
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- <u>Timer_poll_prohibit</u>	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
Last retransmission PDU pollPoll_Window	199
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
 Downlink RLC status info 	
 Timer_status_prohibit 	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	1 DDM:wOntion
 Information for each multiplexing option RLC logical channel mapping indicator 	1 RBMuxOption Not Present
Number of uplink RLC logical channels	11
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	4
- CHOICE RLC size list	Explicit list
- RLC size index	According to clause 6.10.2.4.4.1
 MAC logical channel priority 	4
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
- RB stop/continue	Not Present
- RB information to reconfigure	(High-speed AM DTCH)
- RB identity	25
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info - CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	AWINEC
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not Present
- Poll_SDU	1 TDUE
 Last transmission PDU poll Last retransmission PDU poll 	TRUE TRUE
- Poll_Window	180E 199
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200

Information Element	Value/remark
- Timer_EPC	Not Present
 Missing PDU indicator 	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	
 Information for each multiplexing option 	1 RBMuxOption
 RLC logical channel mapping indicator 	Not Present
 Number of uplink RLC logical channels 	1
 Uplink transport channel type 	RACH
 UL Transport channel identity 	Not Present
 Logical channel identity 	7
- CHOICE RLC size list	Explicit list
- RLC size index	Reference to TS34.108 clause 6 Parameter Set
 MAC logical channel priority 	8
 Downlink RLC logical channel info 	
- Number of downlink RLC logical	1
channels	
 Downlink transport channel type 	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	7
- RB stop/continue	Not Present
Deleted UL TrCH information	
- Uplink transport channel type	E-DCH
- E-DCH MAC-d flow identity	1
- Uplink transport channel type	E-DCH
- E-DCH MAC-d flow identity	2
Deleted DL TrCH information	LIO DOOLI
- Downlink transport channel type	HS-DSCH
- DL HS-DSCH MAC-d flow identity	0 HS-DSCH
- Downlink transport channel type	15-D5CH
- DL HS-DSCH MAC-d flow identity Frequency info	
- CHOICE mode	FDD
- UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink(Nd)	Same downlink UARFCN as used for cell 6
Maximum allowed UL TX power	Not Present
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Paging Type 1 (Step 5)

Information Element	Value/remark
Message Type	
Paging record list	Only 1 entry
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	Equal to the U-RNTI assigned earlier.
- SRNC Identity	
- S-RNTI	
- CN originated page to connected mode UE	Not Present
BCCH modification info	Not Present

CELL UPDATE (Step 6)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in cell 1.
- SRNC Identity	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to "Paging response"

CELL UPDATE CONFIRM (Step 8)

Information Element	Value/remark
New H-RNTI	'0101 0101 0101 0101'
New Primary E-RNTI	'0101 0101 0101 0101'
New Secondary E-RNTI	Not Present
RRC State indicator	CELL_DCH
RB information to reconfigure list	(UMDCCH for BBC)
- RB RB information to reconfigure - RB identity	(UM DCCH for RRC)
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	Not Present
- RB mapping info	THE THE CONTRACT OF THE CONTRA
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	1
- E-DCH MAC-d flow identity	1
- DDI	1
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	HS-DSCH
- DL HS-DSCH MAC-d flow identity	0 1
- Logical channel identity - RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for RRC)
- RB identity	2
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	500
- Max_RST	4
- Polling info	400
- Timer_poll_prohibit	100
- Timer_poll	100
- Poll_PDU - Poll_SDU	Not present
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	100
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	1 DPMuyOntion
Information for each multiplexing option RLC logical channel mapping indicator	1 RBMuxOption Not Present
Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	2
- E-DCH MAC-d flow identity	1
- DDI	2
I	ı

DI C DDI Laiza liat	1 1 RLC PDU size
- RLC PDU size list - RLC PDU size	1 144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	2
- Downlink RLC logical channel info	2
Number of downlink RLC logical channels	1
- Downlink transport channel type	HS-DSCH
- DL HS-DSCH MAC-d flow identity	0
- Logical channel identity	2
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT High priority)
- RB identity	3
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	Troch recent
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	7.1111.20
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	100
- Timer_poll	100
- Poll_PDU	Not present
- Poll_SDU	1
 Last transmission PDU poll 	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set TRUE
- In-sequence delivery - Receiving window size	128
- Downlink RLC status info	120
- Timer_status_prohibit	100
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	
 Information for each multiplexing option 	1 RBMuxOption
 RLC logical channel mapping indicator 	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	3
- E-DCH MAC-d flow identity	1
- DDI - RLC PDU size list	3 1 RLC PDU size
- RLC PDU Size list - RLC PDU size	1 144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	HS-DSCH
- DL HS-DSCH MAC-d flow identity	0
- Logical channel identity	3
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT Low priority)
- RB identity	4
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	AMPLO
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard - SDU discard mode	No discard
- MAX DAT	15
- MAA_DAT - Transmission window size	128

- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	100
- Timer_poll	100
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
	100
- Timer_status_prohibit	
- Timer_EPC	Not Present
 Missing PDU indicator 	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
	IALSE
- RB mapping info	4 884 0 %
 Information for each multiplexing option 	1 RBMuxOption
 RLC logical channel mapping indicator 	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	4
- E-DCH MAC-d flow identity	1
- DDI	4
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	4
- Downlink RLC logical channel info	
 Number of downlink RLC logical channels 	1
- Downlink transport channel type	HS-DSCH
- DL HS-DSCH MAC-d flow identity	0
- Logical channel identity	4
- RB stop/continue	Not Present
- RB information to reconfigure	(High-speed AM DTCH)
- RB identity	25
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	256
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	100
- Timer_poll	100
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99 Not December
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to TS34.108 clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	768
	7.00
- Downlink RLC status info	400
- Timer_status_prohibit	100
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
Timor_OTATOO_periodic	THOSE TOUGHT

- One sided RLC re-establishment
- RB mapping info
- Information for each multiplexing option
- RLC logical channel mapping indicator
- Number of uplink RLC logical channels
- Uplink transport channel type
- Logical channel identity
- E-DCH MAC-d flow identity
- DDI
- RLC PDU size list
- RLC PDU size
- Include in scheduling info
 - MAC logical channel priority
 - Downlink RLC logical channel info

 - Number of downlink RLC logical channels
 - Downlink transport channel type
 - DL DCH Transport channel identity
 - DL DSCH Transport channel identity
 - DL HS-DSCH MAC-d flow identity
- Logical channel identity
 - RB stop/continue

Added or Reconfigured UL TrCH information

Added or Reconfigured DL TrCH information

Frequency info

DTX-DRX timing information

CHOICE timing

- New timing
 - Enabling Delay
 - UE DTX DRX Offset

DTX-DRX Information

- CHOICE E-DCH TTI length
 - 10 ms if 10ms TTI and 2 ms for 2ms TTI is used.
 - UE DTX cycle 1
 - UE DTX cycle 2
 - MAC DTX cycle
- Inactivity Threshold for UE DTX cycle 2
- UE DTX long preamble length
- MAC Inactivity Threshold
- CQI DTX Timer
- UE DPCCH burst_1
- UE DPCCH burst 2
- **DRX** Information
- UE DRX cycle
- Inactivity Threshold for UE DRX cycle
- Inactivity Threshold for UE Grant Monitoring
- UE DRX Grant Monitoring

Uplink DPCCH slot format information

CHOICE channel requirement

E-DCH Info

Downlink HS-PDSCH Information

Downlink information common for all radio links

- Downlink information for all radio link
- CHOICE DPCH info
- Downlink F-DPCH info for all RL
- Timing Indication

Downlink information for each radio link list

- Downlink information for each radio link
 - Choice mode
 - Primary CPICH info

FALSE

1 RBMuxOption

Not Present

E-DCH

7

2 5

1 RLC PDU size

336 bits

TRUE

8

HS-DSCH

Not Present

Not Present

Not Present

Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A20.

Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A20.

Set to the frequency of cell 1

16 if 10ms TTI and 0 if 2ms TTI is used. 0 if 10ms TTI and 1 if 2ms TTI is used.

10 if 10ms TTI and 8 for 2ms TTI is used.

20 if 10ms TTI and 16 for 2ms TTI is used. 10 if 10ms TTI and 8 for 2ms TTI is used.

8 if 10ms TTI and 32 for 2ms TTI is used.

8 if 10ms TTI and 1 for 2ms TTI is used.

32

1

10 if 10ms TTI and 32 for 2ms TTI is used.

32

8 **TRUE**

Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A20.

Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A20.

Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A20.

F-DPCH

Initialize

FDD

- Primary scrambling code	Set to the primary scrambling code of cell 1
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Serving HS-DSCH radio link indicator	TRUE
 Serving E-DCH radio link indicator 	TRUE
- CHOICE DPCH info	F-DPCH
- Downlink F-DPCH info for each RL	
 Primary CPICH usage for channel estimation 	Primary CPICH may be used
- F-DPCH frame offset	Set to value Default F-DPCH Offset Value (as
	currently stored in SS) mod 38400
- F-DPCH slot format	3 if UE supports enhanced F-DPCH, otherwise Not
	Present
- Secondary CPICH info	Not Present
- Secondary scrambling code	Not Present
- Code number	12
- TPC combination index	0
 Closed loop timing adjustment mode 	Not Present
- E-AGCH Info	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	under condition A20.
- E-HICH Information	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	under condition A20.
- E-RGCH Information	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	under condition A20.
•	•

8.3.1.44.5 Test requirement

At step 3, the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

At step 6, the UE shall transmit a CELL UPDATE message on the uplink CCCH.

At step 9, the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC in cell 1.

At step 10 the time between 11 consecutive CQI indications shall be 320ms for 2ms TTI and 400ms for 10ms TTI.

8.3.1.45 Cell Update: Radio Link Failure, with active discontinuous uplink transmission

8.3.1.45.1 Definition

All UEs which support FDD and UL DTX.

8.3.1.45.2 Conformance requirement

1> Radio link failure:

. . .

3> if the UE is in CELL_DCH state and the criteria for radio link failure are met as specified in subclause 8.5.6 of TS 25.331; or

...

4> perform cell update using the cause "radio link failure".

When initiating the URA update or cell update procedure, the UE shall:

. . .

1> if any IEs related to HS-DSCH are stored in the UE:

2> clear any stored IE "Downlink HS-PDSCH information";

- 2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25.
- 1> if any IEs related to E-DCH are stored in the UE:
 - 2> clear any stored IE "E-DCH info";
 - 2> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.
- 1> if any of the IEs "DTX-DRX timing information" or "DTX-DRX information" are stored in the UE:
 - 2> determine the value for the DTX_DRX_STATUS variable and take the corresponding actions as described in subclause 8.5.34.
- 1> if the IE "HS-SCCH less information" is stored in the UE:
 - 2> determine the value for the HS_SCCH_LESS_STATUS variable and take the corresponding actions as described in subclause 8.5.35.

. . .

In CELL_DCH State, after receiving N313 consecutive "out of sync" indications from layer 1 for the established DPCCH or F-DPCH physical channel in FDD, and the physical channels associated with mapped DCCHs in TDD, the UE shall:

- 1> start timer T313;
- 1> upon receiving N315 successive "in sync" indications from layer 1 and upon change of UE state:
 - 2> stop and reset timer T313.
- 1> if T313 expires:
 - 2> consider it as a "Radio link failure".

Periods in time where neither "in sync" nor "out of sync" is reported by layer 1 do not affect the evaluation of the number of consecutive (resp. successive) "in sync" or "out of sync" indications.

When a radio link failure occurs, the UE shall:

- 1> clear the dedicated physical channel configuration;
- 1> perform actions as specified for the ongoing procedure;
- 1> if no procedure is ongoing or no actions are specified for the ongoing procedure:
 - 2> perform a cell update procedure according to subclause 8.3.1 using the cause "radio link failure".

Reference

3GPP TS 25.331 clauses 8.3.1.2, 8.5.6.

8.3.1.45.3 Test purpose

- 1. To confirm that the UE stops the E-DCH transmission with DTX and performs a Cell Update procedure after radio link failure.
- 2. To confirm that the UE keeps the radio bearer mapping option and transport channel configuration for E-DCH after the radio link failure. To confirm that the UE resumes the E-DCH trans mission and configures UL DTX after the Cell Update procedure.

8.3.1.45.4 Method of test

Initial Condition

System Simulator: 1 cell - Cell 1

UE: PS-DCCH_DCH (state 6-7) with SRBs mapped to E-DCH/HS-DSCH as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports discontinuous uplink transmission.

Test Procedure

Table 8.3.1.45

Parameter	Unit	Cell 1	
		T0	T1
UTRARF Channel Number		Mid Rang	
		Frequ	ency
CPICH Ec (FDD)	dBm/3.84MHz	-60	OFF

Table 8.3.1.45 illustrates the downlink power to be applied to Cell 1 at various time instants of the test execution. Column marked "T0" denote the initial conditions.

The UE is in CELL_DCH state and only signalling radio bearers have been established. The SS initiates P26 to make the UE move to state 6-18 as specified in TS 34.108 clause 7.4. The UE is now in the CELL_DCH state and has radio bearers mapped on E-DCH and HS-DSCH established with active E-DCH (DTX) transmission and HS-DSCH reception.

The SS configures its downlink transmission power settings according to column "T1" in table 8.3.1.45. After expiry of timer T313, the UE shall detect a radio link failure in Cell 1.

The SS waits for 15s (see Note 1) and then configures its downlink transmission power settings according to column "T0" in table 8.3.1.45. The UE shall then enter CELL_FA CH state and transmit a CELL UPDATE mess age on the uplink CCCH in Cell 1.

The SS trans mits a CELL UPDATE CONFIRM message, which requests the UE to transit to CELL_DCH state and provides the physical channel configuration to resume the interrupted radio bearer mapped on E-DCH/HS-DSCH and configures UL DTX.

The UE sets up the physical channels associated to E-DCH / HS-DSCH, enters CELL_DCH state and sends a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS waits to allow sufficient time for DTX cycle 2 to be active, and CQI DTX Timer to expire, and then verifies that the time between 11 consecutive CQI indications is 400ms.

The SS calls for generic procedure C.3 to check that the UE is in CELL_DCH state.

NOTE 1: The 15s delay guarantees the expiry of timer T313 (default value = 3s) and the non-expiry of timer T315 (default value = 180s).

Expected sequence

Step	Direction	Message	Comment
	UE SS		
0	$\leftarrow \rightarrow$	P26	See below for the specific message content
			used in RADIO BEARER SETUP message.
1			The SS configures Cell 1 according to the
			"T1" power settings in table 8.3.1.45.
			The SS starts to listen to the uplink CCCH of
			Cell 1.
2			The UE detects the radio link failure and
			stops transmission of E-DCH.
3	\rightarrow	CELL UPDATE	15s after step 1, the SS configures Cell 1
			according to the "T0" power settings in table 8.3.1.45.
			The UE shall camp on Cell 1 and transmit a
			Cell Update message with the IE "Cell
			update cause" set to "radio link failure".
4	+	CELL UPDATE CONFIRM	The SS orders the UE to re-establish the E-
			DCH / HS-DSCH configuration with DTX.
5	\rightarrow	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
6	SS		The SS waits to allow sufficient time for DTX
			cycle 2 to be active, and CQI DTX Timer to
			expire, and then verifies that the time
			between 11 consecutive CQI indications is
			400ms (i.e. duration of 10 consecutive DTX
			cycle 2).
7	$\leftarrow \rightarrow$	CALL C.3	If the test result of C.3 indicates that UE is in
			CELL_DCH state, the test passes,
			otherwise it fails.

Specific Message Contents

RADIO BEARER SETUP (Step 0)

Use the same message as specified for "Packet to CELL_DCH / E-DCH / HS-DSCH using one multiple xing option (1/1) and SRBs mapped on E-DCH/HS-DSCH" in 34.108, with the exception of the following IEs:

Information Element	Value/remark
RB information to be affected	
- RB identity	1 (UM DCCH for RRC)
 RB mapping info Information for each multiplexing option 	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	1
- E-DCH MAC-d flow identity	
- DDI - RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
 MAC logical channel priority 	1
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
 Downlink transport channel type DL DCH Transport channel identity 	HS-DSCH Not present
- DL DSCH Transport channel identity - DL DSCH Transport channel identity	Not present
- DL HS-DSCH MAC-d flow identity	1
- Logical channel identity	1
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
 - Uplink transport channel type - UL Transport channel identity 	RACH Not Present
- OE Transport channel identity - Logical channel identity	1
- CHOICE RLC size list	Explicit List
- RLC size index	According to clause 6.10.2.4.1.2 (standalone 3.4 kbps
	signalling radio bearer)
- MAC logical channel priority	1
- Downlink RLC logical channel info	4
 Number of RLC logical channels Downlink transport channel type 	1 FACH
- DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RB identity	2 (AM DCCH for RRC)
- RB mapping info	O DDM On the se
 Information for each multiplexing option RLC logical channel mapping indicator 	2 RBMuxOptions Not Present
Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	2
 E-DCH MAC-d flow identity 	1
- DDI	2
- RLC PDU size list	1 RLC PDU size
 RLC PDU size Include in scheduling info 	144 bits FALSE
- MAC logical channel priority	2
- Downlink RLC logical channel info	
 Number of RLC logical channels 	1
- Downlink transport channel type	HS-DSCH
- DL DCH Transport channel identity	Not Present
 DL DSCH Transport channel identity DL HS-DSCH MAC-d flow identity 	Not Present
- DE HS-DSCH MAC-d flow identity - Logical channel identity	2
- RLC logical channel mapping indicator	Not Present
 Number of RLC logical channels 	1
 Uplink transport channel type 	RACH
- UL Transport channel identity	Not Present
 Logical channel identity CHOICE RLC size list 	2 Explicit List
- CHOICE RLC SIZE IIST - RLC size index	Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps
NEO SIZO IIIUGA	signalling radio bearer)
- MAC logical channel priority	2
 Downlink RLC logical channel info 	
- Number of RLC logical channels	1

 Downlink transport channel type 	IFACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- RB identity	3 (AM DCCH for NAS High Priority)
- RB mapping info	
 Information for each multiplexing option 	2 RBMuxOptions
 RLC logical channel mapping indicator 	Not Present
 Number of uplink RLC logical channels 	1
- Uplink transport channel type	E-DCH
- Logical channel identity	3
- E-DCH MAC-d flow identity	1
- DDI	3
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	3
- Downlink RLC logical channel info	4
- Number of RLC logical channels	1 HS-DSCH
- Downlink transport channel type	Not Present
- DL DCH Transport channel identity	
- DL DSCH Transport channel identity	Not Present
- DL HS-DSCH MAC-d flow identity - Logical channel identity	1 3
- Logical channel identity - Uplink transport channel type	RACH
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- UL Transport channel identity	Not Present
- Logical channel identity	3
- CHOICE RLC size list	Explicit List
- RLC size index	According to clause 6.10.2.4.1.2 (standalone 3.4 kbps
THE GIES INGOX	signalling radio bearer)
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
- RB identity	4 (AM DCCH for NAS Low Priority)
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
 RLC logical channel mapping indicator 	Not Present
RLC logical channel mapping indicator Number of uplink RLC logical channels	Not Present 1
 Number of uplink RLC logical channels Uplink transport channel type 	
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity 	1
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity 	1 E-DCH 4 1
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI 	1 E-DCH 4 1
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list 	1 E-DCH 4 1 4 1 RLC PDU size
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list RLC PDU size 	1 E-DCH 4 1 4 1 RLC PDU size 144 bits
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list RLC PDU size Include in scheduling info 	1 E-DCH 4 1 1 4 1 RLC PDU size 144 bits FALSE
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list RLC PDU size Include in scheduling info MAC logical channel priority 	1 E-DCH 4 1 4 1 RLC PDU size 144 bits
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list RLC PDU size Include in scheduling info MAC logical channel priority Downlink RLC logical channel info 	1 E-DCH 4 1 4 1 RLC PDU size 144 bits FALSE 4
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list RLC PDU size Include in scheduling info MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channels 	1 E-DCH 4 1 4 1 RLC PDU size 144 bits FALSE 4
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list RLC PDU size Include in scheduling info MAC logical channel priority Downlink RLC logical channels Number of RLC logical channel type 	1 E-DCH 4 1 4 1 RLC PDU size 144 bits FALSE 4 1 HS-DSCH
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list RLC PDU size Include in scheduling info MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channel type DL DCH Transport channel identity 	1 E-DCH 4 1 4 1 RLC PDU size 144 bits FALSE 4 1 HS-DSCH Not Present
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list RLC PDU size Include in scheduling info MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channels Downlink transport channel type DL DCH Transport channel identity DL DSCH Transport channel identity 	1 E-DCH 4 1 4 1 RLC PDU size 144 bits FALSE 4 1 HS-DSCH Not Present Not Present
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list RLC PDU size Include in scheduling info MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channels Downlink transport channel type DL DCH Transport channel identity DL DSCH Transport channel identity DL HS-DSCH MAC-d flow identity 	1 E-DCH 4 1 4 1 RLC PDU size 144 bits FALSE 4 1 HS-DSCH Not Present Not Present 1
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list RLC PDU size Include in scheduling info MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channels Downlink transport channel type DL DCH Transport channel identity DL HS-DSCH MAC-d flow identity Logical channel identity 	1 E-DCH 4 1 4 1 RLC PDU size 144 bits FALSE 4 1 HS-DSCH Not Present Not Present 1 4
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list RLC PDU size Include in scheduling info MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channels Downlink transport channel type DL DCH Transport channel identity DL DSCH Transport channel identity DL HS-DSCH MAC-d flow identity Logical channel identity RLC logical channel mapping indicator 	1 E-DCH 4 1 4 1 RLC PDU size 144 bits FALSE 4 1 HS-DSCH Not Present Not Present 1 4 Not Present
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list RLC PDU size Include in scheduling info MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channels Downlink transport channel type DL DCH Transport channel identity DL DSCH Transport channel identity DL HS-DSCH MAC-d flow identity Logical channel identity RLC logical channel mapping indicator Number of RLC logical channels 	1 E-DCH 4 1 4 1 RLC PDU size 144 bits FALSE 4 1 HS-DSCH Not Present Not Present 1 4 Not Present 1
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list RLC PDU size Include in scheduling info MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channels Downlink transport channel type DL DCH Transport channel identity DL DSCH Transport channel identity DL HS-DSCH MAC-d flow identity Logical channel identity RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type 	1 E-DCH 4 1 4 1 RLC PDU size 144 bits FALSE 4 1 HS-DSCH Not Present Not Present 1 4 Not Present 1 RACH
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list RLC PDU size Include in scheduling info MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channels Downlink transport channel type DL DCH Transport channel identity DL DSCH Transport channel identity DL HS-DSCH MAC-d flow identity Logical channel identity RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity 	1 E-DCH 4 1 4 1 RLC PDU size 144 bits FALSE 4 1 HS-DSCH Not Present Not Present 1 4 Not Present 1 RACH Not Present
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list RLC PDU size Include in scheduling info MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channels Downlink transport channel type DL DCH Transport channel identity DL DSCH Transport channel identity DL HS-DSCH MAC-d flow identity Logical channel identity RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity Logical channel identity 	1 E-DCH 4 1 4 1 RLC PDU size 144 bits FALSE 4 1 HS-DSCH Not Present Not Present 1 4 Not Present 1 RACH Not Present 4
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list RLC PDU size Include in scheduling info MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channels Downlink transport channel type DL DCH Transport channel identity DL DSCH Transport channel identity DL HS-DSCH MAC-d flow identity Logical channel identity RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity Logical channel identity CHOICE RLC size list 	1 E-DCH 4 1 4 1 RLC PDU size 144 bits FALSE 4 1 HS-DSCH Not Present Not Present 1 4 Not Present 1 RACH Not Present 4 Explicit List
 Number of uplink RLC logical channels Uplink transport channel type Logical channel identity E-DCH MAC-d flow identity DDI RLC PDU size list RLC PDU size Include in scheduling info MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channels Downlink transport channel type DL DCH Transport channel identity DL DSCH Transport channel identity DL HS-DSCH MAC-d flow identity Logical channel identity RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity Logical channel identity 	1 E-DCH 4 1 4 1 RLC PDU size 144 bits FALSE 4 1 HS-DSCH Not Present Not Present 1 4 Not Present 1 EACH Not Present 4 Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps
- Number of uplink RLC logical channels - Uplink transport channel type - Logical channel identity - E-DCH MAC-d flow identity - DDI - RLC PDU size list - RLC PDU size - Include in scheduling info - MAC logical channel priority - Downlink RLC logical channel info - Number of RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - DL HS-DSCH MAC-d flow identity - Logical channel identity - RLC logical channel mapping indicator - Number of RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - Logical channel identity	1 E-DCH 4 1 4 1 RLC PDU size 144 bits FALSE 4 1 HS-DSCH Not Present Not Present 1 4 Not Present 1 RACH Not Present 4 Explicit List

 Downlink RLC logical channel info Number of RLC logical channels Downlink transport channel type DL DCH Transport channel identity DL DSCH Transport channel identity Logical channel identity 	1 FACH Not Present Not Present 4
DTX-DRX timing information	4
CHOICE timing	
- New timing	
- Enabling Delay	16
- UE DTX DRX Offset	0
DTX-DRX Information	
- CHOICE E-DCH TTI length	10 ms
- UE DTX cycle 1	10
- UE DTX cycle 2	20
- MAC DTX cycle	10
- Inactivity Threshold for UE DTX cycle 2	8
- UE DTX long preamble length	4
- MAC Inactivity Threshold	8
- CQI DTX Timer	32
- UE DPCCH burst_1	1
- UE DPCCH burst_2	1
DRX Information	
- UE DRX cycle	10
- Inactivity Threshold for UE DRX cycle	32
- Inactivity Threshold for UE Grant Monitoring	8
- UE DRX Grant Monitoring	TRUE
Uplink DPCCH slot format information	1
Added or Reconfigured UL TrCH information	
- Uplink transport channel type	E-DCH
- CHOICE UL parameters	E-DCH
- E-DCH Transmission Time Interval	10ms

CELL UPDATE (Step 3)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in Cell 1.
- SRNC Identity	Check to see if set to value assigned in Cell 1.
Cell Update Cause	Check to see if set to "Radio link failure"

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New H-RNTI	'1010 1010 1010 1010'
New Primary E-RNTI	'1010 1010 1010 1010'
New Secondary E-RNTI	Not Present
RRC State indicator	CELL_DCH
DTX-DRX timing information	0222_0011
CHOICE timing	
- New timing	
- Enabling Delay	16
- UE DTX DRX Offset	0
DTX-DRX Information	O
- CHOICE E-DCH TTI length	
-10 ms	40
- UE DTX cycle 1	10 20
- UE DTX cycle 2	
- MAC DTX cycle	10
- Inactivity Threshold for UE DTX cycle 2	8
- UE DTX long preamble length	4
- MAC Inactivity Threshold	8
- CQI DTX Timer	32
- UE DPCCH burst_1	1
- UE DPCCH burst_2	1
DRX Information	
- UE DRX cycle	10
- Inactivity Threshold for UE DRX cycle	32
- Inactivity Threshold for UE Grant Monitoring	8
- UE DRX Grant Monitoring	TRUE
Uplink DPCCH slot format information	1
CHOICE channel requirement	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9
	under condition A20.
E-DCH Info	Same as the set defined in RADIO BEARER
E-DOTT IIIIO	SETUP message found in TS 34.108 clause 9
	under condition A20.
Downlink HS-PDSCH information	Same as the set defined in RADIO BEARER
	SETUP message found in TS 34.108 clause 9
	lunder condition A20.
Downlink information common for all radio links	under condition Azo.
- Downlink F-DPCH info common for all RL	
- Timing Indication	Initialise
- Downlink F-DPCH power control information	Illinianse
- DPC mode	O (single)
- TPC command error rate target	0 (single) 0.04
- CHOICE mode	FDD
- DPCH compressed mode info	Not Present
- TX Diversity mode	None
- Default DPCH Offset Value	1
- MAC-hs reset indicator	Arbitrary set to value 0306688 by step of 512
Downlink information per radio link list	Same as the set defined in RADIO BEARER
Downlink information per facto link list	
	SETUP message found in TS 34.108 clause 9 under condition A20.
	under condition Azo.

8.3.1.45.5 Test requirement

At step 3, the UE shall transmit a CELL UPDATE message.

At step 5, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and start transmission on E-DCH. At step 6 the time between 11 consecutive CQI indications shall be 400ms.

8.3.1.46 Cell Update: Transition from URA_PCH to CELL_DCH: Success (start of discontinuous uplink transmission)

8.3.1.46.1 Definition

All UEs which support FDD and UL DTX.

8.3.1.46.2 Conformance requirement

When the UE receives a PAGING TYPE 1 message, it shall perform the actions as specified below.

If the UE is in connected mode, for each occurrence of the IE "Paging record" included in the message the UE shall:

- 1> if the IE "Used paging identity" is a UTRAN identity and if this U-RNTI is the same as the U-RNTI allocated to the UE:
 - 2> if the optional IE "CN originated page to connected mode UE" is included:
 - 3> indicate reception of paging; and
 - 3> forward the IE "CN do main identity", the IE "Paging cause" and the IE "Paging record type identifier" to the upper layers.
 - 2> otherwise:
 - 3> perform a cell update procedure with cause "paging response" as specified in subclause 8.3.1.2.
 - 2> ignore any other remaining IE "Paging record" that may be present in the message.
- 1> otherwise:
 - 2> ignore that paging record.

. . .

A UE shall initiate the cell update procedure in the following cases:

1> Paging response:

- 1> Uplink data transmission:
 - 2> if the UE is in URA_PCH or CELL_PCH state; and
 - 2> if the UE has uplink RLC data PDU or uplink RLC control PDU on RB1 or upwards to transmit:
 - 3> perform cell update using the cause "uplink data transmission".

. . .

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

. . .

When the UE receives a CELL UPDATE CONFIRM/URA UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or
- if the message is received on DCCH:

the UE shall:

1>act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following:

- 2> if the IE "Frequency info" is included in the message:
 - 3> if the IE "RRC State Indicator" is set to the value "CELL DCH":
 - 4> act on the IE "Frequency info" as specified in subclause 8.6.6.1 in TS 25.331.

...

If, after completion of the procedure, the UE will be in CELL_DCH state, the UE shall:

- 1> if the IE "Frequency info" is included:
 - 2> if the frequency is different from the currently used frequency:
 - 3> store and use the frequency indicated by the IE "Frequency Info"; and
 - 3> perform the physical layer synchronisation procedure A as specified in TS 25.214 (FDD only).

. . .

If the IE "New H-RNTI" is included, the UE shall:

3> store the value in the variable H_RNTI.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

1> use the value of the variable H_RNTI as UE identity in the HS-SCCH reception procedure in the physical layer.

. . .

If the IE "New Primary E-RNTI" and/or the IE "New Secondary E-RNTI" is included, the UE shall:

1> store the new value(s) in the variable E_RNTI;

When the variable E_DCH_TRANSMISSION is set to TRUE the UE shall:

1> use the value of the Primary E-RNTI and/or Secondary E-RNTI stored in the variable E_RNTI as identities in the E-A GCH reception procedure in the physical layer.

. . .

If the IE "Downlink HS-PDSCH Information" is included and the UE would enter CELL_DCH state according to subclause 8.6.3.3 applied on the received message, the UE shall:

- 1> if the IE "HS-SCCH Info" is included:
 - 2> act as specified in subclause 8.6.6.33 of TS 25.331.
- 1> if the IE "Measurement Feedback Info" is included:
 - 2> act as specified in subclause 8.6.6.34 of TS 25.331.
- - 2> store the received configuration;
 - 2> determine the value for the HS_DSCH_RECEPTION variable and take actions as described in subclause 8.5.25.

If the IE "HS-SCCH Info" is included, the UE shall:

1> store the received configuration.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

- 1> in the case of FDD:
 - 2> receive the HS-SCCH(s) according to the IE "HS-SCCH channelisation code" on the serving HS-DSCH radio link applying the scrambling code as received in the IE "DL Scrambling code".

If the IE "Measurement Feedback Info" is included, the UE shall:

1> store the received configuration.

When the variable HS_DSCH_RECEPTION is set to TRUE the UE shall:

1> use the information for the channel quality indication (CQI) procedure in the physical layer on the serving HS - DSCH rad io link.

. . .

If the IE "Downlink information for each radio link" is included in a received message, the UE shall:

- 1> if the UE would enter CELL_DCH state according to subclause 8.6.3.3 applied on the received message:
 - 2> if the IE "Serving HS-DSCH radio link indicator" is set to 'TRUE':
 - 3> consider this radio link as the serving HS-DSCH radio link.
 - 2> if the IE "Serving E-DCH radio link indicator" is set to 'TRUE':
 - 3> consider this radio link as the serving E-DCH radio link.
 - 2> if the IE "E-A GCH Info" is included:
 - 3> store the newly received E-AGCH configuration.
 - 2> if the IE "E-HICH information" is included:
 - 3> store this E-HICH configuration for the concerning radio link.
 - 2> if the IE "E-RGCH information" is included:
 - 3> store this E-RGCH configuration for the concerning radio link.
 - 2> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.
 - 2> act on the other IEs contained in the IE "Downlink information for each radio link" as specified in subclause 8.6 applied on this radio link.

. . .

If the IE "E-DCH Info" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:

- 1> if the IE "E-DPCCH Info" is included:
 - 2> store the newly received E-DPCCH configuration.
- 1> if the IE "E-DPDCH Info" is included:
 - 2> store the newly received E-DPDCH configuration.
- 1> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.

. . .

Whenever the variable HS DSCH RECEPTION is set to TRUE, the UE shall:

 $1{>}\ perform\ HS_SCCH\ configuration\ as\ stated\ in:$

- 2> subclause 8.6.6.33 for the IE "HS-SCCH Info".
- 1> perform HS-DSCH reception procedures according to the stored HS-PDSCH configuration as stated in:
 - 2> subclause 8.6.3.1b for the IE "H-RNTI";
 - 2> subclause 8.6.5.6b for the IE "HARQ info";
 - 2> subclause 8.6.6.34 for the IE "Measurement Feedback Info".

Whenever the variable E_DCH_TRANSMISSION is set to TRUE, the UE shall:

- 1> perform E_A GCH reception procedures according to the stored E_AGCH configuration as stated in:
 - 2> subclause 8.6.3.14 of TS 25.331 for the IE "New Primary E-RNTI" and the IE "New Secondary E-RNTI".
- 1> perform E-HICH reception procedures for all radio links in the active set for which an E-HICH configuration has been provided;
- 1> perform E-RGCH reception procedures for all radio links in the active set for which an E-RGCH configuration has been provided;
- 1> perform E-DPCCH trans mission procedures according to the stored E-DPCCH configuration as stated in:
 - 2> subclause 8.6.6.37 of TS 25.331 for the IE "E-DPCCH Info";
- 1> perform E-DPDCH transmission procedures according to the stored E-DPDCH configuration as stated in:
 - 2> subclause 8.6.5.16 of TS 25.331 for the IE "E-DCH Transmission Time Interval";
 - 2> subclause 8.6.5.17 of TS 25.331 for the IE "HARQ info for E-DCH";
 - 2> subclause 8.6.6.37 of TS 25.331 for the IE "DPDCH Info".
- 1> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Non-scheduled transmission grant info" is configured shall:
 - 2> obey the scheduling and size restrictions as specified for that MAC-d flow (see subclause 8.6.5.18 of TS 25.331).
- 1> inclusion of MAC-d PDU's in a MAC-e PDU for logical channels belonging to a MAC-d flow for which the IE "Scheduled transmission grant info" is configured shall:
 - 2> be performed in accordance with the received scheduling grant on E-A GCH/E-RGCH (see [15]); and
- 4> obey the scheduling restrictions as specified for scheduled transmissions (see subclause 8.6.6.37 of TS 25.331).

. . .

If the IE "DTX-DRX timing information" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:

- 1> if the CHOICE "timing" is set to "New timing":
 - 2> store the contents of the IE in the variable DTX_DRX_PARAMS.
- 1> determine the value for the DTX_DRX_STATUS variable and take the corresponding actions as described in subclause 8.5.34.

. . .

If the IE "DTX-DRX information" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:

1> store the contents of the IE in the variable DTX_DRX_PARAMS;

- 1> determine the value for the DTX_DRX_STATUS variable and take the corresponding actions as described in subclause 8.5.34;
- 1> if the value of the IE "UE DTX cycle 2" is not an integer multiple of the value of the IE "UE DTX cycle 1"; or
- 1> if the value of the IE "UE DTX cycle 2" is not an integer multiple or a divisor of the value of the IE "CQI Feedback cycle, k"; or
- 1> if the value of the IE "UE DPCCH burst 1" is greater than the value of the IE "UE DTX cycle 1"; or
- 1> if the value of the IE "UE DPCCH burst 2" is greater than the value of the IE "UE DTX cycle 2"; or
- 1> if the IE "UE DTX long preamble length" is set to 4 or 15 slots and the value of the IE "Inactivity Threshold for UE DTX cycle 2" is less than 4 TTIs (for 10ms E-DCH TTI) or 8 TTIs (for 2ms E-DCH TTI); or
- 1> if the IE "UE DRX cycle" is not an integer multiple or a divisor of the value of the IE "UE DTX cycle 1"; or
- 1> if the IE "DRX Information" is included in this message while the IE "DTX information" is not included in this message; or
- 1> if the value of the IE "UE DTX cycle 1" is not an integer multiple or a divisor of the value of the IE "MAC DTX cycle":
 - 2> the UE behaviour is unspecified.

Reference

3GPP TS 25.331 clauses 8.2.2.3, 8.2.2.4, 8.3.1, 8.5.28, 8.6.3.14, 8.6.5.16, 8.6.5.17, 8.6.5.18, 8.6.6.37, 8.6.6.38, 8.6.6.39

8.3.1.46.3 Test purpose

To confirm that the UE enters the CELL_DCH state after it receives a CELL UPDATE CONFIRM message with a physical channel configuration causing it to start E-DCH transmission, HS DSCH reception and configures UL DTX.

To confirm that the UE executes a cell update procedure when the UE transmits uplink data if the UE is in URA_PCH state.

8.3.1.46.4 Method of test

Initial Condition

System Simulator: 1 cell.

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents)

UE: PS-DCCH +DTCH_HS-DSCH +DTCH_E-DCH (state 6-18) under condition A20 as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports discontinuous uplink transmission.

Test Procedure

The UE is in the CELL_DCH state and has a radio bearer mapped on E-DCH and HS-DSCH established with active E-DCH transmission and HS-DSCH reception. E-DCH transmission Time Interval is set to 10ms.

The SS trans mits a PHYSICAL CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL_DCH to URA_PCH. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters URA_PCH state.

The SS trans mits a PAGING TYPE 1 message. The UE then enters the CELL_FACH state to transmit a CELL UPDATE message to the SS on the uplink CCCH with the IE "Cell update cause" set to value "Paging response" in response to the paging.

The SS trans mits CELL UPDATE CONFIRM message, which includes HS-PDSCH and E-DPDCH physical channel parameters on the downlink DCCH with UL DTX. Then the UE resumes E-DCH transmission and HS-DSCH reception, and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

The SS waits to allow sufficient time for DTX cycle 2 to be active, and CQI DTX Timer to expire, and then verifies that the time between 11 consecutive CQI indications is 400ms. Expected sequence

Step	Direc	ction	Message	Comment
	UE	SS		
0	+	→	P26	See below for the specific message content used in RADIO BEARER SETUP message.
1	(_	PHYSICAL CHANNEL RECONFIGURATION	
2	-2	>	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE enters the URA_PCH state
3	(PAGING TYPE 1	
4	->	>	CELL UPDATE	The UE enters the CELL_FACH state.
5	(-	CELL UPDATE CONFIRM	
6			PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE enters the CELL_DCH state and starts E-DCH transmission with UL DTX and HS-DSCH reception.
7	S	S		The SS waits to allow sufficient time for DTX cycle 2 to be active, and CQI DTX Timer to expire, and then verifies that the time between 11 consecutive CQI indications is 400ms (i.e. duration of 10 consecutive DTX cycle 2).

Specific Message Contents

SYSTEM INFORMATION BLOCK TYPE 1 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
-UE Timers and constants in connected mode	
- T312	2

RADIO BEARER SETUP (Step 0) (FDD)

Use the same message as specified for "Packet to CELL_DCH / E-DCH / HS-DSCH with DTX/DRX using one multiplexing option (1/1) and SRBs mapped on E-DCH/HS-DSCH " in 34.108, with the exception of the following IEs:

Information Element	Value/remark	
RB information to be affected		
- RB identity	1 (UM DCCH for RRC)	
- RB mapping info		
- Information for each multiplexing option	2 RBMuxOptions	
 RLC logical channel mapping indicator 	Not Present	
 Number of uplink RLC logical channels 	1	
- Uplink transport channel type	E-DCH	
- Logical channel identity	1	
- E-DCH MAC-d flow identity	1	

- DDI	1
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	1
 Downlink RLC logical channel info 	
 Number of RLC logical channels 	1
- Downlink transport channel type	HS-DSCH
- DL DCH Transport channel identity	Not present
	· ·
- DL DSCH Transport channel identity	Not present
- DL HS-DSCH MAC-d flow identity	1
 Logical channel identity 	1
 RLC logical channel mapping indicator 	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	
	Not Present
- Logical channel identity	1
- CHOICE RLC size list	Explicit List
- RLC size index	According to clause 6.10.2.4.1.2 (standalone 3.4 kbps
	signalling radio bearer)
- MAC logical channel priority	1
- Downlink RLC logical channel info	
	4
- Number of RLC logical channels	1
 Downlink transport channel type 	FACH
 DL DCH Transport channel identity 	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RB identity	2 (AM DCCH for RRC)
- RB mapping info	2 (TIM BOOTTION TATO)
	2 PPMuvOntions
- Information for each multiplexing option	2 RBMuxOptions
 RLC logical channel mapping indicator 	Not Present
 Number of uplink RLC logical channels 	1
 Uplink transport channel type 	E-DCH
- Logical channel identity	2
- E-DCH MAC-d flow identity	$\overline{1}$
-	
- DDI	2
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
 Include in scheduling info 	FALSE
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
<u> </u>	1
- Downlink transport channel type	HS-DSCH
 DL DCH Transport channel identity 	Not Present
 DL DSCH Transport channel identity 	Not Present
- DL HS-DSCH MAC-d flow identity	1
- Logical channel identity	2
	IZ
 RLC logical channel mapping indicator 	Not Present
 RLC logical channel mapping indicator Number of RLC logical channels 	Not Present 1
 RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type 	Not Present 1 RACH
 RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity 	Not Present 1
 RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity Logical channel identity 	Not Present 1 RACH Not Present 2
 RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity Logical channel identity 	Not Present 1 RACH Not Present 2
 RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity Logical channel identity CHOICE RLC size list 	Not Present 1 RACH Not Present 2 Explicit List
 RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity Logical channel identity 	Not Present 1 RACH Not Present 2 Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps
 RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity Logical channel identity CHOICE RLC size list RLC size index 	Not Present 1 RACH Not Present 2 Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer)
 RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity Logical channel identity CHOICE RLC size list RLC size index MAC logical channel priority 	Not Present 1 RACH Not Present 2 Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps
 RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity Logical channel identity CHOICE RLC size list RLC size index MAC logical channel priority Downlink RLC logical channel info 	Not Present 1 RACH Not Present 2 Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer)
 RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity Logical channel identity CHOICE RLC size list RLC size index MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channels 	Not Present RACH Not Present Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) 1
 RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity Logical channel identity CHOICE RLC size list RLC size index MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channels Downlink transport channel type 	Not Present 1 RACH Not Present 2 Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer)
 RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity Logical channel identity CHOICE RLC size list RLC size index MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channels Downlink transport channel type 	Not Present RACH Not Present Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) 1
 RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity Logical channel identity CHOICE RLC size list RLC size index MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channels Downlink transport channel type DL DCH Transport channel identity 	Not Present RACH Not Present Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) The process of the present of
 RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity Logical channel identity CHOICE RLC size list RLC size index MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channels Downlink transport channel type DL DCH Transport channel identity DL DSCH Transport channel identity 	Not Present RACH Not Present Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) The Fach of the present of the
 RLC logical channel mapping indicator Number of RLC logical channels Uplink transport channel type UL Transport channel identity Logical channel identity CHOICE RLC size list RLC size index MAC logical channel priority Downlink RLC logical channel info Number of RLC logical channels Downlink transport channel type DL DCH Transport channel identity Logical channel identity 	Not Present RACH Not Present Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) FACH Not Present Not Present 2
- RLC logical channel mapping indicator - Number of RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - MAC logical channel priority - Downlink RLC logical channel info - Number of RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity	Not Present RACH Not Present Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) The Fach of the present of the
- RLC logical channel mapping indicator - Number of RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - MAC logical channel priority - Downlink RLC logical channel info - Number of RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB identity - RB mapping info	Not Present RACH Not Present Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) The Fach Hot Present Not Present Not Present Administration of the priority (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer)
- RLC logical channel mapping indicator - Number of RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - MAC logical channel priority - Downlink RLC logical channel info - Number of RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB identity - RB mapping info - Information for each multiplexing option	Not Present RACH Not Present Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) The Fach Standalone Standalon
- RLC logical channel mapping indicator - Number of RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - MAC logical channel priority - Downlink RLC logical channel info - Number of RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB identity - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator	Not Present RACH Not Present Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) The Fach Hot Present Not Present Not Present Administration of the priority (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer)
- RLC logical channel mapping indicator - Number of RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - MAC logical channel priority - Downlink RLC logical channel info - Number of RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB identity - RB mapping info - Information for each multiplexing option	Not Present RACH Not Present Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) The Fach Standalone Standalon
- RLC logical channel mapping indicator - Number of RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - MAC logical channel priority - Downlink RLC logical channel info - Number of RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RB identity - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator	Not Present RACH Not Present Explicit List According to clause 6.10.2.4.1.2 (standalone 3.4 kbps signalling radio bearer) THE FACH Not Present Not Present 2 (AM DCCH for NAS High Priority) RBMuxOptions Not Present

```
- Logical channel identity
    - E-DCH MAC-d flow identity
                                                       1 RLC PDU size
    - RLC PDU size list
     - RLC PDU size
                                                       144 hits
    - Include in scheduling info
                                                       FALSE
    - MAC logical channel priority
                                                       3
   - Downlink RLC logical channel info
    - Number of RLC logical channels
    - Downlink transport channel type
                                                       HS-DSCH
    - DL DCH Transport channel identity
                                                       Not Present
                                                       Not Present
    - DL DSCH Transport channel identity
    - DL HS-DSCH MAC-d flow identity
    - Logical channel identity
                                                       3
    - Uplink transport channel type
                                                       RACH
   - RLC logical channel mapping indicator
                                                       Not Present
   - Number of RLC logical channels
    - UL Transport channel identity
                                                       Not Present
    - Logical channel identity
    - CHOICE RLC size list
                                                       Explicit List
     - RLC size index
                                                       According to clause 6.10.2.4.1.2 (standalone 3.4 kbps
                                                       signalling radio bearer)
    - MAC logical channel priority
   - Downlink RLC logical channel info
    - Number of RLC logical channels
    - Downlink transport channel type
                                                       FACH
    - DL DCH Transport channel identity
                                                       Not Present
     - DL DSCH Transport channel identity
                                                       Not Present
     - Logical channel identity
- RB identity
                                                       4 (AM DCCH for NAS Low Priority)
- RB mapping info
   - Information for each multiplexing option
                                                       2 RBMuxOptions
   - RLC logical channel mapping indicator
                                                       Not Present
   - Number of uplink RLC logical channels
    - Uplink transport channel type
                                                       E-DCH
    - Logical channel identity
    - E-DCH MAC-d flow identity
    - חחו
    - RLC PDU size list
                                                       1 RLC PDU size
     - RLC PDU size
                                                       144 bits
                                                       FALSE
    - Include in scheduling info
    - MAC logical channel priority
    - Downlink RLC logical channel info
    - Number of RLC logical channels
    - Downlink transport channel type
                                                       HS-DSCH
    - DL DCH Transport channel identity
                                                       Not Present
    - DL DSCH Transport channel identity
                                                       Not Present
     - DL HS-DSCH MAC-d flow identity
     - Logical channel identity
   - RLC logical channel mapping indicator
                                                       Not Present
   - Number of RLC logical channels
    - Uplink transport channel type
                                                       RACH
    - UL Transport channel identity
                                                       Not Present
    - Logical channel identity
    - CHOICE RLC size list
                                                       Explicit List
     - RLC size index
                                                       According to clause 6.10.2.4.1.2 (standalone 3.4 kbps
                                                       signalling radio bearer)
    - MAC logical channel priority
   - Downlink RLC logical channel info
    - Number of RLC logical channels
    - Downlink transport channel type
                                                       FACH
    - DL DCH Transport channel identity
                                                       Not Present
    - DL DSCH Transport channel identity
                                                       Not Present
    - Logical channel identity
```

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_FA CH from CELL_DCH in PS" in TS 34.108 with following exceptions:

Information Element	Value/remark
New C-RNTI	Not Present
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
URA Identity	0000 0000 0000 0001B

Paging Type 1 (Step 3)

Information Element	Value/remark
Message Type	
Paging record list	Only 1 entry
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	Equal to the U-RNTI assigned earlier.
- SRNC Identity	
- S-RNTI	
- CN originated page to connected mode UE	Not Present
BCCH modification info	Not Present

CELL UPDATE (Step 4)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in cell 1.
- SRNC Identity	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to "Paging response"

CELL UPDATE CONFIRM (Step 5)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New H-RNTI	'1010 1010 1010 1010'
New Primary E-RNTI	'1010 1010 1010 1010'
New Secondary E-RNTI	Not Present
RRC State indicator	CELL_DCH
DTX-DRX timing information	
CHOICE timing	
- New timing	
- Enabling Delay	16
- UE DTX DRX Offset	0
DTX-DRX Information	
- CHOICE E-DCH TTI length	10ms
- UE DTX cycle 1	10
- UE DTX cycle 2	20
- MAC DTX cycle	10
- Inactivity Threshold for UE DTX cycle 2	8
- UE DTX long preamble length	4
- MAC Inactivity Threshold	8
- CQI DTX Timer	32
- UE DPCCH burst_1	1
- UE DPCCH burst_2	1
DRX Information	
- UE DRX cycle	10
- Inactivity Threshold for UE DRX cycle	32
- Inactivity Threshold for UE Grant Monitoring	8

- UE DRX Grant Monitoring	TRUE
Uplink DPCCH slot format information Uplink DPCH info E-DCH Info	1 Not Present Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9
Downlink HS-PDSCH information	under condition A20. Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A20.
Downlink information common for all radio links	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A20 except for the following IEs.
- Timing indicator	Initialize
- Default DPCH Offset Value	Not Present
Downlink information per radio link list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A20.

8.3.1.46.5 Test requirement

At step 2, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

At step 4, the UE shall transmit a CELL UPDATE message on uplink CCCH.

At step 6, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

At step 7 the time between 11 consecutive CQI indications shall be 400ms.

8.3.1.47 Cell Update: cell reselection in CELL_FACH (Reselection between cell not supporting HS-PDSCH in CELL_FACH and cell supporting HS-PDSCH is CELL_FACH)

8.3.1.47.1 Definition and applicability

All UEs which support FDD and HS-PDSCH in CELL_FACH.

8.3.1.47.2 Conformance requirement

In the CELL_FACH state the UE shall perform the following actions:

- 1) NOTE: DCCH and, if configured, DTCH are available in this state.
- 1> if the UE is "in service area":
 - 2> maintain up-to-date system information as broadcast by the serving cell as specified in subclause 8.1.1;
 - 2> perform cell reselection process as specified in [4];

The UE shall set the IEs in the CELL UPDATE message as follows:

1> if the UE supports HS-DSCH reception in CELL_FACH state:

5> 2> include the IE "HS-PDSCH in CELL_FACH" and set it to TRUE.

When the UE receives a CELL UPDATE CONFIRM/URA UPDATE CONFIRM message; and

••

If the UE after state transition remains in CELL_FACH state, it shall

- 1> start the timer T305 using its initial value if timer T305 is not running and periodical cell update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity";
- 1> select PRACH according to subclause 8.5.17;
- 1> for TDD; or
- 1> for FDD, if the UE does not support HS-DSCH reception; or
- 1> if the IE "HS-DSCH common system information" is not included in System Information Block type 5 or System Information Block type 5bis:
 - 2> select Secondary CCPCH according to subclause 8.5.19;
 - 2> take the actions related to the HS_DSCH_RECEPTION_GENERAL variable as described in subclause 8.5.37a.
- 1> else:
 - 2> if the RBs have the multiple xing option with transport channel type "HS-DSCH" for the DL and transport channel type "RACH" in the UL; and
 - 2> if variable H_RNTI and variable C_RNTI are set:
 - 3> start to receive HS-DSCH according to the procedure in subclause 8.5.36.
 - 2> else:
 - 3> clear variable C_RNTI and delete any stored C-RNTI value;
 - 3> clear variable H_RNTI and delete any stored H-RNTI value;
 - 3> clear any stored IEs "HARQ info";
 - 3> set the variable INVALID_CONFIGURATION to TRUE.

. . .

The variable HS_DSCH_RECEPTION_CELL_FACH_STATE shall be set to TRUE only when all the following conditions are met:

- 1> the UE is in CELL_FACH;
- 1> the variable H_RNTI is set;
- 1> the variable C_RNTI is set;
- 1> System Information Block type 5 or System Information Block type 5b is includes IE "HS-DSCH common system information".

If any of the above conditions is not met and the variable HS_DSCH_RECEPTION_CELL_FACH_STATE is set to TRUE, the UE shall:

- 1> set the variable HS_DSCH_RECEPTION_CELL_FACH_STATE to FALSE;
- 1> if the UE is in CELL_FACH and variable HS_DSCH_RECEPTION_OF_CCCH_ENABLED is set to FALSE:
 - 2> set the variable HS_DSCH_RECEPTION_GENERAL to FALSE;
 - 2> stop any HS_SCCH reception procedures;
 - 2> stop any HS-DSCH reception procedures;
 - 2> clear the variable H_RNTI and remove any stored H-RNTI;

- 2> reset the MAC-ehs entity [15];
- 2> release all HARQ resources;
- 2> clear any stored IEs "HARQ info";

Whenever the variable HS DSCH RECEPTION CELL FACH STATE is set to TRUE, the UE shall:

- 1> set the variable HS_DSCH_RECEPTION_GENERAL to TRUE;
- 1> use the IE "HS-DSCH common system information" in System Information Block type 5 or System Information Block type 5 bis;
- 1> receive the HS-SCCH(s) according to the IE "HS-SCCH channelisation code" on the serving cell applying the scrambling code as received in the IE "DL Scrambling code" as received in IE "HS-DSCH common system information";
- 1> perform HS-DSCH reception procedures:
 - 2> if the UE has a stored IE "HARQ info":
 - 3> act on subclause 8.6.5.6b for the stored IE "HARQ info".
 - 2> else:
 - 3> act on subclause 8.6.5.20 for the IE "HA RQ System info" as received in IE "HS-DSCH common system information".
 - 2> and use the value of the variable H_RNTI as UE identity in the HS-SCCH reception procedure in the physical layer.
- 1> and for BCCH reception perform HS-DSCH reception procedures by listening to the first indexed HS-SCCH code listed in the IE "HS-SCCH channelisation code" with "BCCH specific H-RNTI" as received in IE "HS-DSCH common system information".

Whenever the variable HS_DSCH_RECEPTION_CELL_FACH_STATE is set to FALSE, the UE shall:

- 1> if the UE is in CELL_FACH and variable HS_DSCH_RECEPTION_OF_CCCH_ENABLED is set to FALSE:
 - 2> not perform HS_SCCH reception procedures;
 - 2> not perform HS-DSCH reception procedures.

. . .

When UE does not support HS-DSCH reception or when the IE "HS-DSCH common system information" is not included in System Information Block type 5 or System Information Block type 5bis, the UE shall:

- 1> set HS_DSCH_RECEPTION_OF_CCCH_ENABLED to FALSE;
- 1> set the variable HS_DSCH_RECEPTION_GENERAL to FALSE.

When HS_DSCH_RECEPTION_OF_CCCH_ENABLED is set to TRUE, the UE shall:

- 1> set the variable HS_DSCH_RECEPTION_GENERAL to TRUE;
- 1> use the IE "HS-DSCH common system information" in System Information Block type 5 or System Information Block type 5 bis;
- 1> configure the HARQ according to IE "HARQ System info" as defined in subclause 8.6.5.20;
- 1> configure the common MAC-ehs reordering queues according to IE "Common MAC-ehs reordering queues" as defined in subclauses 8.6.5.22; and then
- 1> receive the CCCH according to IE "CCCH mapping info" as defined in subclause 8.6.5.21;
- 1> if the UE is RRC Connected mode:

- 2> select a common H-RNTI as specified in 8.5.38;
- 2> receive the SRB1 according to IE "SRB1 mapping info" as defined in subclause 8.6.5.19.
- 1> else:
 - 2> select a common H-RNTI as specified in [4].
- 1> and start to receive the HS-SCCH(s) with selected H-RNTI according to the IE "HS-SCCH channelisation code" on the selected cell applying the scrambling code as received in the IE "DL Scrambling code";
- 1> configure the MAC flow for BCCH reception as specified in [15];
- 1> and start to receive the first indexed HS-SCCH code listed in the IE "HS-SCCH channelisation code" with "BCCH specific H-RNTI" as received in IE "HS-DSCH common system information".

. . .

In FDD and 1.28 Mcps TDD, the MAC PDU header for DTCH and DCCH mapped on HS-DSCH CELL_FACH, CELL_PCH state is as shown in figure 9.2.1.1c-1.

- there is no MAC-d header included for DTCH and DCCH.
- there is no MAC-c header included for DTCH and DCCH when UE dedicated H-RNTI is used.
- the U-RNTI is only included as MAC-c header to MAC-d PDU for DCCH (SRB#1 only)when common H-RNTI is used

Reference

3GPP TS 25.331 clauses 7.2.2.2, 8.3.1.3 8.3.1.6, 8.5.36, 8.5.37

3GPP TS 25.321 clause 9.2.1.1c

8.3.1.47.3 Test purpose

- 1. To confirm that the UE starts reception of HS-PDSCH in CELL_FACH state, after reselecting to a cell supporting HS-PDSCH in CELL_FACH.
- To confirm that the UE performs the cell reselection procedure while receiving HS-PDSCH in CELL_FACH state.
- To confirm that the UE can receive data on DCCH (SRB#1) HS-DSCH using common H-RNTI in CELL_FA CH state.

8.3.1.47.4 Method of test

Initial Condition

System Simulator: 2 cells: Cell 1 sends the default system information (HS-DSCH for CELL_FACH not configured), Cell 6 configures HS-DSCH for CELL_FACH in System Information Type 5.

UE: PS-DCCH+DTCH_FA CH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108.

For cell 2, the following parameters are specific for the system information

Parameter	Value
T302	8000 ms

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports HS-PDSCH in CELL_FACH

Test Procedure

Table 8.3.1.47

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRARF Channel Number		Mid Ran	ge Test	High Rar	ige Test
		Frequ	iency	Frequ	ency
CPICH Ec (FDD)	dBm/3.84MHz	-60	-70	-70	-60

Table 8.3.1.47 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The SS has configured its downlink transmission power according to column "T0" in table 8.3.1.47. UE is in state 6-11 in cell 1 as specified in clause 7.4 of TS 34.108 and has a radio bearer established mapped on RACH and FACH.

The SS trans mits updated SYSTEM INFORMATION TYPE5/5b is message which includes HS-DSCH reception in cell FACH state. The SS switches its downlink trans mission power settings to column "T 1".

UE finds cell 6 as a better cell and reselects to Cell 6. The UE transmits CELL UPDATE message on uplink CCCH of cell 6 with the IE "Cell update cause" set to "cell reselection". The SS then transmits a CELL UPDATE CONFIRM which includes the IE RRC State Indicator" set to "CELL_FACH", but with unmatched UE Id in MAC-c header, to the UE on the downlink DCCH. The UE does not respond to this. After expiry of T302 the UE shall transmit another CELL UPDATE. The SS then transmits a CELL UPDATE CONFIRM which includes the IE RRC State Indicator" set to "CELL_FACH", but this time with matched UE Id in MAC-c header, to the UE on the downlink DCCH. Then UE shall respond by transmitting a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH.

The SS switches its downlink transmission power settings to column "T0". UE finds cell 1 as a better cell for service and reselects to Cell 1.

The UE transmits CELL UPDATE message on uplink CCCH of cell 1 with the IE "Cell update cause" set to "cell reselection". The SS then transmits a CELL UPDATE CONFIRM which includes the IE RRC State Indicator" set to "CELL_FACH", to the UE on the downlink DCCH. Then UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH.

The SS checks that the UE is in Cell FACH state.

Expected sequence

Step	Direction UE SS	Message	Comment
0	02 00		The UE is in CELL_FACH state in cell
0a	+	SYSTEM INFORMATION BLOCK TYPE 4	SS transmits modified SIB 4 and 11, with contents given in specific
		SYSTEM INFORMATION BLOCK TYPE 11	message contents. Transmitted on Cell1 and Cell6
1	+	SYSTEM INFORMATION TYPE 5/5bis	Transmitted on cell 6. Includes configuration for HS-DSCH reception in CELL_FACH state
2			SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.47. The UE shall find that the cell 6 is better for service and perform reselection. SS waits for the maximum duration required for the UE to camp to cell 6.
3	→	CELL UPDATE	Value "cell reselection" shall be indicated in IE "Cell update cause" and "HS-PDSCH in CELL_FACH" is set to TRUE.
4	+	CELL UPDATE CONFIRM	Transmitted by the SS on SRB1 using common H-RNTI but unmatched UE-ID in MAC-c header. IE "RRC State Indicator" is set to "CELL_FACH".
5	→	CELL UPDATE	After expiry of T302. Value "cell reselection" shall be indicated in IE "Cell update cause" and "HS-PDSCH in CELL_FACH" is set to TRUE
6	←	CELL UPDATE CONFIRM	Transmitted by the SS on SRB1 using common H-RNTI but with matched UE-ID in MAC-c header. IE "RRC State Indicator" is set to "CELL_FACH".
7	→	RADIO BEARER RECONFIGURATION COMPLETE	Transmitted by the UE on RACH.
8			SS applies the downlink transmission power settings, according to the values in columns "T0" of table 8.3.1.47. The UE shall find that the cell 1 is better for service and perform reselection. SS waits for the maximum duration required for the UE to camp to cell 1.
9)	CELL UPDATE	Value "cell reselection" shall be indicated in IE "Cell update cause" and "HS-PDSCH in CELL_FACH" is set to TRUE.
10	+	CELL UPDATE CONFIRM	Transmitted by the SS on FACH / S- CCPCH. IE "RRC State Indicator" is set to "CELL FACH".
11	\rightarrow	UTRAN MOBILITY INFORMATION CONFIRM	Transmitted by the UE on RACH.
12	←→	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

SYSTEM INFORMATION TYPE 5/ SYSTEM INFORMATION TYPE 5bis (Step 2)

Use the same message as specified for "Only for cells which configure HS-DSCH reception in CELL_FA CH " in 34.108, clause 6.1.0b

System Information Block type 4 (Step 0a)

Use the same message type found in clause 6.1.0b of TS 34.108, with the following exceptions:

- Qqualmin	-16

System Information Block type 11 (Step 0a)

Use the same message type found in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length	3
coefficient	
 Inter-frequency FDD measurement indicator 	TRUE
 Inter-frequency TDD measurement indicator 	FALSE
- Inter-RAT measurement indicators	Not Present

CELL UPDATE (Steps 3, 5 and 9)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
Cell Update Cause	Check to see if set to 'Cell Re-selection'
HS-PDSCH in CELL_FACH	Check to see if set to TRUE

CELL UPDATE CONFIRM (Step 4 and 6)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the DL CCCH, with the exception of the following IEs:

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'
New H-RNTI	'1110 1010 1010 1010'
RB information to be affected list	
 RB information to be affected 	(UM DCCH for RRC)
- RB identity	1
- RB mapping info	
 Information for each multiplexing option 	2 RBMuxOption
 RLC logical channel mapping indicator 	Not Present
 Number of RLC logical channels 	1
 Uplink transport channel type 	RACH
 UL Transport channel identity 	Not Present
- Logical channel identity	1
- CHOICE RLC size list	According to clause 6.10.2.4.4.1 (combinations on PRACH in TS 34.108)
 MAC logical channel priority 	1
 Downlink RLC logical channel info 	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1

- RLC logical channel mapping indicator
- Number of uplink RLC logical channels
- Uplink transport channel type
- UL Transport channel identity
- Logical channel identity
- CHOICE RLC size list
- RLC size index
- MAC logical channel priority
- Downlink RLC logical channel info
- Number of downlink RLC logical channels
- Downlink transport channel type
- DL DCH Transport channel identity
- DL DSCH Transport channel identity
- CHOICE DL MAC header type
- DL HS-DSCH MAC-ehs Queue Id
- Logical channel identity
- RB information to be affected
- RB identity
- RB mapping info
- Information for each multiplexing option
- RLC logical channel mapping indicator
- Number of RLC logical channels
- Uplink transport channel type
- UL Transport channel identity
- Logical channel identity
- CHOICE RLC size list
- RLC size index
- MAC logical channel priority
- Downlink RLC logical channel info
- Downlink transport channel type
- DL DCH Transport channel identity

```
Not Present
```

RACH Not Present

Explicit list

According to clause 6.10.2.4.4.1

HS-DSCH

MAC-ehs

(AM DCCH for RRC)

2 RBMuxOption

Not Present

RACH

Not Present

Explicit List

According to clause 6.10.2.4.4.1 (combinations on

PRACH in TS 34.108)

HS-DSCH

Not Present

- DL DSCH Transport channel identity Not Present - CHOICE DL MAC header type MAC-ehs - DL HS-DSCH MAC-ehs Queue Id 1 - Logical channel identity - RLC logical channel mapping indicator Not Present - Number of RLC logical channels - Uplink transport channel type **RACH** Not Present - UL Transport channel identity - Logical channel identity - CHOICE RLC size list **Explicit List** - RLC size index According to clause 6.10.2.4.4.1 (combinations on PRACH in TS 34.108) - MAC logical channel priority - Downlink RLC logical channel info - Downlink transport channel type **FACH** Not Present - DL DCH Transport channel identity - DL DSCH Transport channel identity Not Present - Logical channel identity - RB information to be affected (AM DCCH for NAS_DT High priority) - RB identity - RB mapping info - Information for each multiplexing option 2 RBMuxOption - RLC logical channel mapping indicator Not Present - Number of RLC logical channels - Uplink transport channel type **RACH** - UL Transport channel identity Not Present - Logical channel identity - CHOICE RLC size list Explicit List - RLC size index According to clause 6.10.2.4.4.1 (combinations on PRACH) - MAC logical channel priority - Downlink RLC logical channel info - Number of RLC logical channels HS-DSCH - Downlink transport channel type - DL DCH Transport channel identity Not Present - DL DSCH Transport channel identity Not Present - CHOICE DL MAC header type MAC-ehs - DL HS-DSCH MAC-ehs Queue Id - Logical channel identity - RLC logical channel mapping indicator Not Present - Number of RLC logical channels - Uplink transport channel type **RACH** - UL Transport channel identity Not Present - Logical channel identity - CHOICE RLC size list **Explicit List** - RLC size index According to clause 6.10.2.4.4.1 (combinations on PRACH in TS 34.108) - MAC logical channel priority - Downlink RLC logical channel info - Downlink transport channel type **FACH** - DL DCH Transport channel identity Not Present - DL DSCH Transport channel identity Not Present - Logical channel identity - RB information to be affected (AM DCCH for NAS_DT High priority) - RB identity - RB mapping info - Information for each multiplexing option 2 RBMuxOptions - RLC logical channel mapping indicator Not Present - Number of RLC logical channels - Uplink transport channel type RACH - UL Transport channel identity Not Present - Logical channel identity - CHOICE RLC size list **Explicit List** - RLC size index According to clause 6.10.2.4.4.1 (Combinations on PRACH) - MAC logical channel priority - Downlink RLC logical channel info

HS-DSCH

- Number of RLC logical channels

- Downlink transport channel type

DI DOLI Transport shannal identity	IN at Dragget		
- DL DCH Transport channel identity	Not Present Not Present		
- DL DSCH Transport channel identity			
- CHOICE DL MAC header type	MAC-ehs		
- DL HS-DSCH MAC-ehs Queue Id	1.		
- Logical channel identity	4		
- RLC logical channel mapping indicator	Not Present		
- Number of RLC logical channels	1		
 Uplink transport channel type 	RACH		
 UL Transport channel identity 	Not Present		
 Logical channel identity 	4		
- CHOICE RLC size list	Explicit List		
- RLC size index	According to clause 6.10.2.4.4.1 (Combinations on		
	PRACH)		
- MAC logical channel priority	4		
- Downlink RLC logical channel info			
- Number of RLC logical channels	1		
- Downlink transport channel type	FACH		
- DL DCH Transport channel identity	Not Present		
- DL DSCH Transport channel identity	Not Present		
- Logical channel identity	4		
- RB information to be affected	(AM DTCH)		
- RB identity	25		
- RB mapping info	20		
- Information for each multiplexing option	2 RBMuxOptions		
- RLC logical channel mapping indicator	Not Present		
- Number of RLC logical channels	1		
- Uplink transport channel type	RACH		
- UL Transport channel identity	Not Present		
- Logical channel identity	7		
- CHOICE RLC size list	Explicit List		
- RLC size index	According to clause 6.10.2.4.4.1 (Combinations on		
	PRACH)		
- MAC logical channel priority	8		
- Downlink RLC logical channel info			
- Number of RLC logical channels	1		
- Downlink transport channel type	HS-DSCH		
- DL DCH Transport channel identity	Not Present		
- DL DSCH Transport channel identity	Not Present		
- CHOICE DL MAC header type	MAC-ehs		
- DL HS-DSCH MAC-ehs Queue ld	2		
- Logical channel identity	7		
- RLC logical channel mapping indicator	Not Present		
- Number of RLC logical channels	1		
- Uplink transport channel type	RACH		
- UL Transport channel identity	Not Present		
- Logical channel identity	7		
- CHOICE RLC size list	Explicit List		
- RLC size index	According to clause 6.10.2.4.4.1 (Combinations on PRACH)		
- MAC logical channel priority	8		
- Downlink RLC logical channel info			
- Number of RLC logical channels	1		
- Downlink transport channel type	FACH		
- DL DCH Transport channel identity	Not Present		
- DL DSCH Transport channel identity	Not Present		
- Logical channel identity	7		

RADIO BEARER RECONFIGURATION COMPLETE (Step 7)

Use the same default message as specified in TS 34.108, clause 9.

CELL UPDATE CONFIRM (Step 10)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'

8.3.1.47.5 Test requirements

At step 3 the UE shall reselect to cell 6 and then it shall trans mit a CELL UPDATE message which sets the value "cell reselection" in IE "Cell update cause" and "HS-PDSCH in CELL FACH" set to TRUE.

At step 5 the UE shall not respond to the CELL UPDATE CONFIRM in step 4. The UE will instead transmit CELL UPDATE after expiry of T302.

At step 7 the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM on UL using the PRACH physical resource.

At step 9 the UE shall reselect to cell 1 and then it shall trans mit a CELL UPDATE message which sets the value "cell reselection" in IE "Cell update cause" and "HS-PDSCH in CELL FACH" set to TRUE.

8.3.1.48 Cell Update: Radio Link Failure, UM RLC Re-establishment

8.3.1.48.1 Definition

All UEs which support CS over HSPA.

8.3.1.48.2 Conformance requirement

The cell update procedure may also include:

- a re-establish of AM RLC entities;
- a re-establish of UM RLC entities;
- a radio bearer release, radio bearer reconfiguration, transport channel reconfiguration or physical channel reconfiguration.

A UE shall initiate the cell update procedure in the following cases:

. . .

- 1> Radio link failure:
 - 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:
 - 3> if the UE is in CELL_DCH state and the criteria for radio link failure are met as specified in subclause 8.5.6; or
 - 3> if the transmission of the UE CAPA BILITY INFORMATION message fails as specified in subclause 8.1.6.6; or
 - 3> if the UE detects PDCP Unrecoverable Error [36] in a PDCP entity::
 - 4> perform cell update using the cause "radio link failure".

. . .

The UE RRC shall submit the UE CAPA BILITY INFORMATION message to the lower layers for transmission on the uplink DCCH using AM RLC. When the message has been delivered to lower layers for transmission the UE RRC shall start timer T304 and set counter V304 to 1.

. . .

T304 timeout

Upon expiry of timer T304, the UE shall check the value of V304 and:

- 1> if V304 is smaller than or equal to N304:
 - 2> prior to retrans mitting the UE CAPABILITY INFORMATION message:
 - 3> if the IE "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Started":
 - 4> include the same IEs as in the last unsuccessful attempt of this message, except for the IE "Integrity check info", which is set as specified in subclause 8.5.10.
 - 3> else:
 - 4> include the same IEs as in the last unsuccessful attempt of this message.
 - 2> send the UE CAPA BILITY INFORMATION message on signalling radio bearer RB2;
 - 2> restart timer T304;
 - 2> increment counter V304.
- 1> if V304 is greater than N304:
 - 2> initiate the Cell update procedure as specified in subclause 8.3.1, using the cause "Radio link failure".

. . .

When the UTRAN receives a CELL UPDATE/URA UPDATE message, the UTRAN should:

1> in case the procedure was triggered by reception of a CELL UPDATE:

. . .

- 1> if the radio bearer is connected to a CS domain radio access bearer and the radio bearer uses UM RLC:
 - 2> the UM RLC entity should be re-established in UTRAN.

. . .

When the UE receives a CELL UPDATE CONFIRM/URA UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or
- if the message is received on DCCH:

the UE may:

1> maintain a list of the set of cells to which the UE has Radio Links if the IE "Cell ID" is present.

the UE shall:

1> stop timer T302;

. . .

- 1> if the received CELL UPDATE CONFIRM or URA UPDATE CONFIRM message included the IE "Downlink counter synchronisation info":
 - 2> if the variable PDCP_SN_INFO is empty:
 - 3> configure the corresponding RLC entity for all AM and UM radio bearers and AM and UM signalling radio bearers except RB2 to "stop".
 - 2> else:
 - 3> configure the RLC entity for signalling radio bearers RB1, RB3 and RB4 to "stop";
 - 3> configure the RLC entity for UM and AM radio bearers for which the IE "PDCP SN Info" is not included to "stop".

- 2> re-establish the RLC entity for RB2;
- 2> clear all entries in the table "Processed transactions" in the variable TRANSACTIONS;
- 2> for the downlink and the uplink, apply the ciphering configuration as follows:
 - 3> if the received re-configuration message included the IE "Ciphering Mode Info":
 - 4> use the ciphering configuration in the received message when transmitting the response message.
 - 3> if the ciphering configuration for RB2 from a previously received SECURITY MODE COMMAND has not yet been applied because the activation times not having been reached:
 - 4> if the previous SECURITY MODE COMMAND was received due to new keys being received:
 - 5> consider the new ciphering configuration to include the received new keys;
 - 5> initialise the HFN component of the uplink COUNT-C and downlink COUNT-C of SRB2 as indicated in subclause 8.1.12.3.1.
 - 4> else if the ciphering configuration for RB2 from a previously received SECURITY MODE COMMAND has not yet been applied because of the corresponding activation times not having been reached and the previous SECURITY MODE COMMAND caused a change in LATEST_CONFIGURED_CN_DOMAIN:
 - 5> consider the new ciphering configuration to include the keys associated with the LATEST_CONFIGURED_CN_DOMAIN;
 - 5> initialise the HFN component of the uplink COUNT-C and downlink COUNT-C of SRB2 to the most recently transmitted IE "START list" or IE "START" for the LATEST_CONFIGURED_CN_DOMAIN at the reception of the previous SECURITY MODE COMMAND.
 - 4> apply the new ciphering configuration immediately following RLC re-establishment.
 - 3> else:
 - 4> continue using the current ciphering configuration.
- 2> set the new uplink and downlink HFN component of the COUNT-C of RB2 to MAX(uplink HFN component of the COUNT-C of RB2, down link HFN component of the COUNT-C of RB2);
- 2> increment by one the downlink and uplink values of the HFN component of the COUNT-C for RB2;
- 2> calculate the START value according to subclause 8.5.9;
- 2> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info" in any response message transmitted below.
- 1> else if the radio bearer is connected to a CS domain radio access bearer and the radio bearer uses UM RLC:
 - 2> re-establish the UM RLC entity;
 - 2> if the value of the IE "Status" in the variable CIPHERING_STATUS of the CN domain as indicated in the IE "CN domain identity" in the IE "RAB info" in the variable ESTABLISHED_RABS is set to "Started":
 - 3> set the HFN component of the respective COUNT-C values for the UM RLC entity equal to the START value included in this CELL UPDATE message for the CN domain as indicated in the IE "CN domain identity" in the IE "RAB info" in the variable ESTABLISHED_RABS;
 - 3> set the remaining bits of the HFN component of the COUNT-C values of the UM RLC entity to zero.

. .

For 1.28 Mcps TDD, when the variable E_DCH_TRANSMISSION is set to TRUE (see subclause 8.5.28) and the UE has stored the IE "E-RUCCH info", a "Radio link failure" shall be triggered as below:

- 1> if the E-RUCCH transmission counter is added greater than N_RUCCH, another hysteresis Timer with the value of N-RUCCH times of T-RUCCH period shall be started:
 - 2> upon the hysteresis Timer expires and still no Grant has been received for the whole time duration since the last E-RUCCH transmission:
 - 3> consider it as a "Radio link failure", refer to [59].

For FDD in CELL DCH state and in TDD when a radio link failure occurs, the UE shall:

- 1> clear the dedicated physical channel configuration;
- 1> performactions as specified for the ongoing procedure;
- 1> if no procedure is ongoing or no actions are specified for the ongoing procedure:
 - 2> perform a cell update procedure according to subclause 8.3.1 using the cause "radio link failure".

For FDD, in CELL_FACH state and Idle mode, in conjunction with the Enhanced Uplink in CELL_FACH state, after receiving an indication from layer 1 that physical layer transmission stopped caused by an DL out-of-synchronisation, the UE shall:

1> consider it as a "Radio link failure".

Reference

3GPP TS 25.331 clauses 8.3.1.1, 8.3.1.2, 8.3.1.5, 8.3.1.6, 8.1.6.6.

8.3.1.48.3 Test purpose

 To confirm that UE performs UM RLC re-establishment on CS over HSPA RAB following CELL UPDATE with cause "radio link failure".

8.3.1.48.4 Method of test

Initial Condition

System Simulator: 1 cell – Cell 1

UE is in Idle mode (state 2 or state 7) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports CS over HSPA.

Test Procedure

The SS setups a circuit switched session including radio bearer and UE test loop mode 1 in RLC UM using Common test procedures for mobile terminated CS switched sessions. Usage of "PDCP AMR Data" PDU has been configured by higher layers.

The SS sends valid AMR data packets.

The received data shall be looped back by the UE via its PDCP configuration using PDCP AMR Data PDU.

The SS trans mits UE CAPABILITY ENQUIRY and UE responds with UE CAPABILITY INFORMATION and starts timer T304 to wait for UE CAPABILITY INFORMATION CONFIRM from SS. SS does not transmit UE CAPABILITY INFORMATION CONFIRM message which cause UE to re-transmit UE CAPABILITY INFORMATION message after T304 expiry. After N304 + 1 transmissions, the UE triggers CELL UPADTE message on the uplink CCCH.

The SS trans mits a CELL UPDATE CONFIRM message, which requests the UE to transit to CELL_DCH state and provides the physical channel configuration to resume the interrupted CS radio bearer mapped on E-DCH / HS-DSCH.

The UE sets up the physical channels associated to E-DCH / HS-DSCH, enters CELL_DCH state and sends a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS sends valid AMR data packet.

The received data shall be looped back by the UE via its PDCP configuration using PDCP AMR Data PDU. SS verifies the content of the AMR data is the same as originally transmitted.

Expected sequence

Step	Direction	Message	Comments
Setup	UE SS	ed CS session (using UE test loop made 1) R	efer to section 7.3.1 of TS 34.123-1 for common
		ence. Refer to specific message contents below	
1	÷ .	PDCP Data	The SS sends a PDCP AMR Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 010 (PDCP AMR Data PDU) CS counter = first to fifth LSBs of the CFN at which the packet has been received from higher layers
2	→	PDCP Data	The UE loops back PDCP AMR Data PDU with the following content back to the SS: PDU type = 010 (PDCP AMR Data PDU) CS counter = first to fifth LSBs of the CFN at which the packet has been received from higher layers data: previously received AMR frames
			Steps 2-3 are repeated 4 times, with 500 ms between the sending of each AMR data packet in the downlink
3	←	UE CAPABILITY ENQUIRY	
4	→	UE CAPABILITY INFORMATION	The UE transmits the message UE CAPABILITY INFORMATION and then UE RRC starts timer T304
4a			SS does not transmit UE CAP ABILITY INFOR MATION CONFIR M message, which causes timer T304 in UE to expire and trigger the re-transmission. After N304+1 transmissions, UE detects the radio link failure and stops transmission of E- DCH
5	→	CELL UPDATE	The UE shall transmit a Cell Update message with the IE "Cell update cause" set to "radio link failure".
6	+	CELL UPDATE CONFIRM	UMRLC associated with CSRAB should be reestablished following CELL UPDATE CONFIRM
7	\rightarrow	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
8	+	PDCP Data	The SS sends a PDCP AMR Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 010 (PDCP AMR Data PDU) CS counter = first to fifth LSBs of the CFN at which the packet has been received from higher layers
9	→	PDCP Data	The UE loops back PDCP AMR Data PDU with the following content back to the SS: PDU type = 010 (PDCP AMR Data PDU) CS counter = first to fifth LSBs of the CFN at which the packet has been received from higher layers data: previously received AMR frames Steps 8-9 are repeated 4 times, with 500 ms
Da	mto a LIC to	pinotod CC accelon (units a UE to the same	between the sending of each AMR data packet in the downlink
	vate a UE tern on test proced	ninated CS session (using UE test loop mode lure.	1). Reier to section 7.3.1 of 15 34.123-1 for

Specific Message Contents

SECURITY MODE COMMAND (Preamble Step for UE terminated CS session using UE test loop mode 1)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE with the exception of the following IEs:

Information Element	Value/remark
RRC transaction identifier	0
Integrity check info	
- Message authentication code	Calculated result in SS. The first/ leftmost bit of the bit
- RRC Message sequence number	string contains the most significant bit of the MAC-I. Next RRC SN
Security Capability	INEXL KING SIN
- Ciphering algorithm capability	
- UEA0	If the UE has indicated support for ciphering algorithm
	UEA0 in the IE "security capability" in the RRC CONNECTION SETUP COMPLETE message, this IE is
115 04	set to TRUE.
- UEA1	If the UE has indicated support for ciphering algorithm UEA1 in the IE "security capability" in the RRC CONNECTION SETUP COMPLETE message, this IE is set to TRUE.
- UEA2	If the UE has indicated that "Security capability
	indication" of "UE radio access capability compressed" is set to TRUE in the RRC CONNECTION SETUP
- Spare	COMPLETE message, this IE is set to TRUE. Spare 3-15 = FALSE
- Integrity protection algorithm capability	opare 5-15 - 1 ALGE
- UIA1	TRUE
- UIA2	If the UE has indicated that "Security capability
	indication" of "UE radio access capability compressed" is
	set to TRUE in the RRC CONNECTION SETUP
Ciphering mode info	COMPLETE message, this IE is set to TRUE.
- Ciphering mode command	Start
- Ciphering algorithm	UEA1 or UEA2. UEA2 is selected if "Security capability
	indication" is TRUE in the RRC CONNECTION SETUP COMPLETE message otherwise UEA1.
- Ciphering activation time for DPCH	Not Present
- Radio bearer downlink ciphering activation time info - RB Identity	1
- RLC sequence number	Current RLC SN
- RB Identity - RLC sequence number	2 Current RLC SN + 2
- RB Identity	3
- RLC sequence number	Current RLC SN
- RB Identity	4
- RLC sequence number	Current RLC SN
Integrity protection mode info	Stort
Integrity protection mode command Downlink integrity protection activation info	Start Not Present
- Integrity protection algorithm	UIA2 if indicated that "Security capability indication" of
	"UE radio access capability compressed" is set to TRUE
	in the RRC CONNECTION SETUP COMPLETE
	message, this IE is set to TRUE otherwise UIA1.
- Integrity protection initialisation number	SS selects an arbitrary 32 bits number for FRESH
CN domain identity UE system specific security capability	CS Domain Not Present in condition A1
UE system specific security capability	Present In condition A2
- Inter-RAT UE security capability	. 1995
- CHOICE system	GSM
- GSM security capability	The indicated algorithms must be the same as the
	algorithms supported by the UE as indicated in the IE "
	UE system specific capability in the RRC
	CONNECTION SETUP COMPLETE message.

Condition	Explanation
A1	UE not supporting GSM
A2	UE supporting GSM

RADIO BEARER SETUP message

Speech to CELL_DCH / E-DCH / HS-DSCH CS RAB with DTX/DRX and enhanced data rate using one multiplexing option (1/1) and SRBs mapped on E-DCH/HS-DSCH (Condition A23), with the following exceptions

Information Element	Value/remark
- RAB information for setup	
- CS-HSPA information	
- UL AMR rate	Not Present
- Max CS delay	100
- RB information to be affected	
- RB identity	1 (UM DCCH for RRC)
 Information for each multiplexing option 	2 RBMuxOption
 RLC logical channel mapping indicator 	Not Present
 Number of uplink RLC logical channels 	1
 Uplink transport channel type 	E-DCH
- Logical channel identity	1
- E-DCH MAC-d flow identity	1
- CHOICE RLC PDU size	Fixed size
- DDI	1
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	1
- Downlink RLC logical channel info	
 Number of RLC logical channels 	1
- Downlink transport channel type	HS-DSCH
- DL DCH Transport channel identity	Not present
- DL DSCH Transport channel identity	Not present
- CHOICE DL MAC header type	MAC-ehs
- DL HS-DSCH MAC-ehs Queue Id	1
- Logical channel identity	1
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
 Uplink transport channel type 	RACH
 UL Transport channel identity 	Not Present

- Logical channel identity	1
- CHOICE RLC size list	Explicit List
- RLC size index	According to clause 6.10.2.4.1.3 (standalone 13.6 kbps
	signalling radio bearer)
- MAC logical channel priority	1
 Downlink RLC logical channel info 	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RB identity	2 (AM DCCH for RRC)
- Information for each multiplexing option	2 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	2
- E-DCH MAC-d flow identity	1
- CHOICE RLC PDU size	Fixed size
- DDI	2
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	HS-DSCH
- DL DCH Transport channel identity	Not present
- DL DSCH Transport channel identity	Not present
- CHOICE DL MAC header type	MAC-ehs
- DL HS-DSCH MAC-ehs Queue Id	1
- Logical channel identity	2
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	2
- CHOICE RLC size list	Explicit List
- RLC size index	According to clause 6.10.2.4.1.3 (standalone 13.6 kbps
NEO 3120 III dex	signalling radio bearer)
- MAC logical channel priority	2
- Downlink RLC logical channel info	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- RB identity	3 (AM DCCH for RRC)
- Information for each multiplexing option	2 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	3
- E-DCH MAC-d flow identity	1
- CHOICE RLC PDU size	Fixed size
- DDI	3
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	HS-DSCH
- DL DCH Transport channel identity	Not present
- DL DSCH Transport channel identity	Not present
- CHOICE DL MAC header type	MAC-ehs
- DL HS-DSCH MAC-ehs Queue Id	1
- Logical channel identity	3
	-

 RLC logical channel mapping indicator 	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	3
- CHOICE RLC size list	Explicit List
- RLC size index	According to clause 6.10.2.4.1.3 (standalone 13.6 kbps
THE GIZE ITHEX	signalling radio bearer)
- MAC logical channel priority	3
	3
- Downlink RLC logical channel info	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
- RB identity	4 (AM DCCH for RRC)
- Information for each multiplexing option	2 RBMuxOption
 RLC logical channel mapping indicator 	Not Present
 Number of uplink RLC logical channels 	1
- Uplink transport channel type	E-DCH
- Logical channel identity	4
- E-DCH MAC-d flow identity	1
- CHOICE RLC PDU size	Fixed size
- DDI	4
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	4
- Downlink RLC logical channel info	•
- Number of RLC logical channels	1
- Downlink transport channel type	HS-DSCH
- DL DCH Transport channel identity	Not present
- DL DSCH Transport channel identity	Not present
- CHOICE DL MAC header type	MAC-ehs
- DL HS-DSCH MAC-ehs Queue Id	1
	4
- Logical channel identity	·
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	4
- CHOICE RLC size list	Explicit List
- RLC size index	According to clause 6.10.2.4.1.3 (standalone 13.6 kbps
	signalling radio bearer)
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
 Downlink transport channel type 	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4

UE CAPABILITY ENQUIRY (Step 3)

Use the same message content found in TS 34.108 clause 9

UE CAPA BILITYINFORMATION (Step 4)

Use the same message content found in TS 34.108 clause 9 $\,$

CELL UPDATE (Step 5)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- S-RNTI	Check to see if set to value assigned in Cell 1.
- SRNC Identity	Check to see if set to value assigned in Cell 1.
Cell Update Cause	Check to see if set to "Radio link failure"

CELL UPDATE CONFIRM (Step 6)

Use the same message content found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New H-RNTI	'1010 1010 1010 1010'
New Primary E-RNTI	'1010 1010 1010 1010'
RRC State indicator	CELL_DCH
DTX-DRX timing information	
CHOICE timing	
- New timing	
- Enabling Delay	16
- UE DTX DRX Offset	1 if 2ms TTI selected, otherwise 0
DTX-DRX Information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A23.
DRX Information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A23.
CHOICE channel requirement	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A23.
Uplink DPCH info	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A23.
E-DCH Info	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A23.
Downlink HS-PDSCH information	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A23.
Downlink information common for all radio links	
- Downlink F-DPCH info common for all RL	
- Timing Indication	Initialise
- Downlink F-DPCH power control information	
- DPC mode	0 (single)
- TPC command error rate target	0.04
- CHOICE mode	FDD
- DPCH compressed mode info	Not Present
- TX Diversity mode	None
- Default DPCH Offset Value	Arbitrary set to value 0306688 by step of 512
- MAC-hs reset indicator	TRUE
Downlink information per radio link list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A23.

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 7)

Use the same message content found in TS 34.108 clause 9

Content of PDCP Data PDU (Step 8)

Information Element	Value/remark
PDU type	010
CS counter	first to fifth LSBs of the CFN at which the packet has
	been received from higher layers
Data	244 bits of AMR data + 4 bits of padding

Content of PDCP Data PDU (Step 9)

Information Element	Value/remark
PDU type	010
CS counter	first to fifth LSBs of the CFN at which the packet has
	been received from higher layers
Data	Same content as Data from PDCP Data PDU at Step 8

8.3.1.48.5 Test requirement

At step 5, the UE shall transmit a CELL UPDATE message with cause radio link failure.

At steps 8 and 9 the UE shall successfully loop back all the data packets after UM RLC re-establishment.

8.3.1.49 Cell Update: Intra Frequency cell reselection in Enhanced CELL_FACH with DRX configured

8.3.1.49.1 Definition

8.3.1.49.2 Conformance requirement

The UE should store all relevant IEs included in this system information block. The UE shall

. . .

- 1> if the UE is in CELL_FACH state or Idle mode; and
- 1> if the UE does support E-DCH transmission in CELL_FA CH state and Idle mode; and
- 1> if the IE "HS-DSCH common system information" is included in system information block type 5 or 5b is; and
- 1> if the IE "Common E-DCH system info" is included system information block type 5 or 5bis:
 - 2> use the Enhanced Uplink in CELL_FACH state and Idle mode as specified in section 8.5.45 for FDD or 8.5.45a for 1.28 Mcps TDD and [15] for DTCH, DCCH and CCCH transmission.

[...]

The HS_DSCH_DRX_CELL_FACH_STATUS variable shall be set to TRUE only when the following conditions are met:

- 1> the UE supports HS-DSCH DRX operation in CELL_FACH state;
- 1> the UE is in CELL_FACH state;
- 1> the UE has a dedicated H-RNTI configured;
- 1> the IE "HS-DSCH DRX in CELL_FACH Information" for FDD or IE "HS-DSCH DRX in CELL_FACH Information 1.28 Mcps TDD" for 1.28 Mcps TDD has been received from System Information Block Type 5 or System Information Block Type 5bis;
- 1> for 1.28 Mcps TDD, UE with dedicated H-RNTI configured, after transiting from CELL_PCH to CELL_FACH state, has detected its dedicated H-RNTI on HS-SCCH indicating HS-DSCH reception;
- 1> for FDD, either of the following conditions is met:
 - 2> the value of the IE "DRX Interruption by HS-DSCH data" received from System Information Block Type 5 or System Information Block Type 5bis has been set to TRUE; or
 - 2> the UE supports common E-DCH transmission and the IE "Common E-DCH system info" is included in System Information Block type 5 or System Information Block Type 5bis.

If any of the above conditions is not met and the HS_DSCH_DRX_CELL_FACH_STATUS variable is set to TRUE, the UE shall:

1> stop any ongoing CELL_FACH HS-DSCH DRX operation;

- 1> set the HS_DSCH_DRX_CELL_FACH_STATUS to FALSE;
- 1> stop the timer T321, if it is ongoing.

[...]

The CELL_FACH HS-DSCH DRX operation determines the occasions in which the UE is allowed to discontinuously receive HS-DSCH in CELL_FACH state.

- 1> if E-DCH enhanced random access process termination information is received from lower layers:
 - 2> if the variable HS DSCH RECEPTION OF ETWS ENABLED is FALSE:
 - 3> start the timer T321.
- 1> if the value of the IE "DRX Interruption by HS-DSCH data" received from System Information Block Type 5 or System Information Block Type 5b is TRUE:
 - 2> if the UE does not have an E-DCH resource assigned and data is received on HS-DSCH:
 - 3> if the variable HS_DSCH_RECEPTION_OF_ETWS_ENABLED is FALSE:
 - 4> start or, if the timer is running, restart the timer T321 at the end of the HS-SCCH subframe addressed to this UE.
 - 3> continuously receive HS-DSCH.

Upon timer T321 expiry; or

Upon state transition to CELL_FACH if HS_DSCH_DRX_CELL_FACH_STATUS is set to TRUE and if the UE does not support E-DCH transmission in CELL_FACH state and Idle mode and if IE "DRX Interruption by HS-DSCH data" received from System Information Block Type 5 or System Information Block Type 5bis is set TRUE:

1> the UE shall receive HS-DSCH during the frame(s) with the SFN value fulfilling the following inequality:

$$(SFN-H\text{-}RNTI) \ mod \ DRX_cycle < Rx_burst$$

where:

- H-RNTI is the value stored in the variable H_RNTI;
- DRX_cycle is the length of the DRX cycle in radio frames, signalled by the IE "HS-DSCH DRX cycle_{FACH}";
- Rx burst is the period in frames within the DRX cycle, in which the UE receives HS-DSCH, signalled by the IE "HS-DSCH Rx burst_{FACH}".

For FDD when in CELL_FACH state, when the variable HS_DSCH_RECEPTION_CELL_FACH_STATE is set to TRUE and the variable HS_DSCH_DRX_CELL_FACH_STATUS is set to TRUE,

then the UE in FDD mode shall perform measurements as specified in subclauses 8.4.1.6 and 8.4.1.9, according to the requirements in [19].

The UE may omit the inter-frequency and inter-RAT measurements specified according to the requirements in [19] in subclauses 8.4.1.6 and 8.4.1.9, when the variable HS_DSCH_RECEPTION_OF_ETWS_ENABLED is TRUE.

 $[\ldots]$

A UE shall initiate the cell update procedure in the following cases:

. . .

- 1> Cell reselection:
 - 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:
 - 3> if the UE is in CELL_FACH or CELL_PCH state and the UE performs cell re-selection; or
 - 3> if the UE is in CELL_FACH state and the variable C_RNTI is empty:

4> perform cell update using the cause "cell reselection".

[...]

If the UE after state transition remains in CELL FACH state, it shall

- 1> start the timer T305 using its initial value if timer T305 is not running and periodical cell update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity";
- 1> select PRA CH according to TS 25.331 subclause 8.5.17;
- 1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;
- 1> not prohibit periodical status transmission in RLC;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> ignore that IE and stop using DRX.

[...]

If the CELL UPDATE CONFIRM message:

- does not include the IE "RB information to release list"; and
- includes the IE "RB information to reconfigure list"; or
- includes the IE "RB information to be affected list":

the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message using AM RLC.

Reference

3GPP TS 25.331 clause 8.1.1.6.5, 8.5.48, 8.5.49, 8.3.1

8.3.1.49.3 Test purpose

1. To confirm that the UE performs Intra Frequency cell reselection in Enhanced CELL_FACH state when Enhanced DRX is configured.

8.3.1.49.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 configures Common E-DCH/ HS-DSCH for CELL_FACH in System Information Type 5 with Enhanced DRX and Cell 2 configures Common E-DCH/ HS-DSCH for CELL_FACH in System Information Type 5

UE: PS-DCCH Enhanced CELL_FACH (state 6-11) as specified in clause 7.4 of TS 34.108 with SRB mapping on common E-DCH (DCCH)/HS-DSCH (DCCH). UE does not have common E-DCH resource.

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

SYSTEM INFORMATION BLOCK TYPE 5 (see specific message contents).

SYSTEM INFORMATION BLOCK TYPE 11 (see specific message contents).

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports HS-DSCH DRX operation

Test Procedure

Table 8.3.1.49

Parameter	Unit	Cell 1		Cell 2		
		T0	T1	T0	T1	
UTRARF Channel Number		Mid Range Test Mid R		Mid Ran	Range Test	
		Frequ	ency	Frequ	ency	
CPICH Ec (FDD)	dBm/3.84MHz	-60	-70	-70	-60	

Table 8.3.1.49 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions.

The UE is in Enhanced CELL_FACH state (SRB mapping on common E-DCH/HS-DSCH) state with Enhanced DRX configured and camped onto cell 1. SS configures its downlink transmission power settings according to columns "T1" in Table 8.3.1.49. The UE shall find Cell 2 to be more suitable for service and perform a cell reselection. After the completion of cell reselection, the UE shall transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 2 using common E-DCH and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_FACH" with valid "New C-RNTI", "New H-RNTI" and "New Primary E-RNTI" to the UE on the downlink DCCH. SS verifies that the UE sends UTRAN MOBILITY INFORMATION CONFIRM . Finally CALL C.2 procedure is executed to check that UE is in Enhanced CELL_FACH state.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1			The UE is in Enhanced CELL_FACH state (common E- DCH / HS-DSCH) in cell 1 with
			Enhanced DRX configured.
2			SS applies the downlink
			transmission power settings,
			according to the values in
			columns "T1" of table 8.3.1.49.
			The UE shall find that the cell 2
			is better for service and perform a reselection. SS waits
			for the maximum duration
			required for the UE to camp to
			cell 2.
3	\rightarrow	CELL UPDATE	Value "cell reselection" shall be
			indicated in IE "Cell update
			cause"
4	←	CELL UPDATE CONFIRM	Transmitted by the UE on the
			DL DCCH (SRB#1), New C-
			RNTI, New H-RNTI and New
			Primary E-RNTI identity is
			assigned to the UE. IE "RRC State Indicator" is set
			to "CELL_FACH".
5	→	UTRAN MOBILITY INFORMATION	IO CELE_FACIT.
3	7	CONFIRM	
6	$\leftarrow \rightarrow$	CALL C.2	If the test result of C.2 indicates
			that UE is in Enhanced
			CELL_FACH state with
			common E-DCH in UL and
			HS_DSCH in DL, the test
			passes, otherwise it fails.

Specific Message Contents

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

System Information Block type 5 (FDD)

Use the default parameter values for the system information block 5 with the same type specified in clause

6.1.1 of TS 34.108 for common E-DCH and HS-DSCH reception in CELL_FACH, with the following exceptions:

Information Element	Value/remark
HS-DSCH DRX in CELL_FACH Information	
-T321	200 ms
- HS-DSCH DRX cycle _{FACH}	4
- HS-DSCH Rx burstFACH	1
- DRX Interruption by HS-DSCH data	FALSE

System Information Block type 11 (FDD)

Use the default parameter values for the system information block 11 with the same type specified in clause

6.1.1 of TS 34.108 with the following exception:

Information Element	Value/remark
FACH measurement occasion info	Not Present

CELL UPDATE (Step 3)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'.
Cell Update Cause	
HS-PDSCH in CELL_FACH	TRUE
Support of common E-DCH	TRUE
Support of HS-DSCH DRX operation	TRUE
Support of MAC-i/is	TRUE

CELL UPDATE CONFIRM (Step 4)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the DL DCCH (SRB#1), with the exception of the following IEs

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'
New H-RNTI	'1110 1010 1010 1010'
New Primary E-RNTI	'1110 1010 1010 1010'

8.3.1.49a Cell Update: Inter Frequency cell reselection in Enhanced CELL_FACH with DRX configured

8.3.1.49a.1 Definition

8.3.1.49a.2 Conformance requirement

The UE should store all relevant IEs included in this system information block. The UE shall

. . .

- 1> if the UE is in CELL_FACH state or Idle mode; and
- 1> if the UE does support E-DCH transmission in CELL_FACH state and Idle mode; and
- 1> if the IE "HS-DSCH common system information" is included in system information block type 5 or 5b is; and
- 1> if the IE "Common E-DCH system info" is included system information block type 5 or 5bis:
 - 3> use the Enhanced Uplink in CELL_FA CH state and Idle mode as specified in section 8.5.45 for FDD or 8.5.45a for 1.28 Mcps TDD and [15] for DTCH, DCCH and CCCH transmission.

[...]

The HS_DSCH_DRX_CELL_FACH_STATUS variable shall be set to TRUE only when the following conditions are met:

- 1> the UE supports HS-DSCH DRX operation in CELL_FACH state;
- 1> the UE is in CELL_FACH state;
- 1> the UE has a dedicated H-RNTI configured;
- 1> the IE "HS-DSCH DRX in CELL_FACH Information" for FDD or IE "HS-DSCH DRX in CELL_FACH Information 1.28 Mcps TDD" for 1.28 Mcps TDD has been received from System Information Block Type 5 or System Information Block Type 5bis;
- 1> for 1.28 Mcps TDD, UE with dedicated H-RNTI configured, after transiting from CELL_PCH to CELL_FACH state, has detected its dedicated H-RNTI on HS-SCCH indicating HS-DSCH reception;
- 1> for FDD, either of the following conditions is met:
 - 2> the value of the IE "DRX Interruption by HS-DSCH data" received from System Information Block Type 5 or System Information Block Type 5bis has been set to TRUE; or
 - 2> the UE supports common E-DCH transmission and the IE "Common E-DCH system info" is included in System Information Block type 5 or System Information Block Type 5bis.

If any of the above conditions is not met and the HS_DSCH_DRX_CELL_FACH_STATUS variable is set to TRUE, the UE shall:

- 1> stop any ongoing CELL_FACH HS-DSCH DRX operation;
- 1> set the HS_DSCH_DRX_CELL_FA CH_STATUS to FA LSE;
- 1> stop the timer T321, if it is ongoing.

[...]

The CELL_FACH HS-DSCH DRX operation determines the occasions in which the UE is allowed to discontinuously receive HS-DSCH in CELL_FACH state.

- 1> if E-DCH enhanced random access process termination information is received from lower layers:
 - 2> if the variable HS DSCH RECEPTION OF ETWS ENABLED is FALSE:
 - 3> start the timer T321.

- 1> if the value of the IE "DRX Interruption by HS-DSCH data" received from System Information Block Type 5 or System Information Block Type 5bis is TRUE:
 - 2> if the UE does not have an E-DCH resource assigned and data is received on HS-DSCH:
 - 3> if the variable HS DSCH RECEPTION OF ETWS ENABLED is FALSE:
 - 4> start or, if the timer is running, restart the timer T321 at the end of the HS-SCCH subframe addressed to this UE.
 - 3> continuously receive HS-DSCH.

Upon timer T321 expiry; or

Upon state transition to CELL_FACH if HS_DSCH_DRX_CELL_FACH_STATUS is set to TRUE and if the UE does not support E-DCH transmission in CELL_FACH state and Idle mode and if IE "DRX Interruption by HS-DSCH data" received from System Information Block Type 5 or System Information Block Type 5bis is set TRUE:

1> the UE shall receive HS-DSCH during the frame(s) with the SFN value fulfilling the following inequality:

(SFN - H-RNTI) mod DRX_cycle < Rx_burst

where:

- H-RNTI is the value stored in the variable H_RNTI;
- DRX_cycle is the length of the DRX cycle in radio frames, signalled by the IE "HS-DSCH DRX cycle_{FACH}";
- Rx burst is the period in frames within the DRX cycle, in which the UE receives HS-DSCH, signalled by the IE "HS-DSCH Rx burst_{FACH}".

For FDD when in CELL_FACH state, when the variable HS_DSCH_RECEPTION_CELL_FACH_STATE is set to TRUE and the variable HS_DSCH_DRX_CELL_FACH_STATUS is set to TRUE, then the UE in FDD mode shall perform measurements as specified in subclauses 8.4.1.6 and 8.4.1.9, according to the requirements in [19].

The UE may omit the inter-frequency and inter-RAT measurements specified according to the requirements in [19] in subclauses 8.4.1.6 and 8.4.1.9, when the variable HS_DSCH_RECEPTION_OF_ETWS_ENABLED is TRUE.

[...]

A UE shall initiate the cell update procedure in the following cases:

. . .

- 1> Cell reselection:
 - 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:
 - 3> if the UE is in CELL_FACH or CELL_PCH state and the UE performs cell re-selection; or
 - 3> if the UE is in CELL_FACH state and the variable C_RNTI is empty:
 - 4> perform cell update using the cause "cell reselection".

[...]

If the UE after state transition remains in CELL FACH state, it shall

- 1> start the timer T305 using its initial value if timer T305 is not running and periodical cell update has been configured by T305 in the IE "UETimers and constants in connected mode" set to any other value than "infinity";
- 1> select PRA CH according to TS 25.331 subclause 8.5.17;
- 1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;

- 1> not prohibit periodical status transmission in RLC;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 3> ignore that IE and stop using DRX.

 $[\ldots]$

If the CELL UPDATE CONFIRM message:

- does not include the IE "RB information to release list"; and
- includes the IE "RB information to reconfigure list"; or
- includes the IE "RB information to be affected list":

the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message using AM RLC.

Reference

3GPP TS 25.331 clause 8.1.1.6.5, 8.5.48, 8.5.49, 8.3.1

8.3.1.49a.3 Test purpose

- 1. To confirm that the UE performs Inter-frequency measurements when Enhanced DRX is configured in Enhanced Cell_FA CH state.
- 2. To confirm that the UE performs Inter Frequency cell reselection in Enhanced CELL_FACH state.

8.3.1.49a.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 configures Common E-DCH/ HS-DSCH for CELL_FACH in System Information Type 5 with Enhanced DRX and Cell 2 also configures Common E-DCH/ HS-DSCH for CELL_FACH in System Information Type 5

UE: PS-DCCH Enhanced CELL_FACH (state 6-11) as specified in clause 7.4 of TS 34.108 with SRB mapping on common E-DCH (DCCH)/HS-DSCH (DCCH). UE does not have common E-DCH resource.

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

SYSTEM INFORMATION BLOCK TYPE 5 (see specific message contents).

SYSTEM INFORMATION BLOCK TYPE 11 (see specific message contents).

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports HS-DSCH DRX operation

Test Procedure

Table 8.3.1.49a

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRARF Channel Number		Mid Range Test High Range		•	
		Frequ	ency	Frequ	ency
CPICH Ec (FDD)	dBm/3.84MHz	-60	-70	-70	-60

Table 8.3.1.49a illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions.

The UE is in Enhanced CELL_FACH state (SRB mapping on common E-DCH/HS-DSCH) state with Enhanced DRX configured and camped onto cell 1. SS configures its downlink transmission power settings according to columns "T1" in Table 8.3.1.49a. The UE shall find Cell 2 to be more suitable for service and perform a cell reselection. After the completion of cell reselection, the UE shall transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 2 using common E-DCH and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_FACH" with valid "New C-RNTI", "New H-RNTI" and "New Primary E-RNTI" to the UE on the downlink DCCH. SS verifies that the UE sends UTRAN MOBILITY INFORMATION CONFIRM . Finally CALL C.2 procedure is executed to check that UE is in Enhanced CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
-	UE	SS	-	
1				The UE is in Enhanced CELL_FACH state (common E-DCH / HS-DSCH) in cell 1 with Enhanced DRX configured.
2				SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.49a. The UE shall find that the cell 2 is better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 2.
3		>	CELL UPDATE	Value "cell reselection" shall be indicated in IE "Cell update cause"
4	+	-	CELL UPDATE CONFIRM	New C-RNTI, New H-RNTI and New Primary E-RNTI identity is assigned to the UE. IE "RRC State Indicator" is set to "CELL_FACH".
5	7	>	UTRAN MOBILITY INFORMATION CONFIRM	
6	+	→	CALL C.2	If the test result of C.2 indicates that UE is in Enhanced CELL_FACH state with common E-DCH in UL and HS_DSCH in DL, the test passes, otherwise it fails.

Specific Message Contents

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

System Information Block type 5 (FDD)

Use the default parameter values for the system information block 5 with the same type specified in clause

6.1.1 of TS 34.108 for common E-DCH and HS-DSCH reception in CELL_FACH, with the following exceptions:

Information Element	Value/remark
HS-DSCH DRX in CELL_FACH Information	
-T321	200 ms
- HS-DSCH DRX cycle _{FACH}	4
- HS-DSCH Rx burstFACH	1
- DRX Interruption by HS-DSCH data	FALSE

System Information Block type 11 (FDD)

Use the default parameter values for the system information block 11 with the same type specified in clause

6.1.1 of TS 34.108 with the following exception

Information Element	Value/remark
FACH measurement occasion info	Not Present

CELL UPDATE (Step 3)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark		
U-RNTI			
- SRNC Identity	Check to see if set to '0000 0000 0001'		
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'.		
Cell Update Cause			
HS-PDSCH in CELL_FACH	TRUE		
Support of common E-DCH	TRUE		
Support of HS-DSCH DRX operation	TRUE		
Support of MAC-i/is	TRUE		

CELL UPDATE CONFIRM (Step 4)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the DL DCCH (SRB#1), with the exception of the following IEs

Information Element	Value/remark	
New C-RNTI	'1010 1010 1010 1010'	
New H-RNTI	'1110 1010 1010 1010'	
New Primary E-RNTI	'1110 1010 1010 1010'	

8.3.1.50 Cell Update: Cell reselection in CELL_FACH when common E-DCH resource is released

8.3.1.50.1 Definition and applicability

 $UE\,supports\,\,FDD\,\,and\,\,Enhanced\,\,Uplink\,\,in\,\,CELL_FACH\,state.$

8.3.1.50.2 Conformance requirement

In all cases, the UE shall reselect the new cell, only if the following conditions are met:

- the new cell is better ranked than the serving cell during the preceding time interval Treselection. For UE in RRC connected mode states CELL_PCH or URA_PCH the interval Treselection_{s,PCH} applies, if provided in SIB4 [see 4], while for UE in RRC connected mode state CELL_FACH the interval Treselection_{s,FACH} applies, if provided in SIB4 [see 4]. For hierarchical cell structures when high-mobility state has not been detected, if according to the HCS rules the serving cell is not ranked then all the ranked cells are considered to be better ranked than the serving cell. In case the UE reselects to a cell on an MBMS preferred frequency to receive an MBMS service not available on the current frequency the UE may reduce interval Treselection_S, Treselection_S, PCH and Treselection_S, FACH.

Additionally the UE shall apply the following scaling rules to Treselection_s or Treselection_{s,FACH}:

- For intra-frequency cells and high-mobility state not detected:
 - no scaling applied.
- For intra-frequency cells and high-mobility state is detected:
 - multiply Treselection_s or Treselection_{s,PCH} or Treselection_{s,FACH} by the IE "Speed dependent ScalingFactor for Treselection" if sent on system information.
- For inter-frequency cells and high-mobility state not detected:
 - $multiply Treselection_s$ or $Treselection_{s,PCH}$ or $Treselection_{s,FACH}$ by the IE "Inter-Frequency ScalingFactor for Treselection" if sent on system information.
- For inter-frequency cells and high-mobility state is detected:
 - multiply Treselection_s or Treselection_{s,PCH} or Treselection_{s,FACH} by both the IEs "Speed dependent ScalingFactor for_Treselection" if sent on system information and "Inter-Frequency ScalingFactor for Treselection" if sent on system information.
- For inter-RAT cells and high-mobility state not detected:
 - multiply Treselection_s or Treselection_{s,PCH} or Treselection_{s,FACH} by the IE "Inter-RAT ScalingFactor for Treselection" if sent on system information.
- For inter-RAT cells and high-mobility state is detected:
 - multiply Treselection_s or Treselection_{s,PCH} or Treselection_{s,FACH} by both the IEs "Speed dependent ScalingFactor for_Treselection" if sent on system information and "Inter-RAT ScalingFactor for Treselection" if sent on system information.

In case scaling is applied to $Treselection_s$ or $Treselection_{s,PCH}$, the UE shall round up the result after all scalings to the nearest second. In case scaling is applied to $Treselection_{s,FACH}$, the UE shall round up the result after all scalings to the nearest 0.2 seconds.

- more than 1 second has elapsed since the UE camped on the current serving cell.
- For FDD the UE does not have an allocated common E-DCH resource.
- For 1.28 Mcps TDD, the UE does not have CELL Reselection Indication procedure ongoing.

For FDD the UE continues taking intra-frequency measurements and ranking cells while it has an allocated common E-DCH resource.

Reference

3GPP TS 25.304 clause 5.2.6.1.4

8.3.1.50.3 Test purpose

1. To confirm that the UE performs cell reselection in Enhanced CELL_FACH state when common E-DCH resource is released.

8.3.1.50.4 Method of test

Initial Condition

System Simulator: 2 cells - Both cells configure Common E-DCH for CELL FACH in System Information Type 5.

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

SYSTEM INFORMATION BLOCK TYPE 5 (see specific message contents).

SYSTEM INFORMATION BLOCK TYPE 3/4 (see specific message contents).

UE: PS-DCCH Enhanced CELL_FACH (state 6-11) as specified in clause 7.4 of TS 34.108 with SRB mapping on common E-DCH/HS-DSCH

 $T_{reselect\ period} = 120$ seconds (sufficient time interval for UE to detect a suitable cell and perform cell reselection)

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports common E-DCH

Test Procedure

Table 8.3.1.50: downlink power to be applied

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRARF Channel Number		Mid Range Test		Mid Range Test	
		Frequency		Frequency	
CPICH Ec (FDD)	dBm/3.84MHz	-60	-70	-70	-60

Table 8.3.1.50 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denotes the initial condition.

The UE is in Enhanced CELL_FACH state camped onto cell 1 with common E-DCH resource (note that common E-DCH resource has not been implicitly released by UE or explicitly released by SS at this stage. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.50. The UE shall find Cell 2 to be more suitable for service but shall not send CELL UPDATE. The SS sends Explicit Release on E-A GCH with the UE's E-RNTI to release the common E-DCH resource. UE shall reselect to Cell 2 by sending CELL_UPDATE on the uplink CCCH of cell 2 and set IE "Cell update cause" to "Cell Reselection" within T_{reselect_period}. After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_FACH" with valid "New C-RNTI", "New H-RNTI" and "New Primary E-RNTI" to the UE on the downlink DCCH. SS verifies that the UE sends UTRAN MOBILITY INFORMATION CONFIRM. Finally CALL C.2 procedure is executed to check that UE is in Enhanced CELL_FACH state.

Expected sequence

Step	Direc	ction	Message	Comment
	UE	SS	1	
1				The UE is in Enhanced CELL_FACH state camped on
				cell 1 with allocated common E-
				DCH resource and HS-DSCH
				configured.
2				SS applies the downlink
				transmission power settings,
				according to the values in
				columns "T1" of table 8.3.1.50.
3			Absolute grant	SS sends Explicit Release on
			Absolute grant	E-AGCH to release the
				common E-DCH resource.
4	-	_	Wait for T _{reselect_period} seconds	UE shall not send CELL
	-			UPDATE even though Cell 2 is
				suitable according to normal
				cell reselection criteria.
5	-3)	CELL UPDATE	UE performs cell reselection
				to cell 2 within Treselect_period.
				Value "cell reselection" shall be
				indicated in IE "Cell update
				cause"
6	+	_	CELL UPDATE CONFIRM	Transmitted on DL CCH
				(SRB#1) .New C-RNTI, New H-
				RNTI and New Primary E-RNTI
				identity is assigned to the UE.
				IE "RRC State Indicator" is set
				to "CELL_FACH".
7	-		UTRAN MOBILITY INFORMATION	
			CONFIRM	
8	+	\rightarrow	CALL C.2	If the test result of C.2 indicates
				that UE is in Enhanced
				CELL_FACH state with
				common E-DCH in UL and
				HS_DSCH in DL, the test
				passes, otherwise it fails.

Specific Message Contents

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

System Information Block type 3/4 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Treselection _{s,FACH}	120 seconds

System Information Block type 5 (FDD)

Use the default parameter values for the system information block 5 with the same type specified in clause

6.1.0b of TS 34.108 for common E-DCH and HS-DSCH reception in CELL_FACH, with the following exceptions:

Information Element	Value/Remark
- Common EDCH System Info	
 E-DCH transmission continuation back off 	Infinity

CELL UPDATE (Step 5)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'.
Cell Update Cause	Check to see if set to 'Cell Re-selection'
HS-PDSCH in CELL_FACH	TRUE
Support of common E-DCH	TRUE
Support of MAC-i/is	TRUE

CELL UPDATE CONFIRM (Step 6)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the DL DCCH (SRB#1), with the exception of the following IEs

Information Element	Value/remark	
New C-RNTI	'1010 1010 1010 1010'	
New H-RNTI	'1110 1010 1010 1010'	
New Primary E-RNTI	'1110 1010 1010 1010'	

UTRAN MOBILITY INFORMATION CONFIRM (Step 7)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink DCCH,

8.3.1.50.5 Test Requirement

At step 3, UE should release the common E-DCH resource after reception of explicit release command on E-AGCH from SS.

At step 5, UE reselects the Cell 2 and sends Cell Update with cause "Cell reselection"

8.3.1.51 Cell Update: Cell reselection in CELL_FACH (Reselection between cell not supporting HS-PDSCH and E-DCH in CELL_FACH and cell supporting HS-PDSCH and E-DCH in CELL_FACH)

8.3.1.51.1 Definition and applicability

All UEs which support LCR TDD and HS-PDSCH and E-DCH in CELL_FA CH.

8.3.1.51.2 Conformance requirement

In the CELL_FACH state the UE shall perform the following actions:

NOTE: DCCH and, if configured, DTCH are available in this state.

- 1> if the UE is "in service area":
 - 2> maintain up-to-date system information as broadcast by the serving cell as specified in subclause 8.1.1;
 - 2> perform cell reselection process as specified in [4];
 - 2> perform measurements process according to measurement control information as specified in subclause 8.4 and in subclause 14.4;

- 2> run timer T305 (periodical cell update);
- 2> select and configure the RB multiplexing options applicable for the transport channels to be used in this RRC state:
- 2> for 3.84 Mcps and 7.68 Mcps TDD; or
- 2> for FDD and 1.28 Mcps TDD, if the UE does not support HS-DSCH reception in CELL_FACH state; or
- 2> if the IE "HS-DSCH common system information" is not included in System Information Block type 5 or System Information Block type 5bis; or
- 2> for 1.28 Mcps TDD, if the IE "common E-DCH system info" is not included in System Information Block type 5:
 - 3> listen to all FACH transport channels mapped on the S-CCPCH selected by the UE according to the procedure in subclause 8.5.19.
- 2> else:
 - 3> if variable H_RNTI is set:
 - 4> receive physical channels HS-SCCH(s) using the value of the variable H_RNTI as UE identity and parameters given by the IE(s) "HS-DSCH common system information" according to the procedure in subclause 8.5.36.
 - 3> else:
 - 4> if the variable HS_DSCH_RECEPTION_OF_CCCH_ENABLED or the variable HS_DSCH_RECEPTION_OF_ETWS_ENABLED is set to TRUE:
 - 5> receive physical channel(s) of type HS-SCCH with selected common H-RNTI using parameters given by the IE(s) "HS-DSCH common system information" according to the procedure in subclause 8.5.37.

. . .

The UE shall set the IEs in the CELL UPDATE message as follows:

••

- 1> if the UE supports HS-DSCH reception in CELL_FACH state:
 - 2> include the IE "HS-PDSCH in CELL_FACH" and set it to TRUE.
- 1> if the UE supports Enhanced Uplink in CELL_FACH state and Idle mode:
 - 2> include the IE "Support of common E-DCH" and set it to TRUE.

. . .

When the UE receives a CELL UPDATE CONFIRM/URA UPDATE CONFIRM message; and

••

If the UE after state transition remains in CELL FACH state, it shall

- 1> start the timer T305 using its initial value if timer T305 is not running and periodical cell update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity";
- 1> if variable READY_FOR_COMMON_EDCH is set to TRUE:
 - 2> configure the Enhanced Uplink in CELL_FACH state and Idle mode as specified in subclause 8.5.45 for FDD and 8.5.45a for 1.28 Mcps TDD.

1> else:

- 2> select PRA CH according to subclause 8.5.17;
- 1> for 3.84 Mcps TDD and 7.68 Mcps TDD; or
- 1> for FDD and 1.28 Mcps TDD, if the UE does not support HS-DSCH reception in CELL_FACH state; or
- 1> if the IE "HS-DSCH common system information" is not included in System Information Block type 5 or System Information Block type 5bis; or
- 1> for 1.28 Mcps TDD, if the IE "Common E-DCH system info" is not included in System Information Block type 5:
 - 2> select Secondary CCPCH according to subclause 8.5.19;
 - 2> take the actions related to the HS_DSCH_RECEPTION_GENERAL variable as described in subclause 8.5.37a.

1> else:

- 2> For FDD, if the RBs have the multiplexing option with transport channel type "HS-DSCH" for the DL and transport channel type "RACH" in the UL; and
- 2> if the UE does not supports E-DCH transmission in CELL_FACH state and Idle mode or the IE "Common E-DCH system info" is not included system information block type 5 or 5bis; and
- 2> if variable H_RNTI and variable C_RNTI are set:
 - 3> start to receive HS-DSCH according to the procedure in subclause 8.5.36.

2> else:

- 3> if the RBs have the multiplexing option with transport channel type "HS-DSCH" for the DL and transport channel type "E-DCH" in the UL; and
- 3> if variable READY_FOR_COMMON_EDCH is set to TRUE; and
- 3> if variable H_RNTI and variable C_RNTI and variable E-RNTI are set:
 - 4> start to receive HS-DSCH according to the procedure in subclause 8.5.36.
- 3> else:
 - 4> clear variable C_RNTI and delete any stored C-RNTI value;
 - 4> clear variable H_RNTI and delete any stored H-RNTI value;
 - 4> clear variable E_RNTI and delete any stored E-RNTI value;
 - 4> clear any stored IEs "HA RQ info";
 - 4> set the variable INVALID_CONFIGURATION to TRUE.

The variable HS_DSCH_RECEPTION_CELL_FACH_STATE shall be set to TRUE only when all the following conditions are met:

- 1> the UE is in CELL_FACH;
- 1> the variable H_RNTI is set;
- 1> the variable C_RNTI is set;
- 1> System Information Block type 5 or System Information Block type 5b is includes IE "HS-DSCH common system information";
- 1> for 1.28 Mcps TDD, System Information Block type 5 includes IE "Common E-DCH system info".

If any of the above conditions is not met and the variable HS_DSCH_RECEPTION_CELL_FACH_STATE is set to TRUE, the UE shall:

- 1> set the variable HS_DSCH_RECEPTION_CELL_FACH_STATE to FALSE;
- 1> if the UE is in CELL FACH and variable HS DSCH RECEPTION OF CCCH ENABLED is set to FALSE:
 - 2> set the variable HS DSCH RECEPTION OF ETWS ENABLED to FALSE;
 - 2> set the variable HS_DSCH_RECEPTION_GENERAL to FALSE;
 - 2> stop any HS-SCCH reception procedures;
 - 2> stop any HS-DSCH reception procedures;
 - 2> clear the variable H_RNTI and remove any stored H-RNTI;
 - 2> reset the MAC-ehs entity [15];
 - 2> release all HARQ resources;
 - 2> clear any stored IEs "HARQ info";

Whenever the variable HS_DSCH_RECEPTION_CELL_FACH_STATE is set to TRUE, the UE shall:

- 1> set the variable HS_DSCH_RECEPTION_GENERAL to TRUE;
- 1> use the IE "HS-DSCH common system information" in System Information Block type 5 or System Information Block type 5 bis;
- 1> for FDD, receive the HS-SCCH(s) according to the IE "HS-SCCH channelisation code" on the serving cell applying the scrambling code as received in the IE "DL Scrambling code" as received in IE "HS-DSCH common system information";
- 1> for 1.28 Mcps TDD, receive the HS-SCCH(s) according to the stored HS-SCCH configuration, applying the HS-PDSCH midamble code according to the stored HS-PDSCH midamble configuration;
- 1> perform HS-DSCH reception procedures:
 - 2> if the UE has a stored IE "HARQ info":
 - 3> act on subclause 8.6.5.6b for the stored IE "HARQ info".
 - 2> else:
 - 3> act on subclause 8.6.5.20 for the IE "HA RQ System info" as received in IE "HS-DSCH common system information".
 - 2> and use the value of the variable H_RNTI as UE identity in the HS-SCCH reception procedure in the physical layer.
- 1> and for FDD, for BCCH reception perform HS-DSCH reception procedures by listening to the first indexed HS-SCCH code listed in the IE "HS-SCCH channelisation code" with "BCCH specific H-RNTI" as received in IE "HS-DSCH common system information".
- 1> and for 1.28 Mcps TDD, for BCCH reception perform HS-DSCH reception procedures by listening to the first indexed HS-SCCH according to the stored HS-SCCH configuration with "BCCH specific H-RNTI" as received in IE "HS-DSCH common system information".
- NOTE: For 1.28 Mcps TDD, when performing HS-DSCH reception in CELL_FACH state, the UE shall use the table of transport block size for the HS-DSCH physical layer category 9 as specified in [15].

Whenever the variable HS_DSCH_RECEPTION_CELL_FACH_STATE is set to FALSE, the UE shall:

- 1> if the UE is in CELL_FACH and variable HS_DSCH_RECEPTION_OF_CCCH_ENABLED is set to FALSE:
 - 2> not perform HS-SCCH reception procedures;

2> not perform HS-DSCH reception procedures.

. . .

When UE does not support HS-DSCH reception in CELL_FACH state or when the IE "HS-DSCH common system information" is not included in System Information Block type 5 or System Information Block type 5bis, the UE shall:

- 1> set the variable HS_DSCH_RECEPTION_OF_CCCH_ENABLED to FALSE;
- 1> set the variable HS_DSCH_RECEPTION_OF_ETWS_ENABLED to FALSE;
- 1> set the variable HS_DSCH_RECEPTION_GENERAL to FALSE.

When the variable HS_DSCH_RECEPTION_OF_CCCH_ENABLED or the variable HS_DSCH_RECEPTION_OF_ETWS_ENABLED is set to TRUE, the UE shall:

- 1> set the variable HS_DSCH_RECEPTION_GENERAL to TRUE;
- 1> use the IE "HS-DSCH common system information" in System Information Block type 5 or System Information Block type 5 bis;
- 1> configure the HARQ according to IE "HARQ System info" as defined in subclause 8.6.5.20;
- 1> configure the common MAC-ehs reordering queues according to IE "Common MAC-ehs reordering queues" as defined in subclauses 8.6.5.22; and then
- 1> receive the CCCH according to IE "CCCH mapping info" as defined in subclause 8.6.5.21;
- 1> if the UE is RRC Connected mode:
 - 2> select a common H-RNTI as specified in 8.5.38;
 - 2> if the variable HS_DSCH_RECEPTION_OF_CCCH_ENABLED is set to TRUE:
 - 3> receive the SRB1 according to IE "SRB1 mapping info" as defined in subclause 8.6.5.19.

1> else:

- 2> select a common H-RNTI as specified in [4].
- 1> and for FDD, start to receive the HS-SCCH(s) with selected H-RNTI according to the IE "HS-SCCH channelisation code" on the selected cell applying the scrambling code as received in the IE "DL Scrambling code";
- 1> and for 1.28 Mcps TDD, start to receive the HS-SCCH(s) with selected H-RNTI according to the IE "HS-SCCH system info" on primary frequency in the selected cell applying the midamble code as received in the IE "HS-PDSCH Midamble Configuration";
- 1> configure the MAC flow for BCCH reception as specified in [15];
- 1> and for FDD, start to receive the first indexed HS-SCCH code listed in the IE "HS-SCCH channelisation code" with "BCCH specific H-RNTI" as received in IE "HS-DSCH common system information".
- 1> and for 1.28 Mcps TDD, for BCCH reception perform HS-DSCH reception procedures by listening to the first indexed HS-SCCH according to the IE "HS-SCCH system info" with "BCCH specific H-RNTI" as received in IE "HS-DSCH common system information".
- NOTE: For 1.28 Mcps TDD, when performing HS-DSCH reception in CELL_FACH state, the UE shall use the table of transport block size for the HS-DSCH physical layer category 9 as specified in [15].

In FDD and 1.28 Mcps TDD, the MAC PDU header for DTCH and DCCH mapped on HS-DSCH CELL_FACH, CELL_PCH state is as shown in figure 9.2.1.1c-1.

- there is no MAC-d header included for DTCH and DCCH.

- there is no MAC-c header included for DTCH and DCCH when UE dedicated H-RNTI is used.
- the U-RNTI is only included as MAC-c header to MAC-d PDU for DCCH (SRB#1 only)when common H-RNTI is used

Reference

3GPP TS 25.331 clauses 7.2.2.2, 8.3.1.3 8.3.1.6, 8.5.36, 8.5.37

3GPP TS 25.321 clause 9.2.1.1c

8.3.1.51.3 Test purpose

- 1. To confirm that the UE starts reception of HS-PDSCH in CELL_FACH state, after reselecting to a cell supporting HS-PDSCH in CELL_FACH.
- 2. To confirm that the UE performs the cell reselection procedure while receiving HS-PDSCH in CELL_FACH state.
- 3. To confirm that the UE can receive data on DCCH (SRB#1) HS-DSCH using common H-RNTI in CELL_FA CH state.

8.3.1.51.4 Method of test

Initial Condition

System Simulator: 2 cells: Cell 1 sends the default system information (HS-DSCH for CELL_FACH not configured), Cell 6 configures HS-DSCH for CELL_FACH in System Information Type 5.

UE: PS-DCCH+DTCH_FA CH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108.

For cell 2, the following parameters are specific for the system information

Parameter	Value
T302	8000 ms

Related ICS/IXIT statement(s)

- UE supports 1.28Mcps TDD
- UE supports HS-PDSCH in CELL_FACH
- UE supports E-DCH in CELL_FACH

Test Procedure

Table 8.3.1.51

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRARF Channel Number		Mid Range Test Frequency		High Range Test Frequency	
P-CCPCH RSCP	dBm	-60	-70	-70	-60

Table 8.3.1.51 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The SS has configured its downlink transmission power according to column "T0" in table 8.3.1.51. UE is in state 6-11 in cell 1 as specified in clause 7.4 of TS 34.108 and has a radio bearer established mapped on RACH and FACH.

The SS switches its downlink transmission power settings to column "T1". The SS transmits updated SYSTEM INFORMATION TYPE5/5bis message which includes HS-DSCH and common E-DCH reception in cell FACH state.

UE finds cell 6 as a better cell and reselects to Cell 6. The UE transmits CELL UPDATE message on uplink CCCH of cell 6 with the IE "Cell update cause" set to "cell reselection". The SS then transmits a CELL UPDATE CONFIRM which includes the IE RRC State Indicator" set to "CELL_FACH", but with unmatched UE Id in MAC-c header, to the

UE on the downlink DCCH. The UE does not respond to this. After expiry of T302 the UE shall transmit another CELL UPDATE. The SS then transmits a CELL UPDATE CONFIRM which includes the IE RRC State Indicator" set to "CELL_FACH", but this time with matched UE Id in MAC-c header, to the UE on the downlink DCCH. Then UE shall respond by transmitting a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH.

The SS switches its downlink transmission power settings to column "T0". UE finds cell 1 as a better cell for service and reselects to Cell 1.

The UE transmits CELL UPDATE message on uplink CCCH of cell 1 with the IE "Cell update cause" set to "cell reselection". The SS then transmits a CELL UPDATE CONFIRM which includes the IE RRC State Indicator" set to "CELL_FACH", to the UE on the downlink DCCH. Then UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH.

The SS checks that the UE is in Cell FACH state.

Expected sequence

Step	Direction UE SS	Message	Comment
0	02 00		The UE is in CELL_FACH state in cell
1			SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.51. The UE shall find that the cell 6 is better for service and perform reselection. SS waits for the maximum duration required for the UE to camp to cell 6.
2	+	SYSTEM INFORMATION TYPE 5/5bis	Transmitted on cell 6. Includes configuration for HS-DSCH reception in CELL_FACH state
3)	CELL UPDATE	Transmitted by the UE on common E-DCH. Value "cell reselection" shall be indicated in IE "Cell update cause" and "HS-PDSCH in CELL_FACH" is set to TRUE, and "Support of common E-DCH" is set to TRUE.
4	+	CELL UPDATE CONFIRM	Transmitted by the SS on SRB1 using common H-RNTI but unmatched UE-ID in MAC-c header. IE "RRC State Indicator" is set to "CELL_FACH".
5)	CELL UPDATE	After expiry of T302. Transmitted by the UE on common E-DCH. Value "cell reselection" shall be indicated in IE "Cell update cause" and "HS-PDSCH in CELL_FACH" is set to TRUE, and "Support of common E-DCH" is set to TRUE
6	+	CELL UPDATE CONFIRM	Transmitted by the SS on SRB1 using common H-RNTI but with matched UE-ID in MAC-c header. IE "RRC State Indicator" is set to "CELL_FACH".
7	\rightarrow	RADIO BEARER RECONFIGURATION COMPLETE	Transmitted by the UE on dedicated E-DCH.
8			SS applies the downlink transmission power settings, according to the values in columns "T0" of table 8.3.1.51. The UE shall find that the cell 1 is better for service and perform reselection. SS waits for the maximum duration required for the UE to camp to cell 1.
9	→	CELL UPDATE	Value "cell reselection" shall be indicated in IE "Cell update cause" and "HS-PDSCH in CELL_FACH" is set to TRUE, and "Support of common E-DCH" is set to TRUE.
10	+	CELL UPDATE CONFIRM	Transmitted by the SS on FACH / S- CCPCH. IE "RRC State Indicator" is set to "CELL_FACH".
11	\rightarrow	UTRAN MOBILITY INFORMATION CONFIRM	Transmitted by the UE on RACH.
12	←→	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

SYSTEM INFORMATION TYPE 5/ SYSTEM INFORMATION TYPE 5bis (Step 2)

Use the same message as specified for "Only for cells which configure HS-DSCH reception in CELL_FA CH " in 34.108, clause 6.1.0b

CELL UPDATE (Steps 3, 5 and 9)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
Cell Update Cause	Check to see if set to 'Cell Re-selection'
HS-PDSCH in CELL_FACH	Check to see if set to TRUE
Support of common E-DCH	Check to see if set to TRUE

CELL UPDATE CONFIRM (Step 4 and 6)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the DL CCCH, with the exception of the following IEs:

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'
New H-RNTI	'1110 1010 1010 1010'
RB information to be affected list	
- RB information to be affected	(UM DCCH for RRC)
- RB identity	1
- RB mapping info	
 Information for each multiplexing option 	2 RBMuxOption
 RLC logical channel mapping indicator 	Not Present
 Number of RLC logical channels 	1
 Uplink transport channel type 	RACH
 UL Transport channel identity 	Not Present
 Logical channel identity 	1
- CHOICE RLC size list	According to clause 6.11.5.4.5.2 (combinations on
	PRACH in TS 34.108)
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	1
- E-DCH MAC-d flow identity	1
- CHOICE RLC size	Flexible size
- Length indicator size	According to clause 6.11.5.4.7 TS 34.108
- Minimum UL RLC PDU size	According to clause 6.11.5.4.7 TS 34.108
- Largest UL RLC PDU size	According to clause 6.11.5.4.7 TS 34.108
- Include in Scheduling Info	TRUE
- MAC logical channel priority	1
- Downlink RLC logical channel info	He been
- Downlink transport channel type	HS-DSCH Not Present
- DL DCH Transport channel identity	Not Present
DL DSCH Transport channel identity CHOICE DL MAC header type	
- CHOICE DE MAC neader type - DL HS-DSCH MAC-ehs Queue Id	MAC-ehs
	1
 Logical channel identity RB information to be affected 	(AM DCCH for RRC)
- RB identity	2
- RB mapping info	
- No mapping into - Information for each multiplexing option	2 RBMuxOption
imonnation for each multiplexing option	12 NDINGAOPHON

- RLC logical channel mapping indicator Not Present - Number of RLC logical channels - Uplink transport channel type E-DCH - Logical channel identity - E-DCH MAC-d flow identity 2 - CHOICE RLC size Flexible size According to clause 6.11.5.4.7 TS 34.108 - Length indicator size - Minimum UL RLC PDU size According to clause 6.11.5.4.7 TS 34.108 - Largest UL RLC PDU size According to clause 6.11.5.4.7 TS 34.108 - Include in Scheduling Info TRUE - MAC logical channel priority 2 - Downlink RLC logical channel info - Downlink transport channel type **HS-DSCH** - DL DCH Transport channel identity Not Present - DL DSCH Transport channel identity Not Present - CHOICE DL MAC header type MAC-ehs - DL HS-DSCH MAC-ehs Queue Id - Logical channel identity - RLC logical channel mapping indicator Not Present - Number of RLC logical channels - Uplink transport channel type **RACH** - UL Transport channel identity Not Present - Logical channel identity - CHOICE RLC size list **Explicit List** - RLC size index According to clause 6.11.5.4.5.2 (combinations on PRACH in TS 34.108) - MAC logical channel priority - Downlink RLC logical channel info - Downlink transport channel type **FACH** - DL DCH Transport channel identity Not Present - DL DSCH Transport channel identity Not Present - Logical channel identity - RB information to be affected (AM DCCH for NAS_DT High priority) - RB identity - RB mapping info - Information for each multiplexing option 2 RBMuxOption - RLC logical channel mapping indicator Not Present - Number of RLC logical channels - Uplink transport channel type E-DCH 3
- Logical channel identity - E-DCH MAC-d flow identity - CHOICE RLC size - Length indicator size - Minimum UL RLC PDU size - Largest UL RLC PDU size - Include in Scheduling Info - MAC logical channel priority

- Downlink RLC logical channel info

- Downlink transport channel type - DL DCH Transport channel identity

3 **HS-DSCH** Not Present

TRUE

Flexible size

According to clause 6.11.5.4.7 TS 34.108

According to clause 6.11.5.4.7 TS 34.108

According to clause 6.11.5.4.7 TS 34.108

	1
- DL DSCH Transport channel identity	Not Present
- CHOICE DL MAC header type	MAC-ehs
- DL HS-DSCH MAC-ehs Queue Id	
- Logical channel identity	3
 RLC logical channel mapping indicator 	Not Present
 Number of RLC logical channels 	1
 Uplink transport channel type 	RACH
 UL Transport channel identity 	Not Present
 Logical channel identity 	3
- CHOICE RLC size list	Explicit List
- RLC size index	According to clause 6.11.5.4.5.2 (combinations on
	PRACH in TS 34.108)
 MAC logical channel priority 	3
- Downlink RLC logical channel info	
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
- RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	4
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	E-DCH
' '	
- Logical channel identity	4
- E-DCH MAC-d flow identity	·
- CHOICE RLC size	Flexible size
- Length indicator size	According to clause 6.11.5.4.7 TS 34.108
- Minimum UL RLC PDU size	According to clause 6.11.5.4.7 TS 34.108
- Largest UL RLC PDU size	According to clause 6.11.5.4.7 TS 34.108
- Include in Scheduling Info	TRUE
- MAC logical channel priority	4
- Downlink RLC logical channel info	
 Downlink transport channel type 	HS-DSCH
 DL DCH Transport channel identity 	Not Present
 DL DSCH Transport channel identity 	Not Present
 CHOICE DL MAC header type 	MAC-ehs
- DL HS-DSCH MAC-ehs Queue Id	1
 Logical channel identity 	4
 RLC logical channel mapping indicator 	Not Present
 Number of RLC logical channels 	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	4
- CHOICE RLC size list	Explicit List
- RLC size index	According to clause 6.11.5.4.5.2 (Combinations on
	PRACH)
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
- Logical charmer wentity	'

RADIO BEARER RECONFIGURATION COMPLETE (Step 7)

Use the same default message as specified in TS 34.108, clause 9.

CELL UPDATE CONFIRM (Step 10)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark	
New C-RNTI	'1010 1010 1010 1010'	

8.3.1.51.5 Test requirements

At step 3 the UE shall reselect to cell 6 and then it shall trans mit a CELL UPDATE message which sets the value "cell reselection" in IE "Cell update cause" and "HS-PDSCH in CELL_FACH" and "Support of common E-DCH" set to TRUE.

At step 5 the UE shall not respond to the CELL UPDATE CONFIRM in step 4. The UE will instead transmit CELL UPDATE after expiry of T302.

At step 7 the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM on UL using the PRACH physical resource.

At step 9 the UE shall reselect to cell 1 and then it shall trans mit a CELL UPDATE message which sets the value "cell reselection" in IE "Cell update cause" and "HS-PDSCH in CELL_FACH" and "Support of common E-DCH" set to TRUE.

8.3.1.52 Cell Update: Inter Frequency cell reselection in CELL_FACH based on absolute priority

8.3.1.52.1 Definition and applicability

All UEs which support FDD and Rel 8 RAT priority cell reselection.

8.3.1.52.2 Conformance requirement

5.2.6.1.2a Measurement rules for inter-frequency and inter-RAT cell reselection when absolute priorities are used

If the UE has received absolute priority information for inter-frequency layers, the UE shall follow these rules:

- The UE shall perform measurements of inter-frequency layers with a priority higher than the priority of the current serving layer.

NOTE: The rate of these measurements may vary depending on whether Srxlev and Squal of the serving cell are above or below Sprioritysearch1 and Sprioritysearch2. This is specified in [10].

. . .

- For inter-frequency layers with a priority equal or lower than the priority of the current serving layer:
 - If SrxlevServingCell > Sprioritysearch1 and SqualServingCell > Sprioritysearch2 the UE may choose not to perform measurements of inter-frequency layers of equal or lower priority.
- If $SrxlevservingCell \le Sprioritysearch1$ or $SqualservingCell \le Sprioritysearch2$ the UE shall perform measurements of inter-frequency layers of equal or lower priority.
 - The UE shall not perform measurements of inter-frequency layers for which the UE has no absolute priority.

. . .

5.2.6.1.4a Absolute priority based criteria for inter-frequency and inter-RAT cell reselection

Absolute priorities of different absolute priority layers may be provided to the UE. The following cell reselection criteria are used for inter-frequency cells if absolute priority information for inter-frequency is available to the UE, and inter-RAT cells if absolute priority information for inter-RAT is available to the UE.

If System Information Block 18 with UTRAN information is provided then the UE shall apply the inter-frequency priority rules below only to UTRAN cells of the selected PLMN or equivalent PLMNs. If System Information Block 18 is not provided, or is provided but contains no information for UTRAN, then the rules below apply for the entire UTRAN RAT.

. . .

If priority information is provided for any inter-frequency layers, cells belonging to inter-frequency layers for which no priority or no threshold is assigned shall not be considered for reselection.

. . .

If none of the inter-frequency layers in UTRAN are provided with both priority and threshold parameters, the cell reselection criteria in subclause 5.2.6.1.4 shall apply for inter-frequency layers in UTRAN.

. . .

If both criteria in subclause 5.2.6.1.4 and criteria in subclause 5.2.6.1.4a are simultaneously fulfilled, the order in which the reselection criteria are evaluated is left to UE implementation.

•••

The UE may apply either priorities broadcast in system information or priorities received through dedicated signalling.

The rules regarding which set of priorities shall apply are defined in [4]. UE specific priorities are only valid in the RPLMN, and shall be cleared when the validity time of the UE specific priorities expires, or when leaving the RPLMN.

UE specific priorities are not applied in camped on any cell state.

. . .

The following definitions apply for the layers for which Thresh x,high2 or Thresh x,low2 are not provided:

- Criterion 1: the SrxlevnonServingCell,x of a cell on an evaluated higher absolute priority layer is greater than Threshx,high during a time interval Treselection;
- Criterion 2: SrxlevServingCell < Threshserving,low or SqualservingCell < 0 and the SrxlevnonServingCell,x of a inter-frequency cell on an evaluated equal absolute priority layer is greater than Threshx,low during a time interval Treselection;
- Criterion 3: SrxlevServingCell < Threshserving,low or SqualservingCell < 0 and the SrxlevnonServingCell,x of a cell on an evaluated lower absolute priority layer is greater than Threshx,low during a time interval Treselection;

The following definitions apply for the layers for which both Thresh x,high2 and Thresh x,low2 are provided:

- Criterion 4: the SqualnonServingCell,x of a cell on an evaluated higher absolute priority layer is greater than Threshx,high2 during a time interval Treselection;
- Criterion 5: SqualservingCell < ThreshservingJow2 and the SqualnonServingCell,x of a cell on an evaluated lower absolute priority layer is greater than Threshx,low2 during a time interval Treselection;

Cell reselection to a cell on a higher absolute priority layer than the camped frequency shall be performed if criterion 1 or 4 is fulfilled.

Cell reselection to an inter-frequency cell on an equal absolute priority layer to the camped frequency shall be performed if criterion 2 is fulfilled.

Cell reselection to a cell on a lower absolute priority layer than the camped frequency shall be performed if criterion 3 or 5 is fulfilled.

If more than one cell meets the above criteria, the UE shall reselect the cell with the highest Srxlev nonServingCell,x among the cells meeting the criteria on the highest absolute priority layer.

The UE shall not perform cell reselection to cells for which the cell selection criterion S is not fulfilled.

The UE shall not perform cell reselection until more than 1 second has elapsed since the UE camped on the current serving cell.

The UE should not perform cell reselection while the UE has an allocated common E-DCH resource.

For UE in RRC connected mode states CELL_PCH or URA_PCH the interval Treselection s,PCH applies, if provided in SIB4 (see [4]), while for UE in RRC connected mode state CELL_FACH the interval Treselection s,FACH applies, if provided in SIB4 (see [4]).

In all the above criteria the values of Treselections, Treselections, PCH or Treselections, FACH apply for Treselection and are scaled according to the UE mobility state and target RAT, as specified in 5.2.6.1.1a.

8.6.7.3a UTRA priority info list

If the IE "UTRA priority info list" is received in System Information Block Type 19, the UE shall:

- 1> if the value of the IE "Priority status" in the variable PRIORITY_INFO_LIST equals "dedicated_priority":
 - 2> store the value of the IEs "S_{prioritysearch1}", "S_{prioritysearch2}", "Thresh_{serving,low}" and "Thresh_{serving,low2}" in the IE "UTRA Serving Cell" in the variable PRIORITY INFO LIST;
 - 2> if any of the values in any of the occurrences of the IE "Frequency List" in any occurrence of the IE "Priority Info List" within the variable PRIORITY_INFO_LIST is the frequency of the serving cell:
 - 3> store the value of the IE "priority" in the IE "UTRA Serving Cell" in the variable PRIORITY_INFO_LIST.
 - 2> otherwise:
 - 3> clear the value of the IE "priority" in the IE "UTRA Serving Cell" in the variable PRIORITY_INFO_LIST.
 - 2> for each occurrence of the IE "UTRAN FDD Frequencies":
 - 3> if the value of the IE "UARFCN" exists in the list of UTRA FDD priorities in the PRIORITY_INFO_LIST then, in the occurrence of IE "Frequency List" within the variable PRIORITY_INFO_LIST with that value of the IE "UARFCN":
 - 4> store the value of the IEs "Thresh_{x, high}", "Thresh_{x, low}", "Qqualmin FDD" and "Qrxlev min FDD".
 - 2> for each occurrence of the IE "UTRAN TDD Frequencies":
 - 3> if the value of the IE "UARFCN" exists in the list of UTRA TDD priorities in the PRIORITY_INFO_LIST then, in the occurrence of IE "Frequency List" within the variable PRIORITY_INFO_LIST with that value of the IE "UARFCN":
 - 4> store the value of the IEs "Thresh_{x, high}", "Thresh_{x, low}" and "Qrxlev minTDD".

1> otherwise:

- 2> update the PRIORITY_INFO_LIST IE "Priority status" to cause "sys_info_priority".
- 2> store information in the IE "UTRA Serving Cell" in the IE "UTRA Serving Cell" within the variable PRIORITY_INFO_LIST;
- 2> for each occurrence of the IE " UTRAN FDD Frequencies":
 - 3> if an entry already exists in the IE "Priority Info List" in the variable PRIORITY_INFO_LIST with the same priority value as indicated in the IE "priority" and has the CHOICE "Radio Access Technology" set to "UTRA FDD":
 - 4> create a new entry in the IE "Frequency List" in that occurrence of IE "Priority Info List", and store the value of "UARFCN" in the IE "UARFCN" in this occurrence of the IE "Frequency List" within the variable PRIORITY_INFO_LIST, and in that new entry:
 - 5> store the IEs "Thresh_{x, high}", "Thresh_{x, low}", "QqualminFDD" and "Qrxlev minFDD".

3> otherwise:

- 4> create a new entry in the IE "Priority Info List" and store the value of "priority" in the IE "priority" in this occurrence of the IE "Priority Info List" within the variable PRIORITY_INFO_LIST, and in that new entry:
 - 5> set the CHOICE "Radio Access Technology" to "UTRA FDD" and store the value of "UARFCN" in the IE "UARFCN" in the first occurrence of the IE "Frequency List";

- 5> store the IEs "Thresh_{x, high}", "Thresh_{x, low}", "QqualminFDD" and "Qrxlev minFDD" in that occurrence of the IE "Frequency List".
- 2> for each occurrence of the IE "UTRAN TDD Frequencies":
 - 3> if an entry already exists in the IE "Priority Info List" in the variable PRIORITY_INFO_LIST with the same priority value as indicated in the IE "priority" and has the CHOICE "Radio Access Technology" set to "UTRA TDD":
 - 4> create a new entry in the IE "Frequency List" in that occurrence of IE "Priority Info List", and store the value of "UARFCN" in the IE "UARFCN" in this occurrence of the IE "Frequency List" within the variable PRIORITY_INFO_LIST, and in that new entry:
 - 5> store the IEs "Thresh $_{x, high}$ ", "Thresh $_{x, low}$ " and "Qrxlev minTDD".

3> otherwise:

- 4> create a new entry in the IE "Priority Info List" and store the value of "priority" in the IE "priority" in this occurrence of the IE "Priority Info List" within the variable PRIORITY_INFO_LIST, and in that new entry:
 - 5> set the CHOICE "Radio Access Technology" to "UTRA TDD" and store the value of "UARFCN" in the IE "UARFCN" in the first occurrence of the IE "Frequency List";
 - 5> store the IEs "Thresh_{x, high}", "Thresh_{x, low}" and "Qrxlev minTDD" in that occurrence of the IE "Frequency List".

References

- 1. TS 25.304, 5.2.6.1.2a
- 2. TS 25.304, 5.2.6.1.4a
- 3. TS 25.331, 8.6.7.3a

8.3.1.52.3 Test purpose

- 1. To confirm that UE does not perform higher priority cell reselection based on absolute priority in CELL_FACH state, when power levels do not meet cell reselection criteria.
- 2. To confirm that UE performs higher priority cell reselection based on absolute priority in CELL_FACH state, when power levels meet cell reselection criteria.

8.3.1.52.4 Method of test

Initial conditions

System Simulator:

- 2 cells Cell 1 and Cell 4
- Cell 2 is mapped to cell 4 (inter frequency) of 34.108 clause 6.1 and both cells belong to different frequency bands.
- Cell 1 as the active cell with SS downlink transmission power settings according to "T0" in table 8.3.1.x below.
- SIB19 to be transmitted by both cells.

MASTER INFORMATION BLOCK

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark
MIB Value Tag	Set to (Current MIB value tag + 1)
SB 1 Cell Value tag	Set to (Current SIB4 value tag + 1)

SCHEDULING BLOCK 1

Information Element	Value/remark
SIB 11 Cell Value Tag	Set to (Current SIB 11 value tag + 1)

System Information Block type 11

Use the same message type found in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length	3
coefficient	
 Inter-frequency FDD measurement indicator 	TRUE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present

SYSTEM INFORMATION CHANGE INDICATION

Value/remark	
t equal to Value tag sent in modified MIB	
t	

User Equipment:

- UE is brought to CELL_FA CH state on Cell 1 with "T0" in table 8.3.1.x below.

During T2, UE performs cell reselection to High priority cell 4.

- UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

UE reads all the SIB information.

- UE supports FDD.

Test procedure

Table 8.3.1.52

Parameter	Unit	Cell 1		Cell 4			
		T0	T1	T2	T0	T1	T2
UTRARF Channel		Mid Range Test		High Range Test			
Number		Frequency		Frequency			
CPICH Ec	dBm/3.84MHz	-60	-60	-60	-90	-77	-65
Srxlev*	dB	21	21	21	-9	4	16
qRxLevMinFDD dB -81 -81							
Note-Srxlev is calculated in UE.							
During T1. UE does not perform cell reselection to High priority cell 4.							

SS transmits MIB with the "MIB Value Tag" IE different from the original setting and the SIB TYPE 19 with cell 4 as the higher priority cell and cell 1 as the lower priority cell (See specific message contents). SS notifies the UE by sending a SYSTEM INFORMATION CHANGE INDICATION with the BCCH modification. SS waits for 5s to ensure

SS configures downlink transmission power settings according to columns "T1" in the table 8.3.1.x. UE does not reselect to higher priority cell 4 as power levels of cell 4 do not meet the absolute priority cell reselection criteria defined in SIB TYPE 19. UE should not be sending a CELL UPDATE in this case on cell 4.

SS configures the downlink transmission power settings according to columns "T2" from table 8.3.1.x. UE performs cell reselection to higher priority cell 4 as power levels of cell 4 now meet the absolute priority cell reselection criteria defined in SIB TYPE 19. UE sends a CELL UPDATE with cause: cell reselection. SS responds with CELL UPDATE CONFIRM. SS releases the RRC connection.

Expected sequence

Step	Direction		Message	Comments	
Step	UE	SS			
1	+	-	SYSTEM INFORMATION BLOCK TYPE 19	SS transmits MIB with the "MIB Value Tag" IE different from the original setting and the SIB TYPE 19 with cell 4 as the higher priority cell and cell 1 as the lower priority cell (See specific message contents).	
2	+	-	SYSTEM INFORMATION CHANGE INDICATION	SS notifies the UE by sending a SYSTEM INFOR MATION CHANGE INDICATION with the BCCH modification (See specific message contents) and waits for 5s for UE to read all SIB information.	
3	S	S		SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.52.	
4	U	E		UE does not perform cell reselection to High Priority cell 4 as absolute priority cell reselection criterion is not satisfied.	
5	S	S		SS configures its downlink transmission power settings according to columns "T2" in table 8.3.1.52.	
6		>	CELL UPDATE	UE performs cell reselection to Higher Priority cell 4 and sends CELL UPDATE on the new serving cell 4 and value "cell reselection" shall be indicated in IE "Cell update cause"	
7	+		CELL UPDATE CONFIRM		
8	+	<u>-</u>	RRC CONNECTION RELEASE	SS releases the RRC connection.	
9	-3	>	RRC CONNECTION RELEASE COMPLETE		

Specific Message Contents

The contents of the SYSTEM INFORMATION BLOCK TYPE 19 message in this test case is identical to TS 34.108 clause 6.1.0b, with the following exceptions:

System Information Block type19 (step 1)

Information Element	Value/remark	Version
SysInfoType19		REL-8 or
		later
utra-PriorityInfoList		
utra-ServingCell		
Priority	[4]	
s-PrioritySearch1	[8 (16 dB)]	
s-PrioritySearch2	Not present	
threshServingLow	[10 (20 dB)]	
utran-FDD-FrequencyList		
uarfcn	Same downlink uarfcn as used for cell 4	
priority	[5]	
threshXhigh	[5 (10 dB)]	
threshXlow	[1 (2 dB)]	
qQualMinFDD	-24 dB	
qRxLevMinFDD	-81 dBm	
utran-TDD-FrequencyList	Not present	
gsm-PriorityInfoList	Not present	
eutra-FrequencyAndPriorityInfoList	Not present	

System Information Change Indication (Step 2)

Information Element	Value/remark
Message Type	
Paging record list	Not Present
BCCH modification info	
MIB Value Tag	Set to (Current MIB value tag + 1)
BCCH Modification time	Not Present

8.3.1.52.5 Test requirements

- 1. At step 4, UE does not perform cell reselection to high priority cell 4, as cell reselection criterion is not satisfied.
- 2. At step 6, UE reselects to higher priority cell 4, as cell reselection criteria matches and sends a CELL UPDATE with cause: cell reselection.

8.3.1.53 Cell Update: Absolute priority based cell reselection failure to inter-frequency cell for which no priority or no threshold is assigned

8.3.1.53.1 Definition and applicability

All UEs which support FDD and Rel 8.

8.3.1.53.2 Conformance requirement

5.2.6.1.2a Measurement rules for inter-frequency and inter-RAT cell reselection when absolute priorities are used

If the UE has received absolute priority information for inter-frequency layers, the UE shall follow these rules:

- The UE shall perform measurements of inter-frequency layers with a priority higher than the priority of the current serving layer.

NOTE: The rate of these measurements may vary depending on whether Srxlev and Squal of the serving cell are above or below Sprioritysearch1 and Sprioritysearch2. This is specified in [10].

...

- For inter-frequency layers with a priority equal or lower than the priority of the current serving layer:
- If SrxlevServingCell > Sprioritysearch1 and SqualServingCell > Sprioritysearch2 the UE may choose not to perform measurements of inter-frequency layers of equal or lower priority.
- $If Srxlev \textbf{ServingCell} <= Spriority search 1 \ or \ Squal \textbf{ServingCell} <= Spriority search 2 \ the \ UE \ shall \ perform \ measurements \ of$

inter-frequency layers of equal or lower priority.

- The UE shall not perform measurements of inter-frequency layers for which the UE has no absolute priority.

. . .

5.2.6.1.4a Absolute priority based criteria for inter-frequency and inter-RAT cell reselection

Absolute priorities of different absolute priority layers may be provided to the UE. The following cell reselection criteria are used for inter-frequency cells if absolute priority information for inter-frequency is available to the UE, and inter-RAT cells if absolute priority information for inter-RAT is available to the UE.

If System Information Block 18 with UTRAN information is provided then the UE shall apply the inter-frequency priority rules below only to UTRAN cells of the selected PLMN or equivalent PLMNs. If System Information Block 18 is not provided, or is provided but contains no information for UTRAN, then the rules below apply for the entire UTRAN RAT.

• • •

If priority information is provided for any inter-frequency layers, cells belonging to inter-frequency layers for which no priority or no threshold is assigned shall not be considered for reselection.

. . .

If none of the inter-frequency layers in UTRAN are provided with both priority and threshold parameters, the cell reselection criteria in subclause 5.2.6.1.4 shall apply for inter-frequency layers in UTRAN.

...

If both criteria in subclause 5.2.6.1.4 and criteria in subclause 5.2.6.1.4a are simultaneously fulfilled, the order in which the reselection criteria are evaluated is left to UE implementation.

...

The UE may apply either priorities broadcast in system information or priorities received through dedicated signalling. The rules regarding which set of priorities shall apply are defined in [4]. UE specific priorities are only valid in the RPLMN, and shall be cleared when the validity time of the UE specific priorities expires, or when leaving the RPLMN. UE specific priorities are not applied in camped on any cell state.

. . .

The following definitions apply for the layers for which Thresh x, high 2 or Thresh x, low 2 are not provided:

- Criterion 1: the SrxlevnonServingCell,x of a cell on an evaluated higher absolute priority layer is greater than Threshx,high during a time interval Treselection;
- $Criterion\ 2: Srxlev Serving Cell < Thresh serving, low or Squal Serving Cell < 0 \ and \ the Srxlev non Serving Cell, x \ of a inter-frequency$

cell on an evaluated equal absolute priority layer is greater than Threshx,low during a time interval Treselection;

- Criterion 3: SrxlevServingCell < Threshserving,low or SqualServingCell < 0 and the SrxlevnonServingCell,x of a cell on an

evaluated lower absolute priority layer is greater than Threshx, low during a time interval Treselection;

The following definitions apply for the layers for which both Threshx,high2 and Threshx,low2 are provided:

- Criterion 4: the SqualnonServingCell, x of a cell on an evaluated higher absolute priority layer is greater than Threshx,high2 during a time interval Treselection;
- $Criterion \ 5: Squal Serving Cell < Thresh serving, low 2 \ and \ the \ Squal non Serving Cell, x \ of \ a \ cell \ on \ an \ evaluated \ lower \ absolute$

priority layer is greater than Threshx,low2 during a time interval Treselection;

Cell reselection to a cell on a higher absolute priority layer than the camped frequency shall be performed if criterion 1 or 4 is fulfilled.

Cell reselection to an inter-frequency cell on an equal absolute priority layer to the camped frequency shall be performed if criterion 2 is fulfilled.

Cell reselection to a cell on a lower absolute priority layer than the camped frequency shall be performed if criterion 3 or 5 is fulfilled.

If more than one cell meets the above criteria, the UE shall reselect the cell with the highest SrxlevnonServingCell,x among

the cells meeting the criteria on the highest absolute priority layer.

The UE shall not perform cell reselection to cells for which the cell selection criterion S is not fulfilled.

The UE shall not perform cell reselection until more than 1 second has elapsed since the UE camped on the current serving cell.

The UE should not perform cell reselection while the UE has an allocated common E-DCH resource.

For UE in RRC connected mode states CELL_PCH or URA_PCH the interval Treselections, PCH applies, if provided in SIB4 (see [4]), while for UE in RRC connected mode state CELL_FACH the interval Treselections, FACH applies, if provided in SIB4 (see [4]).

In all the above criteria the values of Treselections, Treselections, PCH or Treselections, FACH apply for Treselection and are

scaled according to the UE mobility state and target RAT, as specified in 5.2.6.1.1a.

8.6.7.3a UTRA priority info list

If the IE "UTRA priority info list" is received in System Information Block Type 19, the UE shall:

- 1> if the value of the IE "Priority status" in the variable PRIORITY_INFO_LIST equals "dedicated_priority":
 - 2> store the value of the IEs "S_{prioritysearch1}", "S_{prioritysearch2}", "Thresh_{serving,low}" and "Thresh_{serving,low2}" in the IE "UTRA Serving Cell" in the variable PRIORITY_INFO_LIST;
 - 2> if any of the values in any of the occurrences of the IE "Frequency List" in any occurrence of the IE "Priority Info List" within the variable PRIORITY_INFO_LIST is the frequency of the serving cell:
 - 3> store the value of the IE "priority" in the IE "UTRA Serving Cell" in the variable PRIORITY INFO LIST.

2> otherwise:

- 3> clear the value of the IE "priority" in the IE "UTRA Serving Cell" in the variable PRIORITY INFO LIST.
- 2> for each occurrence of the IE "UTRAN FDD Frequencies":
 - 3> if the value of the IE "UARFCN" exists in the list of UTRA FDD priorities in the PRIORITY_INFO_LIST then, in the occurrence of IE "Frequency List" within the variable PRIORITY_INFO_LIST with that value of the IE "UARFCN":
 - 4> store the value of the IEs "Thresh_{x, high}", "Thresh_{x, low}", "Qqualmin FDD" and "Qrxlev min FDD".
- 2> for each occurrence of the IE "UTRAN TDD Frequencies":
 - 3> if the value of the IE "UARFCN" exists in the list of UTRA TDD priorities in the PRIORITY_INFO_LIST then, in the occurrence of IE "Frequency List" within the variable PRIORITY_INFO_LIST with that value of the IE "UARFCN":
 - 4> store the value of the IEs "Thresh_{x, high}", "Thresh_{x, low}" and "Qrxlev minTDD".

1> otherwise:

- 2> update the PRIORITY_INFO_LIST IE "Priority status" to cause "sys_info_priority".
- 2> store information in the IE "UTRA Serving Cell" in the IE "UTRA Serving Cell" within the variable PRIORITY_INFO_LIST;
- 2> for each occurrence of the IE "UTRAN FDD Frequencies":
 - 3> if an entry already exists in the IE "Priority Info List" in the variable PRIORITY_INFO_LIST with the same priority value as indicated in the IE "priority" and has the CHOICE "Radio Access Technology" set to "UTRA FDD":
 - 4> create a new entry in the IE "Frequency List" in that occurrence of IE "Priority Info List", and store the value of "UARFCN" in the IE "UARFCN" in this occurrence of the IE "Frequency List" within the variable PRIORITY_INFO_LIST, and in that new entry:
 - 5> store the IEs "Thresh_{x, high}", "Thresh_{x, low}", "QqualminFDD" and "Qrxlev minFDD".

3> otherwise:

- 4> create a new entry in the IE "Priority Info List" and store the value of "priority" in the IE "priority" in this occurrence of the IE "Priority Info List" within the variable PRIORITY_INFO_LIST, and in that new entry:
 - 5> set the CHOICE "Radio Access Technology" to "UTRA FDD" and store the value of "UARFCN" in the IE "UARFCN" in the first occurrence of the IE "Frequency List";
 - 5> store the IEs "Thresh $_{x, high}$ ", "Thresh $_{x, low}$ ", "QqualminFDD" and "Qrxlev minFDD" in that occurrence of the IE "Frequency List".
- 2> for each occurrence of the IE "UTRAN TDD Frequencies":

- 3> if an entry already exists in the IE "Priority Info List" in the variable PRIORITY_INFO_LIST with the same priority value as indicated in the IE "priority" and has the CHOICE "Radio Access Technology" set to "UTRA TDD":
 - 4> create a new entry in the IE "Frequency List" in that occurrence of IE "Priority Info List", and store the value of "UARFCN" in the IE "UARFCN" in this occurrence of the IE "Frequency List" within the variable PRIORITY_INFO_LIST, and in that new entry:
 - 5> store the IEs "Thresh_{x, high}", "Thresh_{x, low}" and "Qrxlev minTDD".

3> otherwise:

- 4> create a new entry in the IE "Priority Info List" and store the value of "priority" in the IE "priority" in this occurrence of the IE "Priority Info List" within the variable PRIORITY_INFO_LIST, and in that new entry:
 - 5> set the CHOICE "Radio Access Technology" to "UTRA TDD" and store the value of "UARFCN" in the IE "UARFCN" in the first occurrence of the IE "Frequency List";
 - 5> store the IEs "Thresh $_{x, high}$ ", "Thresh $_{x, low}$ " and "Qrxlev minTDD" in that occurrence of the IE "Frequency List".

References

- 1. TS 25.304, 5.2.6.1.2a
- 2. TS 25.304, 5.2.6.1.4a
- 3. TS 25.331, 8.6.7.3a

8.3.1.53.3 Test purpose

- 1. To confirm that if priority information is provided for any inter-frequency layers, cells belonging to inter-frequency layers for which no priority or no threshold is assigned shall not be considered for reselection.
- 2. To confirm that UE performs higher priority cell reselection based on absolute priority in CELL_FACH state, when priority is assigned to the cell.

8.3.1.53.4 Method of test

Initial conditions

System Simulator:

2 cells Cell 1 and Cell 4

Cell5 is a dummy cell referenced in SIB-19

Cell 1 is the active cell with SS downlink transmission power settings according to "T0" in table 8.3.1.53 below.

System Information Block type 11

Use the same message type found in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark		
FACH measurement occasion info			
- FACH Measurement occasion cycle length	3		
coefficient			
 Inter-frequency FDD measurement indicator 	TRUE		
- Inter-frequency TDD measurement indicator	FALSE		
- Inter-RAT measurement indicators	Not Present		

User Equipment:

UE supports FDD and Rel-8 RAT priority cell reselection.

Daramotor

UE is brought to CELL_FACH state on Cell 1 with "T0" in table 8.3.1.53 below.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD.

Test Procedure

Table 8.3.1.53

Call 1

Call 4

SS transmits
"MIB Value
from the original
SIB TYPE 19
5(du mmy cell
exist) as the
cell and cell 1 as
cell (See specific

Parameter	Unit	Cell I		Cell 4		
		ТО	T1	ТО	T1	
UTRARF Channel Number		Mid Range Test Frequency		High Range Test Frequency		
CPICH Ec	dBm/3.84MHz	-60	-60	-90	-65	
Srxlev*	dB	21	21	-9	16	
qRxLevMinFDD	dB	-81		-81		
Note-Srxlev is calculated in UE. During T1, Cell 4 meets the criteria for higher priority cell reselection						

MIB with the Tag" IE different setting and the with cell which does not higher priority the lower priority message

contents). SS notifies the UE by sending a SYSTEM INFORMATION CHANGE INDICATION with the BCCH modification. SS waits for 5s to ensure UE reads all the SIB information.

SS configures downlink transmission power settings according to columns "T1" in the table 8.3.1.53. UE does not reselect to cell 4 although it fulfils the cell reselection criteria, as no priority is assigned to this cell in SIB19. UE should not be sending a CELL UPDATE in this case on cell 4.

SS transmits MIB with the "MIB Value Tag" IE different from the original setting and the SIB TYPE 19 with cell 4 as the higher priority cell and cell 1 as the lower priority cell (See specific message contents). SS not if ies the UE by sending a SYSTEM INFORMATION CHANGE INDICATION with the BCCH modification. SS waits for 5s to ensure UE reads all the SIB information.

UE performs cell reselection to higher priority cell 4 since priority is now assigned to this cell in SIB TYPE 19. UE sends a CELL UPDATE with cause: cell reselection. SS responds with CELL UPDATE CONFIRM. SS releases the RRC connection.

Expected sequence

Step	Dire	Direction Messa	Message	Comments
-	UE	SS		

_		LOVOTEN INCODING	1.004
1	(SYSTEM INFORMATION BLOCK TYPE 19	SS transmits MIB with the "MIB Value Tag" IE different from the original setting and the SIB TYPE 19 with cell 4 as the higher priority cell and cell 1 as the lower priority cell (See specific message contents).
2	+	SYSTEM INFORMATION CHANGE INDICATION	SS notifies the UE by sending a SYSTEM INFOR MATION CHANGE INDICATION with the BCCH modification (See specific message contents) and waits for 5s for UE to read all SIB information.
3	SS		SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.53.
4	UE		UE does not perform cell reselection to cell 4 although it fulfils the higher priority cell reselection criteria, since no priority is assigned to this cell in SIB TYPE 19.
5	←	SYSTEM INFORMATION BLOCK TYPE 19	SS transmits MIB with the "MIB Value Tag" IE different from the original setting and the SIB TYPE 19 with cell 4 as the higher priority cell and cell 1 as the lower priority cell (See specific message contents).
6	+	SYSTEM INFORMATION CHANGE INDICATION	SS notifies the UE by sending a SYSTEM INFORMATION CHANGE INDICATION with the BCCH modification (See specific message contents) and waits for 5s for UE to read all SIB information.
7)	CELL UPDATE	UE performs cell reselection to Higher Priority cell 4 and sends CELL UPDATE on the new serving cell 4 and value "cell reselection" shall be indicated in IE "Cell update cause"
8	+	CELL UPDATE CONFIRM	
9	+	RRC CONNECTION RELEASE	SS releases the RRC connection.
10	→	RRC CONNECTION RELEASE COMPLETE	

Specific Message Contents

The contents of the SYSTEM INFORMATION BLOCK TYPE 19 message in this test case is identical to TS 34.108 clause 6.1.0b, with the following exceptions:

SYSTEM INFORMATION BLOCK TYPE 19 (Step 1)

Information Element	Value/remark	Version
SysInfoType19 ::= SEQUENCE {		REL-8 or later
utra-PriorityInfoList ::= SEQUENCE {		
utra-ServingCell ::= SEQUENCE {		
Priority	[4]	
s-PrioritySearch1	[8 (16 dB)]	
s-PrioritySearch2	Not present	
threshServingLow	[10 (20 dB)]	
}		
utran-FDD-FrequencyList		
uarfcn	Same downlink uarfcn as used for cell 5	
priority	[5]	
threshXhigh	[5 (10 dB)]	
threshXlow	[1 (2 dB)]	
qQualMinFDD	-24 dB	
qRxLevMinFDD	-81 dBm	
utran-TDD-FrequencyList	Not present	
}		
gsm-PriorityInfoList	Not present	
eutra-FrequencyAndPriorityInfoList ::= SEQUENCE (SIZE (1maxNumEUTRAFreqs) OF SEQUENCE {	Not present	

SYSTEM INFORMATION BLOCK TYPE 19 (Step 5)

Information Element	Value/remark	Version
SysInfoType19 ::= SEQUENCE {		REL-8 or later
utra-PriorityInfoList ::= SEQUENCE {		
utra-ServingCell ::= SEQUENCE {		
Priority	[4]	
s-PrioritySearch1	[8 (16 dB)]	
s-PrioritySearch2	Not present	
threshServingLow	[10 (20 dB)]	
}		
utran-FDD-FrequencyList		
uarfcn	Same downlink uarfcn as used for cell 4	
priority	[5]	
threshXhigh	[5 (10 dB)]	
threshXlow	[1 (2 dB)]	
qQualMinFDD	-24 dB	
qRxLevMinFDD	-81 dBm	
utran-TDD-FrequencyList	Not present	
}		
gsm-PriorityInfoList	Not present	
eutra-FrequencyAndPriorityInfoList ::= SEQUENCE (SIZE (1maxNumEUTRAFreqs) OF SEQUENCE {	Not present	

SYSTEM INFORMATION CHANGE INDICATION (Step 2, Step 6)

Information Element	Value/remark
Message Type	
Paging record list	Not Present
BCCH modification info	
MIB Value Tag	Set to (Current MIB value tag + 1)
BCCH Modification time	Not Present

8.3.1.53.5 Test requirements

- 1) At step 4, UE does not perform cell reselection to cell 4, as no priority is assigned to this cell in SIB TYPE 19 at step 1.
- 2) At step 7, UE reselects to higher priority cell 4, as priority is now assigned to this cell and sends a CELL UPDATE with cause: cell reselection.
- 8.3.1.54 Cell Update: Absolute priority based cell reselection when more than one cell meets the criterion.

8.3.1.54.1 Definition and applicability

All UEs which support FDD and Rel 8.

8.3.1.54.2 Conformance requirement

5.2.6.1.2a Measurement rules for inter-frequency and inter-RAT cell reselection when absolute priorities are used

. . .

If the UE has received absolute priority in formation for inter-frequency layers, the UE shall follow these rules:

- The UE shall perform measurements of inter-frequency layers with a priority higher than the priority of the current serving layer.

NOTE: The rate of these measurements may vary depending on whether Srxlev and Squal of the serving cell are above or below Sprioritysearch1 and Sprioritysearch2. This is specified in [10].

. . .

- For inter-frequency layers with a priority equal or lower than the priority of the current serving layer:
- If SrxlevservingCell > Sprioritysearch1 and SqualservingCell > Sprioritysearch2 the UE may choose not to perform measurements of inter-frequency layers of equal or lower priority.
- If SrxlevServingCell <= Sprioritysearch1 or SqualservingCell <= Sprioritysearch2 the UE shall perform measurements of inter-frequency layers of equal or lower priority.
- The UE shall not perform measurements of inter-frequency layers for which the UE has no absolute priority.

. . .

5.2.6.1.4a Absolute priority based criteria for inter-frequency and inter-RAT cell reselection

Absolute priorities of different absolute priority layers may be provided to the UE. The following cell reselection criteria are used for inter-frequency cells if absolute priority information for inter-frequency is available to the UE, and inter-RAT cells if absolute priority information for inter-RAT is available to the UE.

If System Information Block 18 with UTRAN information is provided then the UE shall apply the inter-frequency priority rules below only to UTRAN cells of the selected PLMN or equivalent PLMNs. If System Information Block 18 is not provided, or is provided but contains no information for UTRAN, then the rules below apply for the entire UTRAN RAT.

. . .

If priority information is provided for any inter-frequency layers, cells belonging to inter-frequency layers for which no priority or no threshold is assigned shall not be considered for reselection.

. . .

If none of the inter-frequency layers in UTRAN are provided with both priority and threshold parameters, the cell reselection criteria in subclause 5.2.6.1.4 shall apply for inter-frequency layers in UTRAN.

. . .

If both criteria in subclause 5.2.6.1.4 and criteria in subclause 5.2.6.1.4a are simultaneously fulfilled, the order in which the reselection criteria are evaluated is left to UE implementation.

•••

The UE may apply either priorities broadcast in system information or priorities received through dedicated signalling. The rules regarding which set of priorities shall apply are defined in [4]. UE specific priorities are only valid in the RPLMN, and shall be cleared when the validity time of the UE specific priorities expires, or when leaving the RPLMN. UE specific priorities are not applied in camped on any cell state.

. . .

The following definitions apply for the layers for which Threshx,high2 or Threshx,low2 are not provided:

- Criterion 1: the SrxlevnonServingCell,x of a cell on an evaluated higher absolute priority layer is greater than Threshx,high during a time interval Treselection;
- Criterion 2: SrxlevServingCell < ThreshservingJow or SqualservingCell < 0 and the SrxlevnonServingCell,x of a inter-frequency cell on an evaluated equal absolute priority layer is greater than Threshx,low during a time interval Treselection;
- Criterion 3: SrxlevservingCell < ThreshservingJow or SqualservingCell < 0 and the SrxlevnonServingCell,x of a cell on an evaluated lower absolute priority layer is greater than Thresh $_{x,low}$ during a time interval Treselection; The following definitions apply for the layers for which both Thresh $_{x,high2}$ and Thresh $_{x,low2}$ are provided:
- Criterion 4: the SqualnonServingCell,x of a cell on an evaluated higher absolute priority layer is greater than Threshx,high2 during a time interval Treselection;
- Criterion 5: SqualservingCell < Threshserving,low2 and the SqualnonServingCell,x of a cell on an evaluated lower absolute priority layer is greater than Threshx,low2 during a time interval Treselection;

Cell reselection to a cell on a higher absolute priority layer than the camped frequency shall be performed if criterion 1 or 4 is fulfilled.

Cell reselection to an inter-frequency cell on an equal absolute priority layer to the camped frequency shall be performed if criterion 2 is fulfilled.

Cell reselection to a cell on a lower absolute priority layer than the camped frequency shall be performed if criterion 3 or 5 is fulfilled.

If more than one cell meets the above criteria, the UE shall reselect the cell with the highest Srxlev nonServingCell,x among the cells meeting the criteria on the highest absolute priority layer.

The UE shall not perform cell reselection to cells for which the cell selection criterion S is not fulfilled.

The UE shall not perform cell reselection until more than 1 second has elapsed since the UE camped on the current serving cell.

The UE should not perform cell reselection while the UE has an allocated common E-DCH resource.

For UE in RRC connected mode states CELL_PCH or URA_PCH the interval Treselection s,PCH applies, if provided in SIB4 (see [4]), while for UE in RRC connected mode state CELL_FACH the interval Treselection s,FACH applies, if provided in SIB4 (see [4]).

In all the above criteria the values of Treselections, Treselections, PCH or Treselections, FACH apply for Treselection and are scaled according to the UE mobility state and target RAT, as specified in 5.2.6.1.1a.

8.6.7.3a UTRA priority info list

If the IE "UTRA priority info list" is received in System Information Block Type 19, the UE shall:

- 1> if the value of the IE "Priority status" in the variable PRIORITY_INFO_LIST equals "dedicated_priority":
 - 2> store the value of the IEs "S_{prioritysearch1}", "S_{prioritysearch2}", "Thresh_{serving,low}" and "Thresh_{serving,low2}" in the IE "UTRA Serving Cell" in the variable PRIORITY_INFO_LIST;
 - 2> if any of the values in any of the occurrences of the IE "Frequency List" in any occurrence of the IE "Priority Info List" within the variable PRIORITY_INFO_LIST is the frequency of the serving cell:
 - 3> store the value of the IE "priority" in the IE "UTRA Serving Cell" in the variable PRIORITY_INFO_LIST.
 - 2> otherwise:
 - 3> clear the value of the IE "priority" in the IE "UTRA Serving Cell" in the variable PRIORITY_INFO_LIST.
 - 2> for each occurrence of the IE "UTRAN FDD Frequencies":

- 3> if the value of the IE "UARFCN" exists in the list of UTRA FDD priorities in the PRIORITY_INFO_LIST then, in the occurrence of IE "Frequency List" within the variable PRIORITY_INFO_LIST with that value of the IE "UARFCN":
 - 4> store the value of the IEs "Thresh_{x,high}", "Thresh_{x,low}", "Qqualmin FDD" and "Qrxlev min FDD".
- 2> for each occurrence of the IE "UTRAN TDD Frequencies":
 - 3> if the value of the IE "UARFCN" exists in the list of UTRA TDD priorities in the PRIORITY_INFO_LIST then, in the occurrence of IE "Frequency List" within the variable PRIORITY_INFO_LIST with that value of the IE "UARFCN":
 - 4> store the value of the IEs "Thresh_{x, high}", "Thresh_{x, low}" and "Qrxlev minTDD".

1> otherwise:

- 2> update the PRIORITY_INFO_LIST IE "Priority status" to cause "sys_info_priority".
- 2> store information in the IE "UTRA Serving Cell" in the IE "UTRA Serving Cell" within the variable PRIORITY_INFO_LIST;
- 2> for each occurrence of the IE "UTRAN FDD Frequencies":
 - 3> if an entry already exists in the IE "Priority Info List" in the variable PRIORITY_INFO_LIST with the same priority value as indicated in the IE "priority" and has the CHOICE "Radio Access Technology" set to "UTRA FDD":
 - 4> create a new entry in the IE "Frequency List" in that occurrence of IE "Priority Info List", and store the value of "UARFCN" in the IE "UARFCN" in this occurrence of the IE "Frequency List" within the variable PRIORITY_INFO_LIST, and in that new entry:
 - 5> store the IEs "Thresh_{x, high}", "Thresh_{x, low}", "QqualminFDD" and "Qrxlev minFDD".

3> otherwise:

- 4> create a new entry in the IE "Priority Info List" and store the value of "priority" in the IE "priority" in this occurrence of the IE "Priority Info List" within the variable PRIORITY_INFO_LIST, and in that new entry:
 - 5> set the CHOICE "Radio Access Technology" to "UTRA FDD" and store the value of "UARFCN" in the IE "UARFCN" in the first occurrence of the IE "Frequency List";
 - 5> store the IEs "Thresh $_{x, high}$ ", "Thresh $_{x, low}$ ", "QqualminFDD" and "Qrxlev minFDD" in that occurrence of the IE "Frequency List".
- 2> for each occurrence of the IE "UTRAN TDD Frequencies":
 - 3> if an entry already exists in the IE "Priority Info List" in the variable PRIORITY_INFO_LIST with the same priority value as indicated in the IE "priority" and has the CHOICE "Radio Access Technology" set to "UTRA TDD":
 - 4> create a new entry in the IE "Frequency List" in that occurrence of IE "Priority Info List", and store the value of "UARFCN" in the IE "UARFCN" in this occurrence of the IE "Frequency List" within the variable PRIORITY_INFO_LIST, and in that new entry:
 - 5> store the IEs "Thresh_{x, high}", "Thresh_{x, low}" and "Qrxlev minTDD".

3> otherwise:

- 4> create a new entry in the IE "Priority Info List" and store the value of "priority" in the IE "priority" in this occurrence of the IE "Priority Info List" within the variable PRIORITY_INFO_LIST, and in that new entry:
 - 5> set the CHOICE "Radio Access Technology" to "UTRA TDD" and store the value of "UARFCN" in the IE "UARFCN" in the first occurrence of the IE "Frequency List";

5> store the IEs "Thresh_{x, high}", "Thresh_{x, low}" and "Qrxlev minTDD" in that occurrence of the IE "Frequency List".

References

- 1. TS 25.304, 5.2.6.1.2a
- 2. TS 25.304, 5.2.6.1.4a
- 3. TS 25.331, 8.6.7.3a

8.3.1.54.3 Test purpose

To confirm that if more than one cell meets the absolute priority based cell reselection criteria, the UE shall reselect the cell with the highest SrxlevnonServingCell,x among the cells meeting the criteria on the highest absolute priority layer.

8.3.1.54.4 Method of test

Initial conditions

System Simulator:

- 3 cells Cell 1, Cell 4 and Cell 5
- Cell 1 is the active cell with SS down link transmission power settings according to "T0" in table 8.3.1.54 below.
- All cells to be configured to transmit SIB 19 with default contents as in 34.108.

System Information Block type 11

Use the same message type found in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
FACH measurement occasion info	
 FACH Measurement occasion cycle length 	3
coefficient	
- Inter-frequency FDD measurement indicator	TRUE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present

User Equipment:

- UE supports FDD and Rel-8 RAT priority cell reselection.
- UE is brought to CELL_FA CH state on Cell 1 with "T0" in table 8.3.1.54 below.
- UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD.

Test Procedure

Table 8.3.1.54

Parameter	Unit	Cell 1		Cell 4		Cell 5	
		T0	T1	ТО	T1	T0	T1
UTRA RF Channel		Mid Range Test		Mid Range Test High Range Test		High Range Test	
Number		Frequency		Frequency		Frequency	
CPICH Ec	dBm/3.84MHz	-60	-60	-90	-65	-90	-70
Srxlev*	dB	21	21	-9	16	-9	11
qRxLevMinFDD	dB	-81 -81			31	-8	31
Note-Srxlev is calculated in UE.							
During T1, cell 4 and	During T1, cell 4 and cell 5 meet the higher priority cell reselection criterion.						

SS transmits MIB with the "MIB Value Tag" IE different from the original

setting and the SIB TYPE 19 with cell 4 and cell 5 as the higher priority cells and cell 1 as the lower priority cell (See specific message contents). SS notifies the UE by sending a SYSTEM INFORMATION CHANGE INDICATION with the BCCH modification. SS waits for 5s to ensure UE reads all the SIB information.

SS configures the downlink transmission power settings according to columns "T1" from table 8.3.1.x. UE now performs cell reselection to cell 4 as Srxlev of cell 4 is higher than that of cell 5 even though both the cells fulfil the absolute priority cell reselection criteria defined in SIB TYPE 19. UE sends a CELL UPDATE with cause: cell reselection. SS responds with CELL UPDATE CONFIRM. SS releases the RRC connection.

Expected sequence

Step	Direction	Message	Comments			
Step	UE SS	- iwessage	Comments			
1	- -	SYSTEM INFORMATION BLOCK TYPE 19	SS transmits MIB with the "MIB Value Tag" IE different from the original setting and the SIB TYPE 19 with cell 4 and cell 5 as the higher priority cells and cell 1 as the lower priority cell (See specific message contents).			
2	+	SYSTEM INFORMATION CHANGE INDICATION	SS notifies the UE by sending a SYSTEM INFORMATION CHANGE INDICATION with the BCCH modification (See specific message contents) and waits for 5s for UE to read all SIB information.			
3	SS		SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.54.			
4	→	CELL UPDATE	UE performs cell reselection to Higher Priority cell 4 and sends CELL UPDATE on the new serving cell 4 and value "cell reselection" shall be indicated in IE "Cell updatecause"			
5	+	CELL UPDATE CONFIRM				
6	+	RRC CONNECTION RELEASE	SS releases the RRC connection.			
7)	RRC CONNECTION RELEASE COMPLETE				

Specific Message Contents

The contents of the SYSTEM INFORMATION BLOCK TYPE 19 message in this test case is identical to TS 34.108 clause 6.1.0b, with the following exceptions:

SYSTEM INFORMATION BLOCK TYPE 19 (step 1)

Information Element	Value/remark	Version
SysInfoType19		REL-8 or later
utra-PriorityInfoList		
utra-ServingCell		
Priority	[4]	
s-PrioritySearch1	[8 (16 dB)]	
s-PrioritySearch2	Not present	
threshServingLow	[10 (20 dB)]	
utran-FDD-FrequencyList		
uarfcn	Same downlink uarfcn as used for cell 4	
priority	[5]	
threshXhigh	[5 (10 dB)]	
threshXlow	[1 (2 dB)]	
qQualMinFDD	-24 dB	
qRxLevMinFDD	-81 dBm	
uarfcn	Same downlink uarfcn as used for cell 5	
priority	[5]	
threshXhigh	[5 (10 dB)]	
threshXlow	[1 (2 dB)]	
qQualMinFDD	-24 dB	
qRxLevMinFDD	-81 dBm	
utran-TDD-FrequencyList	Not present	
gsm-PriorityInfoList	Not present	
eutra-FrequencyAndPriorityInfoList	Not present	

SYSTEM INFORMATION CHANGE INDICATION (Step 2)

Information Element	Value/remark
Message Type	
Paging record list	Not Present
BCCH modification info	
MIB Value Tag	Set to (Current MIB value tag + 1)
BCCH Modification time	Not Present

8.3.1.54.5 Test requirements

1) At step 4, UE reselects to higher priority cell 4, and sends a CELL UPDATE with cause: cell reselection.

8.3.2 URA Update

8.3.2.1 URA Update: Change of URA

8.3.2.1.1 Definition

-

8.3.2.1.2 Conformance requirement

A UE in URA_PCH state shall initiate the URA update procedure in the following cases:

1> URA reselection:

2> if the UE detects that the current URA assigned to the UE, stored in the variable URA_IDENTITY, is not present in the list of URA identities in system information block type 2; or

- 2> if the list of URA identities in system information block type 2 is empty; or
- 2> if the system information block type 2 can not be found:

...

3> perform URA update using the cause "change of URA".

When initiating the URA update procedure, the UE shall:

- 1> stop timer T305;
- 1> set the variables PROTOCOL_ERROR_INDICATOR, FAILURE_INDICATOR, UNSUPPORTED_CONFIGURATION and INVALID_CONFIGURATION to FALSE;
- 1> move to CELL_FACH state, if not already in that state;
- 1> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;
- 1> in case of a URA update procedure:
 - 2> set the contents of the URA UPDATE message according to TS 25.331 subclause 8.3.1.3;
 - 2> submit the URA UPDATE message for transmission on the uplink CCCH.
- 1> set counter V302 to 1;
- 1> start timer T302 when the MAC layer indicates success or failure in transmitting the message.

In case of URA update procedure the UE shall transmit a URA UPDATE message.

The UE shall set the IEs in the URA UPDATE message as follows:

- 1> set the IE "U-RNTI" to the value of the variable U_RNTI;
- 1> set the IE "URA update cause" corresponding to which cause as specified in TS 25.331 subclause 8.3.1.2 that is valid when the URA UPDATE message is submitted to lower layers for transmission;
 - 2> if the value of the variable PROTOCOL_ERROR_INDICATOR is TRUE:

...

- 2> if the value of the variable PROTOCOL_ERROR_INDICATOR is FALSE:
 - 3> if the value of the variable INVALID_CONFIGURATION is TRUE:

...

- 3> if the value of the variable INVALID_CONFIGURATION is FALSE:
 - 4> set the IE "Protocol error indicator" to FALSE.

If the URA UPDATE CONFIRM message:

- does not include "CN information elements"; and
- does not include the IE "Ciphering mode info"; and
- does not include the IE "Integrity protection mode info"; and
- does not include the IE "New U-RNTI"; and
- does not include the IE "New C-RNTI":

the UE shall:

1> transmit no response message.

. . .

If any or several of the following conditions are true:

. . .

reselection to another UTRA cell (including the previously serving cell) before completion of the cell update or URA update procedure;

the UE shall:

...

1> check whether it is still in "in service area" (see TS 25.331 subclause 8.5.5.2);

. . .

- 1> in case of a URA update procedure:
 - 2> clear any entry for the URA UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRA NSA CTIONS.

If the UE detects "in service area" if it has not entered idle mode, and:

- 1> if V302 is equal to or smaller than N302, the UE shall:
 - 2> if the UE performed cell re-selection:
 - 3> delete its C-RNTI.

. . .

- 2> in case of a URA update procedure:
 - 3> set the contents of the URA UPDATE message according to TS 25.331 subclauses 8.3.1.3 and 8.5.10;
 - 3> if a URA UPDATE CONFIRM message was received and caused the IE "Reconfiguration" in the variable CIPHERING_STATUS to be set to TRUE and/or the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO is set to TRUE:

...

3> submit the URA UPDATE message for transmission on the uplink CCCH.

. . .

The UE shall:

- 1> if the IE "URA identity" is included in a received message:
 - 2> if the IE "RRC State Indicator" is included and set to "URA_PCH":
 - 3> store this URA identity in the variable URA_IDENTITY;
 - 3> after sending a possible message to UTRAN and entering URA_PCH state as specified elsewhere, read system information block type 2 in the selected cell;
 - 3> if the stored URA identity in the variable URA_IDENTITY is not included in the list of URA identities in System Information Block type 2 in the selected cell, the list of URA identities in system information block type 2 is empty or if the system information block type 2 can not be found, a confirmation error of URA identity list has occurred:
 - 4> if no URA update procedure is ongoing:

...

- 4> if a URA update procedure is ongoing:
 - 5> take actions as specified in TS 25.331 subclause 8.3.1.10.

If the URA UPDATE CONFIRM message causes a confirmation error of URA identity list as specified in TS 25.331 subclause 8.6.2.1 the UE shall:

- 1> check the value of V302; and
- 1> if V302 is smaller or equal than N302:

. . .

- 2> set the IEs in the URA UPDATE message according to TS 25.331 subclause 8.3.1.3;
- 2> submit the URA UPDATE message for transmission on the uplink CCCH;

...

Reference

3GPP TS 25.331 clause 8.3.1.2, 8.3.1.12, 8.6.2.1

8.3.2.1.3 Test purpose

- 1. To confirm that the UE executes an URA update procedure after the successful change of URA.
- 2. To confirm that the UE performs an URA update procedure after it detects that SIB 2 is not broadcasted.
- 3. To confirm that the UE performs an URA update procedure after it detects a confirmation error of URA identity list

8.3.2.1.4 Method of test

Initial Condition

System Simulator: 2 cells: The URA-ID and transmission power for each cell is shown in Table 8.3.2.1, where the initial condition is shown in column "T0".

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108, with URA-ID 1 from the list of URA-ID in cell 1.

Test Procedure

Parameter	Unit				Ce	l 1						Ce	II 2			
		T0	T1	T2	T3	T4	T5 T6	T7	T0	T1	T2	T3	T4	T5	T6	T7
UTRARF																
Channel					Ch	. 1						Ch	. 1			
Number																
CPICH Ec	dBm/3.8	-60	-6	69	-60	-69	-60	-69	-69	-6	0	-69	-60	-6	9	-60
	4MHz															
P-CCPCH	dBm	-60	-6	69	-60	-69	-60	-69	-69	-6	0	-69	-60	-6	9	-60
RSCP																
(TDD)																
URAID		URA:	ID 1			URA-I	D 2	•		UF	RA-ID	1,3 and	d 4	· ·	no S	SIB2

The test begins with the downlink power transmission of both cells set according to 'T0' column in table 8.3.2.1. The UE is in the URA_PCH state and assigned with only 1 URA identity in cell 1: URA-ID 1. The SS then adjusts the transmission power again according to the 'T1' column. This is expected to cause the UE to perform a cell reselection to cell 2. Since URA-ID 1 is also broadcasted in cell 2, the UE shall not perform any URA update procedure due to the change of URA. Starting from time 'T2', SS modifies the system information in cell 1, so that URA-ID 2 is the only URA identity in that cell. Next SS adjusts the transmission power according to 'T3' column. UE shall perform a cell reselection to cell 1 and when the UE finds that its current URA-ID 1 is not in the new broadcasted list of URA-IDs, it moves to CELL_FACH state and transmits a URA UPDATE message on the uplink CCCH. After the SS receives this message, it transmits a URA UPDATE CONFIRM message, which includes the IEs "RRC State Indicator" and IE "URA-ID" to the UE on the downlink CCCH. The IE "RRC State Indicator" is set to "URA_PCH". UE returns to URA_PCH state in cell 1 without sending any uplink response message. Next SS adjusts the transmission power according to 'T4' column. UE shall re-select to cell 2 and transmit a URA UPDATE message to SS. However, SS do not acknowledge but adjusts the transmission power according to 'T5' column. UE shall perform cell re-selection to cell 1 and then send a URA UPDATE message to SS. SS shall transmit URA UPDATE CONFIRM message to UE on the downlink CCCH. Starting from time 'T6', SS modifies the system information in cell 2, so that no SIB 2 is sent in that

cell. Next the SS adjusts the transmission power according to the 'T7' column. The UE shall re-select to cell 2 and send a URA UPDATE message since no SIB2 is broadcasted in this cell. When the UE receives a URA UPDATE CONFIRM message including a URA identity, the UE will again send a URA UPDATE message. When receiving this last message, the SS shall transmit RRC Connection Release message on downlink CCCH to release the RRC connection.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction UE SS	Message	Comment
1	UE 33		The UE is updated with only 1
•			URA identity carried currently
			by cell 1. The starting state of
			the UE is URA_PCH
2			SS set the power transmission
			and system information of all
			cells according to column 'T1'
_			of table 8.3.2.1.
3			UE shall perform a cell reselection but shall not
			transmit URA UPDATE
			message with the update cause
			of "change of URA".
3a			Starting from time 'T2', SS
			modifies the system information
			in cell 1, so that URA-ID 2 is
			the only URA identity in that
			cell
4			SS set the power transmission and system information of all
			cells according to column 'T3'
			of table 8.3.2.1.
5	\rightarrow	URA UPDATE	The UE shall perform a cell
			reselection first and when it
			finds that its current URA-ID 1
			is not in the newly broadcasted
			list of URA-IDs, it shall then
			transmit this message and set
			value "change of URA" into IE
6	←	ILIDA LIDDATE CONCIDM	"URA update cause".
6	_	URA UPDATE CONFIRM	Message comprises IE "RRC State Indicator" set to
			"URA_PCH", and also IE "URA
			Identity" equal to "URA-ID 2".
7			SS set the power transmission
			and system information of all
			cells according to column 'T4'
			of table 8.3.2.1.
8	\rightarrow	URA UPDATE	
9			SS do not respond to the URA
			UPDATE message from UE
			and set the power transmission and system information of all
			cells according to column 'T5'
			of table 8.3.2.1.
10	→	URA UPDATE	
11	←	URA UPDATE CONFIRM	
11a			Starting from time 'T6', SS
			modifies the system information
			in cell 2, so that no SIB 2 is
4.0			sent in that cell.
12			SS set the power transmission
			and system information of all cells according to column 'T7'
			of table 8.3.2.1.
13	\rightarrow	URA UPDATE	The UE shall perform a cell
'3		STOTE STOTE	reselection first and when it
			finds that no URA-ID is
			broadcasted in this cell, it shall
			then transmit this message and
			set value "change of URA" into
			IE "URA update cause".

Step	Direction	Message	Comment
	UE SS		
14	÷		Message comprises IE "RRC State Indicator" set to "URA_PCH", and also IE "URA Identity" equals to "URA-ID 2".
15	\rightarrow	URA UPDATE	
16	+	RRC CONNECTION RELEASE	This message is sent on CCCH.
17	\rightarrow	Void	
18			UE enters idle mode

Specific Message Contents

SYSTEM INFORMATION BLOCK TYPE 2

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exceptions.

Cell 1, time T0-T1:

Information Element	Value/remark	
- URA identity list		
- URA identity	0000 0000 0000 0001B	

Cell 2, time T0-T5:

Information Element	Value/remark
- URA identity list	
- URA identity	0000 0000 0000 0011B
- URA identity	0000 0000 0000 0001B
- URA identity	0000 0000 0000 0100B

Cell 1, time T2-T7 (step 3a):

Information Element	Value/remark
- URA identity list	
- URA identity	0000 0000 0000 0010B

Cell 2, time T6-T7 (step 11a):

No SYSTEM INFORMATION BLOCK TYPE 2 is broadcasted in cell 2 during this time period.

URA UPDATE (Step 5, 8, 10, 13, and 15)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark	
U-RNTI		
- SRNC Identity	Check to see if set to '0000 0000 0001'	
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'	
URA Update Cause	Check to see if set to 'change of URA'	

URA UPDATE CONFIRM (Step 6, 11 and 14)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
URAidentity	URA-ID 2

8.3.2.1.5 Test requirement

After step 2 the UE shall not transmit a URA UPDATE message with update cause "change of URA".

After step 4 the UE shall find that URA-ID 2 is not in its maintained list of URA-IDs. After cell reselection, the UE shall move to CELL_FACH state and transmit a URA UPDATE message setting value "change of URA" into IE "URA update cause".

After step 7 the UE shall find that URA-ID 1 is not in its maintained list of URA-IDs. After cell reselection, the UE shall move to CELL_FACH state and a transmit URA UPDATE message setting value "change of URA" into IE "URA update cause".

After step 9 the UE shall find the new cell and transmit a URA UPDATE message setting value "change of URA" into IE "URA update cause".

After step 12 the UE shall find that no URA-ID is broadcasted in the cell, move to CELL_FACH state and transmit a URA UPDATE message setting the update cause to "change of URA".

After step 14 the UE shall find that no URA-ID is broadcasted in the cell and transmit a URA UPDATE message setting the update cause to "change of URA".

8.3.2.1a URA Update: Change of URA (Cells belong to different frequency bands)

8.3.2.1a.1 Definition

This test case is identical to test case 8.3.2.1 except that the cells belong to different frequency bands.

NOTE: The test case 8.3.2.1 is an intra frequency test.

8.3.2.1a.2 Conformance requirement

Same conformance requirement as in clause 8.3.2.1.2

8.3.2.1a.3 Test purpose

Same test purpose as in clause 8.3.2.1.3 except that the cells belong to different frequency bands

8.3.2.1a.4 Method of test

Initial Condition

Same initial conditions as in clause 8.3.2.1.4 except, Cell 2 is mapped to cell 4 (inter frequency) of 34.108 clause 6.1 and both cells belong to different frequency bands.

System Information Block type 3

Use the same message type found in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/Remarks	
-Qualmin	-16dB	

Related ICS/IXIT statement(s)

- UE supports multiple bands simultaneously yes/no

Test Procedure

Same test procedure as in clause 8.3.2.1.4 with the following exception

After step 8, SS shall send URA UPDATE CONFIRM message to the UE.

NOTE: If the UE supports more than 2 frequency bands, the test may be executed for various band combinations.

Expected sequence

Same expected sequence as in clause 8.3.2.1.4 with the following additional / modified test steps

Step	Direction		Message	Comment
	UE	SS		
8a	-	-	URA UPDATE CONFIRM	
9				SS sets the power transmission and system information of all cells according to column 'T5' of table 8.3.2.1.

Specific Message Contents

Same specific message contents as in clause 8.3.2.1.4 with the following exceptions for the additional test steps:

URA UPDATE CONFIRM (Step 8a)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark	
URA identity	URA-ID 1	

8.3.2.1a.5 Test requirement

Same test requirement as in clause 8.3.2.1.5.

8.3.2.1b URA Update: Change of URA (Cells belong to different frequency bands for LCR TDD)

8.3.2.1b.1 Definition

This test case is identical to test case 8.3.2.1 except that the cells belong to different frequency bands.

NOTE: The test case 8.3.2.1 is an intra frequency test.

8.3.2.1b.2 Conformance requirement

Same conformance requirement as in clause 8.3.2.1.2

8.3.2.1b.3 Test purpose

Same test purpose as in clause 8.3.2.1.3 except that the cells belong to different frequency bands

8.3.2.1b.4 Method of test

Initial Condition

Same initial conditions as in clause 8.3.2.1.4 except, Cell 2 is mapped to cell 4 (inter frequency) of 34.108 clause 6.1 and both cells belong to different frequency bands.

System Information Block type 3

Use the same message type found in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/Remarks
-Qrxle vmin	-115dBm

Related ICS/IXIT statement(s)

- UE supports multiple bands simultaneously yes/no

Test Procedure

Same test procedure as in clause 8.3.2.1.4 with the following exception

After step 8, SS shall send URA UPDATE CONFIRM message to the UE.

NOTE: If the UE supports more than 2 frequency bands, the test may be executed for various band combinations.

Expected sequence

Same expected sequence as in clause 8.3.2.1.4 with the following additional / modified test steps

Step	Direction		Message	Comment
	UE	SS		
8a	-	_	URA UPDATE CONFIRM	
9				SS sets the power transmission and system information of all cells according to column 'T5' of table 8.3.2.1.

Specific Message Contents

Same specific message contents as in clause 8.3.2.1.4

URA UPDATE CONFIRM (Step 8a)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
URAidentity	URA-ID 1

8.3.2.1b.5 Test requirement

Same as in clause 8.3.2.1.5.

8.3.2.2 URA Update: Periodical URA update and Reception of Invalid message

8.3.2.2.1 Definition

8.3.2.2.2 Conformance requirement

A UE in URA_PCH state shall initiate the URA update procedure in the following cases:

1> URA reselection:

1> Periodic URA update:

- 2> if the criteria for performing URA update with the causes as specified above in the current subclause are not met; and
- 2> if the timer T305 expires while the UE is in the service area; and
- 2> if periodic updating has been configured by T305 in the IE "UETimers and constants in connected mode" set to any other value than "infinity":
 - 3> perform URA update using the cause "periodic URA update".

. . .

If the UE receives an URA UPDATE CONFIRM message, which contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows:

1> If V302 is equal to or smaller than N302, the UE shall:

2> set the variable PROTOCOL_ERROR_INDICATOR to TRUE;

. . .

- 2> in case of a URA update procedure:
 - 3> set the contents of the URA UPDATE message according to TS 25.331 subclause 8.3.1.3;
 - 3> submit the URA UPDATE message for transmission on the uplink CCCH.
- 2> increment counter V302:
- 2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.
- 1> if V302 is greater than N302, the UE shall:

. . .

- 2> release all its radio resources;
- 2> enter idle mode;
- 2> Other actions the UE shall perform when entering idle mode from connected mode are specified in TS 25.331 subclause 8.5.2;
- 2> the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.1.2, 8.3.1.7, 8.3.1.11

8.3.2.2.3 Test purpose

- 1. To confirm that the UE executes a URA update procedure after the expiry of timer T305.
- 2. To verify that the UE handles an invalid URA UPDATE CONFIRM message correctly when executing the URA update procedure.

8.3.2.2.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in URA_PCH state. When the UE detects the expiry of timer T305, set according to the value specified in system information, the UE moves to CELL_FACH state and transmits a URA UPDATE message to the SS on the uplink CCCH. The message shall indicate the cause to be "periodic URA update" in IE "URA update cause". SS replies with an invalid URA UPDATE CONFIRM message sent on downlink DCCH, and check to see if the UE handles this event properly. The UE shall attempt to retrans mit the identical URA UPDATE message. After the SS receives the second URA UPDATE message, it transmits a correct URA UPDATE CONFIRM message to the UE on the downlink CCCH. The UE then returns to URA_PCH state. SS calls for generic procedure C.5 to check that UE is in URA_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in URA_PCH state. SS wait until T305 timer has
				expired.
2	→		URA UPDATE	UE shall transmit this message and set value "periodic URA update" into IE "URA update cause".
3	+		URA UPDATE CONFIRM	See specific message content.
4	→		URA UPDATE	UE shall not return to idle mode immediately, but attempts to retransmit this message.
5	\		URA UPDATE CONFIRM	
6			Void	
7	←-	→	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

Specific Message Contents

URA UPDATE (Step 2)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
URA Update Cause	Check to see if set to 'Periodic URA update'

URA UPDATE CONFIRM (Step 3)

Use the URA UPDATE CONFIRM message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark	
Critical extensions	'FF'H	

URA UPDATE (Step 4)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
RRC Transaction identifier	Check to see if set to the value given in URA UPDATE
	CONFIRM message in step 3.
URA Update Cause	Check to see if set to 'Periodic URA update'
Protocol error indicator	TRUE
Protocol error information	
- Protocol error cause	Message extension not comprehended

URA UPDATE CONFIRM (Step 5)

Use the URA UPDATE CONFIRM message as defined in [9] TS 34.108 clause 9.

8.3.2.2.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305, move to CELL_FACH state, and transmit a URA UPDATE message which sets the value "periodical cell update" into IE "URA update cause".

After step 3 the UE shall re-transmit URA UPDATE message with IE "Protocol error indicator" set to "TRUE" and IE "Protocol error information" set to "Message extension not comprehended".

After step 5 the UE shall return to the URA_PCH state.

8.3.2.3 Void

8.3.2.4 URA Update: loss of service after expiry of timers T307 and T305

8.3.2.4.1 Definition

8.3.2.4.2 Conformance requirement

When the T305 expires and the UE detects that it is "out of service area" as specified in TS 25.331 subclause 8.5.5.1, the UE shall

1> start timer T307;

. . .

When the T307 expires, the UE shall:

- 1> move to idle mode;
- 1> release all dedicated resources;
- 1> indicate release (abort) of the established signalling connections (as stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS) and established radio access bearers (as stored in the variable ESTABLISHED_RABS) to upper layers;
- 1> clear the variable ESTABLISHED_SIGNALLING_CONNECTIONS;
- 1> clear the variable ESTABLISHED_RABS;
- 1> perform other actions when entering idle mode from connected mode as specified in TS 25.331 subclause 8.5.2;
- 1> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.1.4.

8.3.2.4.3 Test purpose

1. To confirm that the UE moves to idle mode after the expiry of timer T307, following an expiry of timer T305 when it discovers that it is out of service area.

8.3.2.4.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.2.4

Parameter	Unit	Cell	1
		T0	T1
UTRARF Channel Number		Mid Rang	ge Test
		Frequ	ency
CPICH Ec	dBm/3.84MHz	-60	-80
P-CCPCH RSCP (TDD)	dBm	-60	-80

Table 8.3.2.4 illustrates the downlink power to be applied at various time instants of the test execution. Columns marked "T0" denote the initial conditions.

The UE is in CELL_DCH state. The SS transmits UTRAN MOBILITY INFORMATION message to the UE to change the value of T305. The UE shall respond with UTRAN MOBILITY INFORMATION CONFIRM message. The UE transits to URA_PCH state using the generic procedure P18 in TS 34.108 clause 7.4. The content of the SYSTEM INFORMATION BLOCK TYPE 3 and 4 is modified. The SS waits for reception of a periodical URA update in order to know the timing of the T305 in the UE. The SS replies to the received URA UPDATE message with an URA UPDATE CONFIRM message on the downlink CCCH. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.2.4 so that S<0. When the UE detects the expiry of periodic URA updating timer T305 according to the system information, the UE detects that it is out of service area. After the expiry of timer T307, the UE moves to the idle state. SS configures its downlink transmission power settings according to columns "T0" in table 8.3.2.4 so that S>0. SS waits for 60s and then calls for generic procedure C.1 to check that UE is in idle mode state

Expected sequence

Step	Direc	ction	Message	Comment
	UE	SS		
0				Initially, the UE is in CELL_DCH state.
0a	+	-	UTRAN MOBILITY INFORMATION	Include new timers value (see specific
				message contents).
0b	-	>	UTRAN MOBILITY INFORMATION CONFIRM	
0c	←	\rightarrow	SS executes procedure P18 (clause	Transit the UE to URA_PCH state. URA-ID
			7.4.2.7.2) specified in TS 34.108.	1 shall be in the list of URA-ID.
1			Void	
1a	+	-	MASTER INFORMATION BLOCK	SS changes the contents of
			SYSTEM INFORMATION BLOCK TYPE 3	MASTER INFORMATION BLOCK and
			and 4	SYSTEM INFORMATION BLOCK (see
				specific message contents).
1b	•	(PAGING TYPE 1	Include IE "BCCH modification info"
1c	=	>	URA UPDATE	IE "URA update cause" shall be set to "periodical URA update".
1d	+	_	URA UPDATE CONFIRM	

Step	Step Direction		Message	Comment
	UE	SS		
2a				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.2.4 so that the UE detects that it is out of service area.
2b				SS waits (T305+T307) +10% for UE to enter idle mode.
3				Upon the expiry of timer T305, the UE shall search for cell to camp and triggers T307 timer. SS listens to the uplink CCCH to verify that URAUPDATE message is not transmitted.
4				After the expiry of timer T307, the UE enters idle state. SS configures its downlink transmission power settings according to columns "T0" in table 8.3.2.4 so that the cell is suitable for camping. SS waits for 60s.
5	+	·→	CALL C.1	If the test result of C.1 indicates that UE is in idle mode state, the test passes, otherwise it fails.

Specific Message Contents

MASTER INFORMATION BLOCK (Step 1a)

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark
MIB Value Tag	A valid MIB value tag as defined in TS 25.331 that is
	different from the previous value.
Scheduling information	 Scheduling info for System Information Type 1
- PLMN Value tag	A valid PLMN value tag as defined in TS 25.331 that is
· ·	different from the previous value.
Scheduling information	- Scheduling info for System Information Type 3
- Cell Value tag	A valid Cell value tag as defined in TS 25.331 that is
	different from the previous value.
Scheduling information	- Scheduling info for System Information Type 4
- Cell Value tag	A valid Cell value tag as defined in TS 25.331 that is
· ·	different from the previous value.

SYSTEM INFORMATION BLOCK TYPE 3 and 4 (Step 1a)

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark	
Qrxle vmin	-70	

PAGING TYPE 1 (Step 1b)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Paging record list	Not Present
BCCH modification info	
MIB Value tag	A valid Cell value tag as defined in TS 25.331 that is different from the previous value.
BCCH modification time	Not present

UTRAN MOBILITY INFORMATION (Step 0a)

Use the same message sub-type found in clause 9 of TS 34.108, with the following exception.

Information Element	Value/remark	
- T305	5 minutes	

UTRAN MOBILITY INFORMATION CONFIRM (Step 0b)

Use the same message sub-type found in clause 9 of TS 34.108.

URA UPDATE (Step 1c)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
URA Update Cause	Check to see if set to "periodical URA update"

8.3.2.4.5 Test requirement

After step 0a the UE shall respond with UTRAN MOBILITY INFORMATION CONFIRM message.

After step 2 the UE shall not transmit any URA UPDATE message on the uplink CCCH.

8.3.2.5 URA Update: Success after Confirmation error of URA-ID list

8.3.2.5.1 Definition

8.3.2.5.2 Conformance requirement

The UE shall:

- 1> if the IE "URA identity" is included in a received message:
 - 2> if the IE "RRC State Indicator" is included and set to "URA_PCH":
 - 3> store this URA identity in the variable URA_IDENTITY;
 - 3> after sending a possible message to UTRAN and entering URA_PCH state as specified elsewhere, read system information block type 2 in the selected cell;
 - 3> if the stored URA identity in the variable URA_IDENTITY is not included in the list of URA identities in System Information Block type 2 in the selected cell, the list of URA identities in system information block type 2 is empty or if the system information block type 2 can not be found, a confirmation error of URA identity list has occurred:
 - 4> if no URA update procedure is ongoing:

• • •

- 4> if a URA update procedure is ongoing:
 - 5> take actions as specified in TS 25.331 subclause 8.3.1.10.

If the URA UPDATE CONFIRM message causes a confirmation error of URA identity list as specified in TS 25.331 subclause 8.6.2.1 the UE shall:

- 1> check the value of V302; and
- 1> if V302 is smaller or equal than N302:
 - 2> set the IEs in the URA UPDATE message according to TS 25.331 subclause 8.3.1.3;
 - 2> submit the URA UPDATE message for transmission on the uplink CCCH;

- 2> increment counter V302;
- 2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.
- 1> if V302 is greater than N302:

...

Reference

3GPP TS 25.331 clause 8.3.1.10, 8.6.2.1.

8.3.2.5.3

Test purpose

 To confirm that the UE retries to perform the URA update procedure following a confirmation error of URA-ID list.

8.3.2.5.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108.

Test Procedure

At the start of this test, the UE is brought to URA_PCH state and assigned a URA with URA-ID 1. When the UE detects the expiry of timer T305 according to the system information, the UE moves to CELL_FACH state and transmits a URA UPDATE message to the SS on the uplink CCCH. The reason for performing URA updating shall be set to "periodic URA update" in IE "URA update cause". After the SS receives this message, it transmits a URA UPDATE CONFIRM message which includes the IE "RRC state indicator" set to "URA_PCH" and IE "URA identity" set to "URA-ID 2" to the UE on the downlink DCCH. The UE finds that the indicated URA-ID is not included in the list of URA-IDs broadcasted in system information block type 2, and then the UE shall retry to transmit a URA UPDATE message, with "change of URA" set in IE "URA update cause", for a confirmation error of URA-ID list. SS continue to send the same URA UPDATE CONFIRM message on the downlink DCCH until N302+1 URA UPDATE messages have been received. Then SS transmits a URA UPDATE CONFIRM message to the UE which includes IE "URA Identity" set to "URA-ID 1" and IE "new U-RNTI" on the downlink DCCH. The UE shall find this URA-ID in its URA-ID list and transmits an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH.

Expected sequence

Step	Direction	Message	Comment
-	UE SS	1	
1			The UE is URA_PCH state. SS initializes counter K to 0
2	→	URA UPDATE	This message shall contain value "periodic URA update" set in IE "URA update cause" after expiry of timer T305.
3		Void	
4	+	URA UPDATE CONFIRM	SS transmits this message, setting the value "URA-ID 2" to IE "URA Identity", and including "New U_RNTI".
4a	\rightarrow	UTRAN MOBILITY INFORMATION CONFIRM	
5	→	URA UPDATE	This message shall contain value "change of URA" set in IE "URA update cause"
6			SS increments K by 1. If K is not greater than N302, proceed to step 7. If K is greater than N302, SS proceeds to step 8.
7	+	URA UPDATE CONFIRM	SS transmits this message, setting the value "URA-ID 2" to IE "URA Identity"", and including "New U_RNTI" And then returns to step 4a.
8	+	URA UPDATE CONFIRM	SS transmits this message, setting IE "URA Identity" to "URA-ID 1". This message also comprises IE "New U-RNTI".
9	\rightarrow	UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

URA UPDATE (Step 2)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
URA Update Cause	Check to see if set to 'Periodic URA update'

URA UPDATE CONFIRM (Step 4 &7)

Use the same message sub-type as specified in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New U-RNTI	
-SRNC Identity	'0000 0000 0001'
-S-RNTI	'0000 0000 0000 0000 0101'
New C-RNTI	'1010 1010 1010 1010' B
URA Identity	2

URA UPDATE (Step 5)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0101'
URA Update Cause	Check to see if set to 'URA update cause'

URA UPDATE CONFIRM (Step 8)

Use the same message sub-type as specified in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New U-RNTI	
-SRNC Identity	'0000 0000 0001'
-S-RNTI	'0000 0000 0000 0101 0101'
New C-RNTI	'1010 1010 1010 0000' B
URA Identity	1

UTRAN MOBILITY INFORMATION CONFIRM (Step 4a & 9)

Only the message type IE in this message is checked.

8.3.2.5.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305, move to CELL_FACH state, transmit a URA UPDATE message on the uplink CCCH and set value "periodic URA update" into IE "URA update cause".

After step 4 the UE shall re-transmit a URA UPDATE message with IE "URA update cause" set to "change of URA" after it detects a confirmation error of URA-ID list for the URA-ID indicated in the URA UPDATE CONFIRM message. A total of (N302+1) URA UPDATE messages shall be received by the SS.

After step 8 the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH.

8.3.2.6 URA Update: Failure (V302 is greater than N302: Confirmation error of URA-ID list)

8.3.2.6.1 Definition

8.3.2.6.2 Conformance requirement

The UE shall:

- 1> if the IE "URA identity" is included in a received message:
 - 2> if the IE "RRC State Indicator" is included and set to "URA_PCH":
 - 3> store this URA identity in the variable URA_IDENTITY;
 - 3> after sending a possible message to UTRAN and entering URA_PCH state as specified elsewhere, read system information block type 2 in the selected cell;
 - 3> if the stored URA identity in the variable URA_IDENTITY is not included in the list of URA identities in System Information Block type 2 in the selected cell, the list of URA identities in system information block type 2 is empty or if the system information block type 2 can not be found, a confirmation error of URA identity list has occurred:
 - 4> if no URA update procedure is ongoing:

. . .

4> if a URA update procedure is ongoing:

5> take actions as specified in TS 25.331 subclause 8.3.1.10.

If the URA UPDATE CONFIRM message causes a confirmation error of URA identity list as specified in TS 25.331 subclause 8.6.2.1 the UE shall:

- 1> check the value of V302; and
- 1> if V302 is smaller or equal than N302:
 - 2> set the IEs in the URA UPDATE message according to TS 25.331 subclause 8.3.1.3;
 - 2> submit the URA UPDATE message for transmission on the uplink CCCH;
 - 2> increment counter V302;
 - 2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.
- 1> if V302 is greater than N302:
 - 2> release all its radio resources;
 - 2> enter idle mode;
 - 2> perform the actions specified in TS 25.331 subclause 8.5.2 when entering idle mode from connected mode;
 - 2> the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.1.10, 8.6.2.1

8.3.2.6.3

Test purpose

1. To confirm that the UE make repeated attempts to perform the URA update procedure following a detection of a confirmation error of URA -ID list. It then moves to idle state when internal counter V302 is greater than N302.

8.3.2.6.4

Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is originally in URA_PCH state updated with URA-ID 1. When the UE detects the expiry of timer T305 according to the system information, the UE shall move to CELL_FACH state and transmit a URA UPDATE message to the SS on the uplink CCCH. In this message, the value "periodic URA update" shall be set in IE "URA update cause". After the SS receives this message, it transmits a URA UPDATE CONFIRM message which includes the IE "RRC state indicator" set to "URA_PCH" and indicating the IE "URA Identity" to be "URA-ID 2" to the UE on the downlink CCCH. The UE finds that the indicated URA-ID is not included in the list of URA-IDs broadcasted. Then the UE shall retry to transmit a URA UPDATE message, with "change of URA" set in IE "URA update cause", for N302 times and each time the SS responds with the URA UPDATE CONFIRM message similar to the previous one on the downlink CCCH. After that, the UE shall enter idle state. SS waits for 5s and then calls for generic procedure C.1 to check that UE is in idle mode state.

Expected sequence

Step	Direction	Message	Comment
-	UE SS		
1			The UE is in URA_PCH state at
			the start of the test. SS sets
			internal counter K to 0.
2	\rightarrow	URA UPDATE	The message shall indicate
			"periodic URA update" in IE
			"URA update cause". This
			message is sent following the expiry of timer T305.
			SS increments counter K by 1.
3			SS increments K by 1.
4	←	URA UPDATE CONFIRM	The SS transmits this message
7	`	OKAOI DAIL CONTIKW	and set IE "URA Identity" to
			"URA-ID 2".
5	→	URA UPDATE	The message shall indicate
		5 5	"change of URA" in IE "URA
			update cause". This message
			is sent following the expiry of
			timer T305.
			SS increments counter K by 1.
6	←	URA UPDATE CONFIRM	The SS transmits this message
			and set IE "URA Identity" to
			"URA-ID 2". When K is greater
			than N302 proceeds to step 7, else executes step 5.
7		Void	The UE shall enter idle state.
<i>'</i>		Void	SS waits for 5s.
8		Void	Se wante for se.
9		Void	
10	$\leftarrow \rightarrow$	CALL C.1	If the test result of C.1 indicates
			that UE is in idle mode state,
			the test passes, otherwise it
			fails.

Specific Message Contents

URA UPDATE CONFIRM (Step 3)

Use the same message sub-type defined in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark	
URA Identity	2	

8.3.2.6.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305, then it shall move to CELL_FACH state and transmit a URA UPDATE message on the uplink CCCH, setting value "periodic URA update" in IE "URA update cause".

After step 6 and if K is not greater than N302, the UE shall retry to transmit a URA UPDATE message, setting value "periodic URA update" in IE "URA update cause" after it detects the confirmation error of URA-ID list for the URA-ID included in the URA UPDATE CONFIRM message.

After step 6 and if K is greater than N302, the UE shall stop transmitting URA UPDATE message and then enters idle state.

8.3.2.7 URA Update: Success after T302 timeout

8.3.2.7.1 Definition

8.3.2.7.2 Conformance requirement

If any or several of the following conditions are true:

- expiry of timer T302;

. . .

the UE shall:

- 1> stop T302 if it is running;
- 1> check whether it is still in "in service area";
- 1> in case of a URA update procedure:
 - 2> clear any entry for the URA UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRA NSA CTIONS.

If the UE detects "in service area" if it has not entered idle mode, and:

- 1> if V302 is equal to or smaller than N302, the UE shall:
 - 2> in case of a URA update procedure:
 - 3> set the contents of the URA UPDATE message according to TS 25.331 subclause 8.3.1.3;
 - 3> submit the URA UPDATE message for transmission on the uplink CCCH.
 - 2> increment counter V302;
 - 2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.
- 1> if V302 is greater than N302, the UE shall:

. . .

Reference

3GPP TS 25.331 clause 8.3.1.12.

8.3.2.7.3 Test purpose

1. To confirm that the UE attempts to repeat the URA update procedure upon the expiry of timer T302.

8.3.2.7.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in URA_PCH. When the UE detects the expiry of timer T305 according to the system information, the UE moves to CELL_FACH state and transmits a URA UPDATE message to the SS on the uplink CCCH, setting value "periodic URA update" into IE "URA update cause". The SS ignores this message. The UE shall then retry to transmit a URA UPDATE message after the expiry of timer T302, until a total of N302+1 URA UPDATE messages have been received by the SS. SS transmits a URA UPDATE CONFIRM message to the UE on the downlink CCCH to end the procedure.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in URA_PCH state at
				the beginning of test. SS
				initializes counter K to 0
			LIDA LIDDATE	SS waits for T305 to expire.
2	\rightarrow	•	URA UPDATE	This message shall contain value "periodic URA update" in
				IE "URA update cause" sent
				upon the expiry of timer T305.
3				SS shall not reply. Increment K
				by 1.
4)	·	URA UPDATE	This message shall contain
				value "periodic URA update" in
				IE "URA update cause" sent
				upon the expiry of timer T302.
5				SS shall not reply. SS
				increments K by 1. If K is not
				greater than N302, proceed to
				step 4. If K is greater than
6	-	_	URA UPDATE CONFIRM	N302, SS proceeds to step 6.
7	-		UTRAN MOBILITY INFORMATION	
/	7		CONFIRM	
8	← -	\rightarrow	CALL C.5	If the test result of C.5 indicates
				that UE is in URA_PCH state,
				the test passes, otherwise it fails.

Specific Message Contents

URA UPDATE CONFIRM (Step 6)

Use the same message sub-type as in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New U-RNTI	
SRNC identity	0000 0000 0001 B
S-RNTI	0000 0000 0000 1111 1111 B
New C-RNTI	'1010 1010 1010 1010' B

8.3.2.7.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305, then it shall move to CELL_FACH state and transmit a URA UPDATE message on the uplink CCCH. The updating cause shall be set to "periodic URA update" in IE "URA update cause".

After step 3 the UE shall retry to transmit a URA UPDATE message at the expiry of timer T302, until a total of N302+1 URA UPDATE messages have been received by the SS.

After step 6, the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH.

8.3.2.8 Void

8.3.2.9 URA Update: Failure (UTRAN initiate an RRC connection release procedure on CCCH)

8.3.2.9.1 Definition

8.3.2.9.2 Conformance requirement

When the UTRAN receives a CELL UPDATE/URA UPDATE message, the UTRAN should:

1> ... or

1> initiate an RRC connection release procedure (see subclause 8.1.4 in TS 25.331) by transmitting an RRC CONNECTION RELEASE message on the downlink CCCH.

. . .

The UE shall receive and act on an RRC CONNECTION RELEASE message in states CELL_DCH and CELL_FACH. Furthermore this procedure can interrupt any ongoing procedures with the UE in the above listed states.

When the UE receives the first RRC CONNECTION RELEASE message; and

- 1> if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or
- 1> if the message is received on DCCH:

the UE shall:

. . .

- 1> in state CELL_FACH:
 - 2> if the RRC CONNECTION RELEASE message was received on the CCCH:

3> ...

3> enter idle mode;

Reference

3GPP TS 25.331 clause 8.3.1.5, 8.1.4.3

8.3.2.9.3 Test purpose

To confirm that the UE moves to idle state upon the reception of RRC CONNECTION RELEASE message on downlink CCCH during a URA update procedure.

8.3.2.9.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in URA_PCH state. When the UE detects the expiry of periodic URA updating timer T305, the UE moves to CELL_FACH state and transmits a URA UPDATE message to the SS on the uplink CCCH. The message shall indicate the cause to be "periodic URA update" in IE "URA update cause". The SS transmits RRC CONNECTION RELEASE message on downlink CCCH. The UE shall return to idle mode after release of all current signalling flows and radio access bearers. SS calls for generic procedure C.1 to check that UE is in Idle Mode state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the URA_PCH state. SS wait until T305 timer has expired.
2)		URA UPDATE	UE shall transmit this message and set value "periodic URA update" into IE "URA update cause".
3	+	-	RRC CONNECTION RELEASE	SS transmits RRC CONNECTION RELEASE message to the UE on the downlink CCCH.
4				The UE releases L2 signalling radio bearer and radio resources then the UE goes to idle mode.
5	←-)	CALL C.1	If the test result of C.1 indicates that UE is in Idle Mode state, the test passes, otherwise it fails.

Specific Message Contents

URA UPDATE (Step 2)

The same message found in Clause 9 of TS 34.108 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
URA Update Cause	Check to see if set to 'Periodic URA update'

RRC CONNECTION RELEASE (Step 3)

Use the same message sub-type found in Clause 9 of TS 34.108.

8.3.2.9.5 Test requirement

After step 1 the UE shall transmit a URA UPDATE message on the uplink CCCH and set value "periodic URA update" into IE "Cell update cause".

After step 3 the UE shall enter idle state.

8.3.2.10 URA Update: Reception of URA UPDATE CONFIRM message that causes invalid configuration

8.3.2.10.1 Definition

8.3.2.10.2 Conformance Requirement

If the variable INVALID_CONFIGURATION is set to TRUE, the UE shall:

- 1> if V302 is equal to or smaller than N302:
 - 2> in case of a URA update procedure:
 - 3> set the contents of the URA UPDATE message according to TS 25.331 subclause 8.3.1.3;
 - 3> submit the URA UPDATE message for transmission on the uplink CCCH.
 - 2> increment counter V302;
 - 2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.
- 1> if V302 is greater than N302:

...

Reference

3GPP TS 25.331 clause 8.3.1.9

8.3.2.10.3 Test Purpose

1. To confirm that the UE retransmits a URA UPDATE message when it receives a URA UPDATE CONFIRM message that will trigger an invalid configuration in the UE, if the number of retransmissions has not reached the maximum allowed value.

8.3.2.10.4 Method of Test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in URA_PCH state. When the UE detects the expiry of timer T305 according to the system information, the UE moves to CELL_FACH state and transmits a URA UPDATE message to the SS on the uplink CCCH. This message shall contain value "periodical URA update" in IE "URA update cause". Upon receiving such a message, the SS replies with a URA UPDATE CONFIRM message with IE "RRC State Indicator" set to "CELL_DCH" on the downlink CCCH. The UE shall detect its variable "invalid configuration" is set and re-transmit URA UPDATE message. SS then transmit a valid URA UPDATE CONFIRM UPDATE message on the downlink CCCH to end the procedure.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the URA_PCH state. SS wait until T305 timer has expired.
2	7	•	URA UPDATE	UE shall transmit this message and set value "periodic URA update" into IE "URA update cause".
3	-	-	URA UPDATE CONFIRM	
4	->	•		IE "Protocol error indicator" is set to TRUE and IE "Protocol error information" is set to "Information element value not comprehended".
5			Void	
6			Void	
7	-	-	URA UPDATE CONFIRM	

URA UPDATE (Step 2)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
URA Update Cause	Check to see if set to 'Periodic URA update'

URA UPDATE (Step 4)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark				
U-RNTI					
- SRNC Identity	Check to see if set to '0000 0000 0001'				
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'				
URA Update Cause	Check to see if set to 'Periodic URA update'				
Protocol error indicator	TRUE				
Protocol error information					
- Protocol error cause	Information element value not comprehended				

URA UPDATE CONFIRM (Step 3)

Use the same message sub-type found in TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
RRC State Indicator	CELL_DCH

8.3.2.10.5 Test Requirement

After step 1 the UE shall detect the expiry of timer T305, then it shall move to CELL_FACH state and transmit a URA UPDATE message on the uplink CCCH, setting value "periodic URA update" into IE "URA update cause".

After step 3 the UE shall transmit a URA UPDATE message on the uplink CCCH, setting value 'TRUE" in IE "URA update cause" and value "Information element value not comprehended" in "Protocol error cause".

8.3.2.11 URA Update: Cell reselection to cell of another PLMN belonging to the equivalent PLMN list

8.3.2.11.1 Definition

8.3.2.11.2 Conformance requirement

- 1. A UE in URA_PCH state shall initiate the URA update procedure in the following cases:
 - URA reselection:
 - if the UE detects that the current URA assigned to the UE, stored in the variable URA_IDENTITY, is not present in the list of URA identities in system information block type 2; or
 - if the list of URA identities in system information block type 2 is empty; or
 - if the system information block type 2 can not be found:
 - perform URA update using the cause "change of URA".
- 2. A "suitable cell" is a cell on which the UE may camp on to obtain normal service. Such a cell shall fulfil all the following requirements.
 - The cell is part of the selected PLMN or, of a PLMN considered as equivalent by the UE according to the information provided by the NAS.
 - The cell is not barred, see clause 5.3.1.1 in TS 25.304.
 - The cell is not part of the list of "forbidden LAs for roa ming" TS 22.011
 - The cell selection criteria are fulfilled, see clause 5.2.3.1.2 in TS 25.304.
- 3. The Mobile Equipment shall store a list of "equivalent PLMNs". This list is replaced or deleted at the end of each location update procedure, routing area update procedure and GPRS attach procedure. The stored list consists of a list of equivalent PLMNs as downloaded by the network plus the PLMN code of the network that downloaded the list. The stored list shall not be deleted when the MS is switched off. The stored list shall be deleted if the SIM is removed. The maximum number of possible entries in the stored list is six.

Reference

3GPP TS 25.331 clause 8.3.1.2.

3GPP TS 25.304 clause 4.3.

3GPP TS 24.008 clause 4.4.1.

8.3.2.11.3 Test purpose

1. To confirm that the UE executes a URA update procedure after a successful reselection of another UTRA cell with a URA identity that is not the URA of the UE and with a PLMN identity different from the original cell but with a PLMN that is part of the equivalent PLMN list in the UE.

NOTE: Verifies conformance requirements 1, 2 and 3.

2. To confirm that the UE refrains from executing a URA update procedure to a better UTRA cell with another PLMN identity when that PLMN identity is not part of the equivalent PLMN list in the UE.

NOTE: Test case in 8.3.2.1 is a test where the UE reselects to a cell with the same PLMN identity as the registered PLMN.

8.3.2.11.4 Method of test

Initial Condition

System Simulator: 3 cells - Cell 1 is active, with the downlink transmission power shown in column marked "T0" in table 8.3.2.1-1, while cell 4 and cell 7 is inactive.

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

UE: Shall have stored equivalent PLMN list containing PLMN-1 and PLMN-2. The equivalent PLMN list stored in the UE shall not contain PLMN-3. The UE shall also have stored the URA identity URA-ID 1 from the list of URA-IDs in cell 1.

Test Procedure

Table 8.3.2.11-1

Parameter	Unit	Unit Cell 1			Cell 4			Cell 7		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
UTRA RF Channel		Mid Range Test			High Range Test			Low Range Test Frequency		
Number		F	requenc	y	Frequency					
PLMN identity			PLMN-1		PLMN-2			PLMN-3		
URA identity		URA-ID 1			URA-ID 2			URA-ID 3		
CPICH Ec (FDD)	dBm/3. 84MHz	-58	-69	-69	Cell 4 is switched off	-58	-58	Cell 7 is switched off	Cell 7 is switched off	-47
P-CCPCH RSCP (TDD)	dBm	-62	-68	-68	Cell 4 is switched off	-62	-68	Cell 7 is switched off	Cell 7 is switched off	-62

Table 8.3.2.11-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" and "T2" are to be applied subsequently.

- a) At T0, the SS activates Cell 1.
- b) At T1, the SS activates Cell 4, and monitors Cell 4 for received messages from UE.
- c) UE re-selects to Cell 4, and sends a URA UPDATE message. The SS replies with an URA UPDATE CONFIRM message on the downlink CCCH.
- d) At T2, the SS activates Cell 7, and monitors Cell 7 for received messages from UE.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS	1	
1		•		UE is in URA_PCH state,
				camped on Cell 1 and registered
				to PLMN1. SS applies downlink
				transmission power settings
				according to values in column
				"T0" of table 8.3.2.11-1.
1a	(€	-	MASTER INFORMATION BLOCK	Modified SIB 3 and MIB
			SYSTEM INFORMATION BLOCK TYPE 3	
1b	+		PAGING TYPE 1	Include IE
				"BCCH modification info"
1c				Wait 5 seconds to allow UE to
				read new system information
1d				SS applies downlink transmission
				power settings according to
				values in column "T1" of table
	ļ.,,		LIDA LIDDATE	8.3.2.11-1.
2	-	>	URA UPDATE	The UE moves to CELL_FACH
				state and transmits this message in Cell 4.
				The value "change of URA" shall
				be set in IE "URA update cause".
3		_	URA UPDATE CONFIRM	The value "URA_PCH" set in IE
3	`	•	OKAOI DAIL CONTIKW	"RRC State Indicator".
4				SS applies downlink transmission
"				power settings according to
				values in column "T2" of table
				8.3.2.11-1.
5				SS monitors that the UE does not
				send a URA UPDATE message
				or any other message.
6	←	\rightarrow	CALL C.5	If the test result of C.5 indicates
				that UE is in URA_PCH state, the
				test passes, otherwise it fails.

Specific Message Contents

MASTER INFORMATION BLOCK (Step 1a)

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark
	Set to (Current MIB value tag + 1)
SIB 3 Cell Value tag	Set to (Current SIB3 value tag + 1)

System Information Block type 3 (Step 1a)

Use the same message type found in clause 6.1.0b of TS 34.108, with the following exceptions:

- Qqualmin -16

PAGING TYPE 1 (Step 1b)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Paging record list	Not Present
BCCH modification info	
MIB Value tag	Set to latest value transmitted in MIB
BCCH modification time	Not present

URA UPDATE (Step 2)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:.

Information Element	Value/remark	
URA Update Cause	Check to see if set to 'change of URA'	

URA UPDATE CONFIRM (Step 3)

Use the same message sub-type found in TS 34.108 clause 9.

8.3.2.11.5 Test requirement

After Step 1d the UE shall send a URA UPATE message.

After Step 4 the UE shall refrain from sending a URA update (or any other message).

8.3.2.12 Restricted cell reselection to a cell belonging to forbidden LA list (URA_PCH)

8.3.2.12.1 Definition

8.3.2.12.2 Conformance requirement

- 1. A UE in URA_PCH state shall initiate the URA update procedure in the following cases:
 - URA reselection:
 - if the UE detects that the current URA assigned to the UE, stored in the variable URA_IDENTITY, is not present in the list of URA identities in system information block type 2; or
 - if the list of URA identities in system information block type 2 is empty; or
 - if the system information block type 2 can not be found:
 - perform URA update using the cause "change of URA".
- 2. A "suitable cell" is a cell on which the UE may camp on to obtain normal service. Such a cell shall fulfil all the following requirements.
 - The cell is part of the selected PLMN or, of a PLMN considered as equivalent by the UE according to the information provided by the NAS.
 - The cell is not barred, see clause 5.3.1 in TS 25.304.
 - The cell is not part of the list of "forbidden LAs for roaming" in TS 22.011.
 - The cell selection criteria are fulfilled, see clause 5.2.3.1.2 in TS 25.304.
- 3. The Mobile Equipment shall contain a list of "forbidden location areas for roaming", as well as a list of "forbidden location areas for regional provision of service". These lists shall be erased when the MS is switched off or when the SIM is removed, and periodically (with period in the range 12 to 24 hours). The location area identification received on the BCCH that triggered the location updating request shall be added to the suitable list whenever a location update reject message is received with the cause "Roaming not allowed in this location area" or with the cause "Location Area not allowed". The lists shall accommodate each 10 or more location area identifications. When the list is full and a new entry has to be inserted, the oldest entry shall be deleted.

Reference

3GPP TS 25.331 clause 8.3.1.2.

3GPP TS 25.304 clause 4.3.

3GPP TS 24.008 clause 4.4.1.

8.3.2.12.3 Test purpose

1. To confirm that the UE refrains from selecting a UTRA cell and performing a URA update if that cell has a LA identity that is part of the list of LAs stored in the UE as "forbidden location areas for roaming".

NOTE: Test case in 8.3.2.1 is a test where the UE reselects to a cell with the same LA identity as the LA identity in the original cell.

8.3.2.12.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 is active, with the downlink transmission power shown in column marked "T0" in table 8.3.2.12-1, while cell 4 is inactive.

Qqualmin value for Cell 1 is set to -16 dB in SIB3 and SIB4 (FDD only) (see specific message contents).

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

UE: Shall have stored LA-ID 2 into the list of "forbidden location areas for roaming". The UE shall also have stored the URA identity URA-ID 1 from the list of URA-IDs in cell 1.

Test Procedure

Table 8.3.2.12-1

Parameter	Unit Cell 1		II 1	Cell 4	
		T0	T1	T0	T1
UTRARF Channel Number		Mid Rai	nge Test	High Ra	nge Test
		Freq	uency	Freq	uency
URA identity		UR <i>A</i>	∖-ID 1	URA	-ID 2
LA identity		LA-	ID 1	LA-	ID 2
CPICH Ec (FDD)	dBm/3.84MHz	-73	-73	Cell 4 is switched off	-67
P-CCPCH RSCP (TDD)	dBm	-62	-68	Cell 4 is switched off	-62

Table 8.3.2.12-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while column marked "T1" are to be applied subsequently.

- a) At T1, verify that the UE does not reselect to cell 4 and not send a URA update in cell 4, although cell 4 is the best cell.
- b) SS calls for generic procedure C.5 to check that UE is in URA_PCH state in cell 1.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is in URA_PCH state,
				camped on Cell 1 and registered
				to PLMN1. SS applies downlink
				transmission power settings
				according to values in column "T0" of table 8.3.2.12-1.
2				SS applies downlink transmission
				power settings according to
				values in column "T1" of table
				8.3.2.12-1.
3				SS monitors that the UE does not
				send a URA UPDATE message
				or any other message within 30
				seconds of step 2.
4	+	\rightarrow	CALL C.5	If the test result of C.5 indicates
				that UE is in URA_PCH state in
				cell 1, the test passes, otherwise
				it fails.

Specific Message Contents

MASTER INFORMATION BLOCK

Use the same message sub-type found in clause 6.1.0a.3 of TS 34.108, with the following exception.

Information Element	Value/remark
MIB Value Tag	Set to (Current MIB value tag + 1)
SIB 3 Cell Value tag	Set to (Current SIB3 value tag + 1)
SIB 4 Cell Value tag	Set to (Current SIB4 value tag + 1)

System Information Block type 3

Use the same message type found in clause 6.1.0b of TS 34.108, with the following exceptions:

System Information Block type 4

Use the same message type found in clause 6.1.0b of TS 34.108, with the following exceptions:

ı	- Qqualmin	-16

8.3.2.12.5 Test requirement

After Step 2 the UE shall refrain from sending a URA UPDATE (or any other message).

8.3.2.13 URA Update: Change of URA due to HCS Cell Reselection

8.3.2.13.1 Definition

8.3.2.13.2 Conformance requirement

1. The quality level threshold criterion H for hierarchical cell structures is used to determine whether prioritised ranking according to hierarchical cell re-selection rules shall apply, and is defined by:

$$H_s = Q_{meas}$$
, - $Qhcs_s$

$$H_n = Q_{meas,n} - Qhcs_n - TO_n * L_n$$

. . .

2. The cell-ranking criterion R is defined by:

$$R_s \! = Q_{meas,s} \! + Qhyst_s$$

$$R_n = Q_{meas,n}$$
 - $Qoffset_{s,n}$ - $TO_n * (1 - L_n)$

where:

$$TO_n = TEMP_OFFSET_n * W(PENALTY_TIME_n - T_n)$$

$$\begin{array}{ll} L_n = 0 & \text{if } HCS_PRIO_n = HCS_PRIO_s \\ L_n = 1 & \text{if } HCS_PRIO_n <> HCS_PRIO_s \end{array}$$

$$W(x) = 0$$
 for $x < 0$
 $W(x) = 1$ for $x > 0$

 $TEMP_OFFSET_n$ applies an offset to the H and R criteria for the duration of $PENALTY_TIME_n$ after a timer T_n has started for that neighbouring cell.

The timer T_n is implemented for each neighbouring cell. T_n shall be started from zero when one of the following conditions becomes true:

- if HCS_PRIO_n <> HCS_PRIO_s and

$$Q_{meas}, n > Qhcs_n$$

Or

- if $HCS_PRIO_n = HCS_PRIO_s$ and
 - for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH RSCP in the serving cell, and:

$$Q_{meas,n} > Q_{meas,s} + Qoffset1_{s,n}$$

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH Ec/No in the serving cell, and:

$$Q_{meas,n} > Q_{meas,s} + Qoffset2_{s,n}$$

- for all other serving and neighbour cells:

$$Q_{meas,n} > Q_{meas,s} + Qoffset1_{s,n}$$

 T_n for the associated neighbour cell shall be stopped as soon as any of the above conditions are no longer fulfilled. Any value calculated for TO_n is valid only if the associated timer T_n is still running else TO_n shall be set to zero.

At cell-reselection, a timer T_n is stopped only if the corresponding cell is not a neighbour cell of the new serving cell, or if the criteria given above for starting timer T_n for the corresponding cell is no longer fulfilled with the parameters of the new serving cell. On cell re-selection, timer T_n shall be continued to be run for the corresponding cells but the

criteria given above shall be evaluated with parameters broadcast in the new serving cell if the corresponding cells are neighbours of the new serving cell.

. . .

3. The cell selection criterion S used for cell reselection is fulfilled when:

for FDD cells: Srxlev > 0 AND Squal > 0

for TDD cells: Srxlev > 0

for GSM cells: Srxlev > 0

Where:

 $Squal = Q_{qualmeas} - Qqualmin$

 $Srxlev = Q_{rxlevmeas} - Qrxlevmin - Pcompensation$

. . .

- 4. The UE shall perform ranking of all cells that fulfil the S criterion among
 - all cells that have the highest HCS_PRIO among those cells that fulfil the criterion H >= 0. Note that this rule is not valid when UE high-mobility is detected.
 - all cells, not considering HCS priority levels, if no cell fulfil the criterion H >= 0. This case is also valid when it is indicated in system information that HCS is not used, that is when serving cell does not belong to a hierarchical cell structure.

The cells shall be ranked according to the R criteria.

The best ranked cell is the cell with the highest R value.

5. If an FDD cell is ranked as the best cell and the quality measure for cell selection and re-selection is set to CPICH RSCP, the UE shall perform cell re-selection to that FDD cell.

In all cases, the UE shall reselect the new cell, only if the following conditions are met:

- the new cell is better ranked than the serving cell during a time interval Treselection.
- more than 1 second has elapsed since the UE camped on the current serving cell.

. . .

- 6. The *cell reselection* process in Connected Mode is the same as *cell reselection evaluation process* used for idle mode, described in subclause 5.2.6 of 25.304.
 - 7. A UE in URA_PCH state shall initiate the URA update procedure in the following cases:
 - 1> URA reselection:
 - 2> if the UE detects that the current URA assigned to the UE, stored in the variable URA_IDENTITY, is not present in the list of URA identities in system information block type 2; or

. . .

3> perform URA update using the cause "change of URA".

Reference

3GPP TS 25.304 clause 5.2.6.1.4

3GPP TS 25.304 clause 5.4.3

3GPP TS 25.331 clause 8.3.1

8.3.2.13.3 Test purpose

- To confirm that the UE can read HCS related SIB information and act upon all HCS parameters in URA_PCH state.
- 2. To confirm that the UE executes an URA update procedure after the successful change of URA due to HCS Cell Reselection in URA_PCH state.
- 3. To confirm UE responds correctly when it re-selects to a new cell while waiting from URA UPDATE CONFIRM message from SS.

8.3.2.13.4 Method of test

Initial Condition

System Simulator: 3 cells - Cell 1 is active with URA-ID 1 and downlink transmission power shown in column marked "T0" in table 8.3.2.13-1. Cell2 with URA-ID 1 and Cell 3 with URA-ID 2 are switched off

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE, with URA-ID 1 from the list of URA-ID in cell 1

Specific Message Content

For system information blocks 4 and 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

Contents of System Information Block type 4 (FDD)

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	FDD
- Sintersearch	0 dB
- SsearchHCS	17 (35 dB)
- RAT List	This parameter is configurable
- Sli mit,SearchRAT	0
- Qqualmin	-20 dB
- Qrxle vmin	-58 (-115 dBm)
- Qhyst1s	7 (gives actual value of 14 dB)
- Qhyst2s	Not Present
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD, 1.28 Mcps TDD and 7.68 Mcps TDD)

Information Element	Value/remark	
- Cell selection and re-selection info		
- CHOICE mode	TDD	
- SsearchHCS	23 (47 dB)	
- Qhyst1s	10 (gives actual value of 20 dB)	
- HCS Serving cell information	,	
-HCS Priority	6	
- Q HCS	39 (results in actual value of -76)	
- TcrMax	Not Present	

Contents of System Information Block type 11 (FDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system	
information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	Not Propert
- Cell individual offset - Reference time difference to cell	Not Present Not Present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
,	in clause 6.1.4
- Primary CPICH TX power	Not Present
 Cell Selection and Re-selection info 	Not Present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator - CHOICE mode	TRUE FDD
- Primary CPICH info	ורטט
- Primary criem into	Refer to clause titled "Default settings for cell No.2 (FDD)"
- 1 lilliary scrainbillig code	in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
 HCS neighbouring cell information 	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	40
- Penalty Time	40
-Temporary Offset - CHOICE mode	12 FDD
- Qqualmin	-20 dB
- Qquaiiiiii - Qrxle vmin	-58 (-115 dBm)
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)"
Primary CDICH TV namer	in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator - Cell Selection and Re-selection info	FALSE
- Qoffset1 _{s.n}	-20dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	,
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-58 (-115 dBm)

Contents of System Information Block type 11 (3.84 Mcps TDD 1.28 Mcps TDD and 7.68 Mcps TDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 (0 dB)
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
 Cell Selection and Re-selection info 	
- Qoffset1 _{s,n}	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxle vmin	-52 (-103 dBm)
- Intra-frequency cell id	3
- Cell info	
 Cell individual offset 	0 (0 dB)
 Reference time difference to cell 	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
 HCS neighbouring cell information 	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxle vmin	-52 (-103 dBm)

Test Procedure

Table 8.3.2.13-1

Parameter	Unit	Cell 1		Cell 2		Cell 3				
		T0	T1	T2	T0	T1	T2	T0	T1	T2
Cell id in system			1		2		3			
information										
UTRA RF Channel		Mid	Range 1	Гest	Mid Range Test		Mid Range Test			
Number		Fı	equenc	:y	Fr	equency		Frequency		
HCS Priority			6			7		7		
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-65	-65	-83	-83	-69	-83	-69	-69
H* (During penalty		16	11	-1	-19	-19	7	-19	-5	7
time)										
H* (After PenaltyTime)		16	11	11	-7	-7	7	-7	7	7
P-CCPCH RSCP	dBm	-61	-61	-61	-80	-80	-67	-80	-73	-73
(TDD)										
H* (After PenaltyTime)		15	15	15	-4	-4	9	-4	3	3
R* (During		-46	-51	-45	-63	-63	-61	-63	-49	-55
PenaltyTime)										
R* (After PenaltyTime)		-46	-51	-45	-63	-63	-49	-63	-49	-55

(*) Note: this parameter is calculated internally in the UE and is only shown for clarification of the test procedure.

The UE is in the URA_PCH state and assigned with only 1 URA identity in cell 1: URA-ID 1. SS configures Cell 2 and 3 with power level given in column "T0", and URA-Id 1 and 2 respectively and starts broadcast of BCCH on the primary CCPCH in cells 2 and 3. UE shall remain camped on the Cell 1 even after expiry of penalty time i.e. 40 seconds. SS sets downlink transmission power settings according to columns "T1" in table 8.3.2.13-1. SS then adjusts the transmission power again according to 'T1' column. This is expected to cause the UE to perform a cell reselection to cell 3 after at-least 40 Seconds (Penalty Time) after the power levels have been changed. UE on performing cell reselection to cell 3 finds that its current URA-ID 1 is not in the new broadcasted list of URA-IDs, it moves to CELL_FACH state and transmits a URA UPDATE message on the uplink CCCH. After the SS receives this message, it transmits URA UPDATE CONFIRM message to the UE on the downlink CCCH. The "RRC State Indicator" is set to "URA_PCH". UE returns to URA_PCH state in cell 3 without sending a uplink response message. Next SS adjusts the transmission power according to 'T2' column. After the expiry of penalty time the UE shall re-select to cell 2, and transmit URA UPDATE message to SS. However, SS do not acknowledge but adjusts the transmission power according to 'T0' column. UE shall perform cell re-selection to cell 1 and then sent URA UPDATE message to SS. Finally SS shall transmit URA UPDATE CONFIRM message to UE on the downlink CCCH. UE shall return to URA PCH state in Cell 1 and will not transmit anything on PRACH.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step			Message	Comment
-	UE	SS	1	
1				The UE is updated with only 1
				URA identity carried currently
				by cell 1. The starting state of
_	ļ.,	,	POOL	the UE is URA_PCH
2	·	-	ВССН	SS configures cell 2 (with URA-
				ID 1) and Cell 3 (with URA-ID 2) and power levels as given in
				column T0 of table 8.3.2.13-1
				and starts transmission of
				BCCH.
3				UE shall Remain camped on
				Cell 1 and in URA_PCH state
				even after expiry of Penalty
				time.
4	1			SS set the power transmission
				of all cells according to column
				'T1' of table 8.3.2.13-1.
5	-	>	URA UPDATE	The UE shall perform a cell
				reselection first after the
				penalty time to cell 3 and when
				it finds that its current URA-ID 1
				is not in the new broadcasted
				list of URA-IDs, it shall then
				transmit this message and set value "change of URA" into IE
				"URA update cause".
6	· ·		URA UPDATE CONFIRM	Message sent on CCCH.
7	<u> </u>	<u> </u>	OKA OF DATE CONTINU	SS set the power transmission
,				of all cells according to column
				'T2' of table 8.3.2.13-1. SS
				makes sure that the UE does
				not send an URA Update
				message during penalty time
8	\rightarrow		URA UPDATE	In Cell 2
9				SS do not respond to the URA
				UPDATE message from UE
				and set the power transmission
				of all cells according to column
4.5			LIDALIBRATE	'T0' of table 8.3.2.13-1.
10	-		URA UPDATE CONFIDM	In Cell 1
11	+		URA UPDATE CONFIRM	Message sent on CCCH.

Specific Message Contents

The contents of system information block 4 and 11 messages are identical as system information block 4 and 11 messages as found in 34.108 clause 6.1 with the following exceptions:

Contents of System Information Block type 4 (FDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	FDD
- Sintersearch	0 dB
- SsearchHCS	17 (35 dB)
- RAT List	This parameter is configurable
- Sli mit,SearchRAT	0
- Qqualmin	-20 dB
- Qrxle vmin	-115 dBm
- Qhyst1s	7 (gives actual value of 14 dB)
Qhyst2₅ Not Present	
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	39 (results in actual value of -76)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD, 1.28 Mcps TDD and 7.68 Mcps TDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	TDD
- SsearchHCS	23 (47 dB)
- Qhyst1s	10 (gives actual value of 20 dB)
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	39 (results in actual value of -76)
- TcrMax	Not Present

Contents of System Information Block type 11 (FDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system	
information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
 Cell individual offset 	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1.4
- Primary CPICH TX power	Not Present
- Cell Selection and Re-selection info	NOT PRESENT
- Intra-frequency cell id	1
- Cell info	Not Droppet
- Cell individual offset	Not Present
- Reference time difference to cell - Read SFN indicator	Not Present TRUE
- CHOICE mode	FDD
- Primary CPICH info	FUU
- Primary criem into	Refer to clause titled "Default settings for cell No.1 (FDD)"
- Filliary Scrambling Code	in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	7,600
- Qoffset1 _{s,n}	-20dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxle vmin	-58 (-115 dBm)
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	Defeate alone filled IID-fault III (III (III)
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)"
Drimony CDICH TV nower	in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info - Qoffset1 _{s.n}	-20 dB
- Waximum allowed UL TX power	33 dBm
- Maximum allowed OL 1X power - HCS neighbouring cell information	Present
- HCS neignbouring cert information - HCS_Priority	1 1636111 7
- HCS_PHOHIN	39 (results in actual value of –76)
-U_HCS -HCS Cell Reselection Information	100 (100 uito iii actual value 01 –70)
- Penalty Time	40
- Temporary Offset	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxle vmin	-58 (-115 dBm)
Service mini	100 (. 10 0011)

Contents of System Information Block type 11 (3.84 Mcps TDD, 1.28 Mcps TDD and 7.68 Mcps TDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0 (0 dB)
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s.n}	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	oo (loodite iii dotdai valdo of 10)
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxle vmin	-52 (-103 dBm)
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0 (0 dB)
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	100
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	Not i lesem
- Qoffset1 _{s.n}	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority -Q_HCS	20 (recults in actual value of .76)
	39 (results in actual value of –76)
-HCS Cell Reselection Information	40
- Penalty Time	
-Temporary Offset - CHOICE mode	TDD
	1. – –
- Qrxle vmin	-52 (-103 dBm)

Contents of System Information Block type 11 (FDD) (Cell 3)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	FALSE
- Use of HCS	used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system	OF IOT KOO!
information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	3
- Cell info	3
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)"
- I filliary scrainbilling code	in clause 6.1.4
- Cell Selection and Re-selection info	NOT PRESENT
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
1 milary columning code	in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	7,232
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	33 (163 dits iii actual value of -10)
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-58 (-115 dBm)
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
, ,	in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 _{s.n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	23 (.30 dito ili dottati valuo oi 10)
- Penalty Time	40
- Temporary Offset	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxle vmin	-58 (-115 dBm)
- QI AIG VIIIIII	100 (110 dDill)

Contents of System Information Block type 11 (3.84 Mcps TDD, 1.28 Mcps TDD and 7.68 Mcps TDD) (Cell 3)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0 (0 dB)
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxle vmin	-52 (-103 dBm)
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 (0 dB)
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	, , , , , , , , , , , , , , , , , , , ,
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxle vmin	-52 (-103 dBm)

URA UPDATE (Step 5, 8 and 10)

Information Element	Value/remark	
URA Update Cause	Check to see if set to 'change of URA'	

URA UPDATE CONFIRM (Steps 6 and 11)

Use the same message sub-type found in TS 34.108 clause 9.

8.3.2.13.5 Test requirement

After step 4 the UE shall find that URA-ID 2 is not in its maintained list of URA-IDs. After cell reselection, the UE shall move to CELL_FACH state and transmit URA UPDATE message setting value "change of URA" into IE "URA update cause".

After step 7 the UE shall find that URA-ID 1 is not in its maintained list of URA-IDs. After cell reselection, the UE shall move to CELL_FACH state and transmit URA UPDATE message setting value "change of URA" into IE "URA update cause".

8.3.3 UTRAN Mobility Information

8.3.3.1 UTRAN Mobility Information: Success

8.3.3.1.1 Definition

8.3.3.1.2 Conformance requirement

When the UE receives a UTRAN MOBILITY INFORMATION message, it shall:

- 1> act on received information elements as specified in TS 25.331 subclause 8.6;
- 1> if the IE "UE Timers and constants in connected mode" is present:
 - 2> store the values of the IE "UE Timers and constants in connected mode" in the variable TIMERS_AND_CONSTANTS, replacing any previously stored value for each timer and constant; and
 - 2> for each updated timer value:
 - 3> start using the new value next time the timer is started;

NOTE: If a new value of timer T305 is included in the IE "UE Timers and constants in connected mode", and the old value of timer T305 is "infinity", the UE will not use the new value of the timer T305 until the next cell reselection.

- 2> for each updated constant value:
 - 3> start using the new value directly;

. . .

1> transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC;

If the IE "New U-RNTI" is included in a received message, the UE shall:

1> store the value in the variable U_RNTI, replacing any old stored value.

. . .

If the IE "New C-RNTI" is included, the UE shall:

- 1> store the value in the variable C_RNTI, replacing any old stored value;
- 1> use that C-RNTI when using common transport channels of type RACH, and FACH in the current cell.

. . .

In case of cell update procedure the UE shall transmit a CELL UPDATE message.

The UE shall set the IEs in the CELL UPDATE message as follows:

. . .

1> set the IE "U-RNTI" to the value of the variable U_RNTI;

. . .

Reference

3GPP TS 25.331 clauses 8.3.3, 8.6.3.9, 8.6.3.10, 8.3.1.3.

8.3.3.1.3 Test purpose

1. To confirm that the UE starts to use the new identities after it receives a UTRAN MOBILITY INFORMATION message from the SS.

8.3.3.1.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Specific Message Contents

For system information block 1 of Cell 1 (gives IE's which are different from defaults given in 34.108 subclause 6.1) to be transmitted before idle update preamble.

System Information Block type 1

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception:

Information Element	Value/remark
-T305	10

Test Procedure

Initially, the UE is in CELL_FACH state and it has been assigned a C-RNTI and U-RNTI. SS waits for T305 to expire. The UE shall transmit a CELL UPDATE message. SS sends CELL UPDATE CONFIRM message to the UE on the downlink CCCH. Then SS transmits an UTRAN MOBILITY INFORMATION message which includes new C-RNTI and U-RNTI to the UE. Then the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message using the assigned new C-RNTI in MAC header as confirmation. SS waits for UE to perform periodic cell updating. When SS received a CELL UPDATE message, SS checks that UE uses the new U-RNTI in the CELL UPDATE message. Then SS sends CELL UPDATE CONFIRM on the downlink CCCH. SS waits for UE to perform periodic cell updating. When SS received a CELL UPDATE message, SS sends CELL UPDATE CONFIRM on the downlink CCCH to end the test procedure.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1			The initial state of the UE is CELL_FACH state. UE has been allocated both C-RNTI and U-RNTI during RRC connection establishment phase.
1a			SS waits for a period up to timer T305 to allow the UE to start performing a cell updating procedure.
1b	\rightarrow	CELL UPDATE	
1c	←	CELL UPDATE CONFIRM	
2	+	UTRAN MOBILITY INFORMATION	Contains new C-RNTI and U-RNTI identities and a value for T305 that is different from the value defined in the system information.
3	→	UTRAN MOBILITY INFORMATION CONFIRM	The assigned new C-RNTI shall be included in MAC header.
4			SS wait for T305 (same as the value defined in system information) to expire.
5	→	CELL UPDATE	UE shall trigger cell updating. The message shall indicate the same U-RNTI assigned in the UTRAN MOBILITY INFORMATION message in step 2.
6	←	CELL UPDATE CONFIRM	
7			SS wait for T305 (the new value as specified in step 2) to expire.
8)	CELL UPDATE	UE shall trigger cell updating. The message shall indicate the same U-RNTI assigned in the UTRAN MOBILITY INFORMATION message in step 2.
9	+	CELL UPDATE CONFIRM	
10	←→	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Content

UTRAN MOBILITY INFORMATION (Step 2)

Use the same message sub-type as in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New U-RNTI	
- SRNC Identity	'0000 0000 0001'
- S-RNTI	'0101 0101 0101 0101 '
New C-RNTI	'0000 0000 0000 1111'
UE Timers and constants in connected mode	
- T305	5 minutes

UTRAN MOBILITY INFORMATION CONFIRM (Step 3)

Only the message type IE is checked in this message.

CELL UPDATE (Step 1b)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH.

CELL UPDATE (Step 5 and 8)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0101 0101 0101 0101 0101'
Cell Update Cause	Check to see if set to 'periodical cell updating'

CELL UPDATE CONFIRM (Step 1c)

Use the same message sub-type as in TS 34.108, clause 9.

CELL UPDATE CONFIRM (Step 6 and 9)

Use the same message sub-type as in TS 34.108, clause 9 on the downlink CCCH, with the exception of the following IEs:

Information Element Value/remark	
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0101 0101 0101 0101 0101'

8.3.3.1.5 Test requirement

After step 2 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH that using the assigned new C-RNTI in MAC header.

After step 4 and 7 the UE shall transmit a CELL UPDATE message on the uplink CCCH with IE "Cell update cause" set to "periodical cell updating". The IE "U-RNTI" shall be identical to the IE "New RNTI" found in UTRAN MOBILITY INFORMATION message sent by the SS in step 2.

8.3.3.2 UTRAN Mobility Information: Failure (Invalid message reception)

8.3.3.2.1 Definition

8.3.3.2.2 Conformance Requirements

If the UTRAN MOBILITY INFORMATION message contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> transmit a UTRAN MOBILITY INFORMATION FAILURE message on the uplink DCCH using AM RLC;
- 1> set the IE "RRC transaction identifier" in the UTRAN MOBILITY INFORMATION FAILURE message to the value of "RRC transaction identifier" in the entry for the UTRAN MOBILITY INFORMATION message in the table "Rejected transactions" in the variable TRANSACTIONS, and;
- 1> set the IE "failure cause" to the cause value "protocol error";
- 1> include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL ERROR INFORMATION;
- 1> when the UTRAN MOBILITY INFORMATION FAILURE message has been submitted to lower layers for transmission:

- 2> continue with any ongoing processes and procedures as if the invalid UTRAN MOBILITY INFORMATION message has not been received;
- 2> and the procedure ends.

References

3GPP TS 25.331 clauses 8.3.3.6

8.3.3.2.3 Test Purpose

1. To confirm that the UE ignore the erroneous UTRAN MOBILITY INFORMATION message and report this event to the UTRAN by sending UTRAN MOBILITY INFORMATION FAILURE message, stating the appropriate failure cause and information.

8.3.3.2.4 Method of test

Initial Conditions

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Specific Message Contents

For system information block 1 (given IEs which are different from defaults given in TS34.108 clause 6.1) to be transmitted before idle update preamble.

System Information Block type 1

Information Element	Value/remark
T305	5 minutes

Test Procedure

The UE is brought to CELL_FACH state. SS waits for T305 to expire. The UE shall transmit a CELL UPDATE message. SS sends CELL UPDATE CONFIRM message to the UE on the downlink DCCH. Then SS transmits a UTRAN MOBILITY INFORMATION message, which contains an unexpected critical message extension, to the UE on the DCCH using AM-RLC mode. The UE shall respond by transmitting the UTRAN MOBILITY INFORMATION FAILURE message, indicating "protocol error" in IE "failure cause" and also "Message extension not comprehended " in IE "Protocol error information". After receiving the UTRAN MOBILITY INFORMATION FAILURE message, SS waits for T305 to expire. The UE shall transmit a CELL UPDATE message with the original U-RNTI identity assigned. SS sends CELL UPDATE CONFIRM message to the UE on the downlink DCCH.

Expected Sequence

Step	Direc	tion	Message	Comment
	UE	SS		
1				The initial state of the UE is
				CELL_FACH state.
1a				SS waits for a period up to
				timer T305 to allow the UE to
				start performing a cell updating
				procedure.
1b	-		CELL UPDATE	
1c	+		CELL UPDATE CONFIRM	
2	←	_	UTRAN MOBILITY INFORMATION	See specific message content.
_				
3)	>	UTRAN MOBILITY INFORMATION FAILURE	UE shall transmit this message
				to report the error in UTRAN
				MOBILITY INFORMATION
				message. It shall include the
				appropriate cause in the
4				message. SS waits for a period up to
4				timer T305 to allow the UE to
				start performing a cell updating
				procedure.
5	-	>	CELL UPDATE	p. 000 dd. 0.
6	-		ICELL UPDATE CONFIRM	
	_			

Specific Message Content

UTRAN MOBILITY INFORMATION (Step 2)

Use the UTRAN MOBILITY INFORMATION message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Critical extensions	'FF'H

UTRAN MOBILITY INFORMATION FAILURE (Step 3)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/remark
Failure Cause	
- Failure Cause	Check to see if set to 'Protocol error'
- Protocol Error Information	Check to see if set to Message extension not
	comprehended

CELL UPDATE (Step 1b and 5)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'B
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'B
Cell update cause	Check to see if set to 'periodical cell updating'

CELL UPDATE CONFIRM (Step 1c and 6)

Use the same message sub-type as in TS 34.108 clause 9.

8.3.3.2.5 Test Requirement

After step 1a the UE shall initiate a periodic cell updating procedure by transmitting CELL UPDATE message on the CCCH. In this message, the U-RNTI identity shall be set to the same value as assigned during the RRC connection establishment procedure.

After step 2 the UE shall transmit UTRAN MOBILITY INFORMATION FAILURE message, indicating the value "protocol error" in IE "failure cause" and also "Message extension not comprehended" in IE "protocol error information".

After step 4 the UE shall initiate a periodic cell updating procedure by transmitting CELL UPDATE message on the CCCH. In this message, the U-RNTI identity shall be set to the same value as assigned during the RRC connection establishment procedure.

8.3.3.3 UTRAN MOBILITY INFORMATION: Seamless SRNS relocation in CELL_DCH (without pending of ciphering)

- 8.3.3.3.1 Definition
- 8.3.3.3.2 Conformance requirement

To initiate the procedure UTRAN transmits a UTRAN MOBILITY INFORMATION message to the UE on the downlink DCCH using AM or UM RLC. In case of SRNS relocation, the message is sent using UM RLC only.

When the UE receives a UTRAN MOBILITY INFORMATION message, it shall:

- 1> if the UTRAN MOBILITY INFORMATION message contained the IE "Ciphering mode info" or contained the IE "Integrity protection mode info":
 - 2> set the IE "Status" in the variable SECURITY_MODIFICATION for all the CN domains in the variable SECURITY_MODIFICATION to "Affected";
- 1> if the UTRAN MOBILITY INFORMATION message contained the IE "Ciphering mode info":
 - 2> include and set the IE "Radio bearer uplink ciphering activation time info" to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO.
- 1> if the received UTRAN MOBILITY INFORMATION message included the IE " Down link counter synchronisation info ":
 - 2> re-establish the RLC entity for RB2;
 - 2> set the new uplink and downlink HFN component of COUNT-C of RB2 to MAX(uplink HFN component of COUNT-C of RB2, downlink HFN component of COUNT-C of RB2);
 - 2> increment by one the downlink and uplink values of the HFN component of COUNT-C for RB2;
 - 2> calculate the START value according to TS 25.331 subclause 8.5.9;
 - 2> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info" in the UTRAN MOBILITY INFORMATION CONFIRM message.
- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC;
- 1> if the IE "Integrity protection mode info" was present in the UTRAN MOBILITY INFORMATION message:

- 2> start applying the new integrity protection configuration in the uplink for signalling radio bearer RB2 from and including the transmitted UTRAN MOBILITY INFORMATION CONFIRM message.
- 1> if the IE "Downlink counter synchronisation info" was included in the received UTRAN MOBILITY INFORMATION message:
 - 2> when RLC has confirmed the successful transmission of the response message:
 - 3> re-establish all AM and UM RLC entities with RB identities larger than 4 and set the first 20 bits of all the HFN component of the respective COUNT-C values to the START value included in the response message for the corresponding CN domain;
 - 3> re-establish the RLC entities with RB identities 1, 3 and 4 and set the first 20 bits of all the HFN component of the respective COUNT-C values to the START value included in the response message for the CN domain stored in the variable LATEST_CONFIGURED_CN_DOMAIN;
 - 3> set the remaining bits of the HFN component of the COUNT-C values of all UM RLC entities to zero;
 - 3> re-initialise the PDCP header compression entities of each radio bearer in the variable ESTABLISHED RABS.
- 1> apply the new ciphering configuration as follows:
 - 2> if the IE "Radio bearer downlink ciphering activation time in fo" is present:
 - 3> apply the following procedure for each radio bearer and signalling radio bearers using RLC-AM or RLC-UM indicated by the IE "RB identity":

. . . .

4> switch to the new ciphering configuration according to the following:

...

- 5> if an RLC reset or re-establishment occurs before the activation time for the new ciphering configuration has been reached, ignore the activation time and apply the new ciphering configuration immediately after the RLC reset or RLC re-establishment.
- 1> if IE "Integrity protection mode command" has the value "start" and the IE "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Started" and this IE was not included SECURITY MODE COMMAND:

NOTE: This case is used in SRNS relocation

- 2> perform integrity protection on the received message, applying the new integrity protection configuration, as described in subclause 8.5.10.1 of TS25.331 by:
 - 3> using the algorithm (UIA defined in TS33.102) indicated by the IE "Integrity protection algorithm" contained in the IE "Integrity protection mode info";
 - 3> using the IE "Integrity protection initialisation number", contained in the IE "Integrity protection mode info" as the value of FRESH defined in TS33.102.
- 2> let RBm be the signalling radio bearer where the reconfiguration message was received and let RBn be the signalling radio bearer where the response message is transmitted;
- 2> prohibit transmission of RRC messages on all signalling radio bearers in the IE "ESTABLISHED_RABS" except on RB0 and the radio bearer where the response message is transmitted;
- 2> if for a signalling radio bearer, a security configuration triggered by a previous SECURITY MODE COMMAND is pending, due to the activation time for the signalling radio bearer not having elapsed:
 - 3> if the previous SECURITY MODE COMMAND was received due to new keys being received:
 - 4> consider the new integrity protection configuration to include the received new keys; and

4> initialise the HFN of the COUNT-I values of the corresponding signalling radio bearers according to subclause 8.1.12.

3> else:

- 4> consider the new Integrity Protection configuration to include the keys associated with the LATEST_CONFIGURED_CN_DOMAIN associated with the previously received SECURITY MODE COMMAND; and
- 4> initialise the HFN of the COUNT-I values of the corresponding signalling radio bearers according to subclause 8.1.12 using the START value associated with the LATEST CONFIGURED CN DOMAIN to be transmitted in the response to the current message.
- 2> start applying the new integrity protection configuration in the downlink for each signalling radio bearer in the IE "ESTABLISHED_RABS" except RBm at the next received RRC message disregarding any pending activation times for the corresponding signalling radio bearer;
- 2> start applying the new integrity protection configuration in the downlink for signalling radio bearer RBm from and including the received configuration message;
- 2> start applying the new integrity protection configuration in the uplink for signalling radio bearer RBn from and including the transmitted response message;
- 2> start applying the new integrity protection configuration in the uplink for signalling radio bearers other than RBn from the first message onwards.

NOTE: The UTRAN should ignore the information included in the IE "Uplink integrity protection info".

Reference

 $3GPP\ TS\ 25.331\ clause\ 8.3.3\ ,\ 8.6.3.4\ and\ 8.6.3.5$

8.3.3.3.3 Test purpose

- To confirm that the UE sends calculated START values for each CN domain to SS after a successful SRNS relocation.
- 2. In the case that ciphering is applied by the network, to confirm that the UE restarts ciphering following a successful SRNS relocation.
- 3. To confirm that the UE correctly applies integrity protection after the SRNS relocation.

8.3.3.3.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_DCH (state 6-10) or CS-DCCH+DTCH_DCH (state 6-9) or PS+CS-DCCH+DTCH_DCH (state 6-14) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in the CELL_DCH state. SS then transmits a UTRAN MOBILITY INFORMATION message, which includes a valid "New U-RNTI", IE "Downlink counter synchronisation info" and IE "Integrity protection mode info", to the UE on the downlink DCCH using UM RLC. SS verifies that the UE sends UTRAN MOBILITY INFORMATION CONFIRM message. This message also includes a calculated new START value according to the formula "STARTx' = MSB20 (MAX {COUNT-C, COUNT-I | radio bearers and signalling radio bearers using the most recently configured CK_X and IK_X }) + 2", calculated IE "Integrity Check Info" using a new FRESH value as included in IE "Integrity protection in itialisation number" in IE "Integrity protection mode in fo" in UTRAN MOBILITY INFORMATION message and COUNT-I that includes subsequent HFN as used in the old integrity protection configuration.

SS transmits UE CAPABILITY ENQUIRY message on the downlink DCCH using RLC-AM. The UE shall respond to downlink message with a UE CAPABILITY INFORMATION message on the uplink DCCH using RLC-AM. SS responds with UE CAPABILITY INFORMATION CONFIRM message. SS then send IDENTITY REQUEST message

on the DCCH using RLC-AM (SRB3) in order to confirm that the UE can communicate on SRB3 by using new integrity configuration. The UE shall respond IDENTITY RESPONSE message on the uplink DCCH using RLC-AM (SRB3).

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1	+	UTRAN MOBILITY INFORMATION	If IE "Ciphering mode info" is present in the SECURITY MODE COMMAND during initial condition set-up, this message is sent after last ciphering activation time has elapsed and there is no pending ciphering activation time. New U-RNTI identities are assigned to the UE. IE "Downlink counter synchronisation info" is included. New integrity protection configuration is applied on DL SRB1.
2	→	UTRAN MOBILITY INFORMATION CONFIRM	New calculated START value is included. New integrity protection configuration is applied on UL SRB2. If IE "Ciphering mode info" is present in step 1, new ciphering configuration is applied on UL SRB2 with the downlink and uplink values of the HFN component of COUNT-C for SRB2 incremented by one.
3	+	UE CAPABILITY ENQUIRY	New integrity protection configuration is applied on DL SRB2. If IE "Ciphering mode info" is present in step 1, new ciphering configuration is applied on DL SRB2 with the same START value as used in step 2.
4	\rightarrow	UE CAPABILITY INFORMATION	
5	+	UE CAPABILITY INFORMATION CONFIRM	
6	+	DOWNLINK DIRECT TRANSFER	NAS message embedded in this is IDENTITY REQUEST. New integrity protection configuration is applied on DL SRB3. If IE "Ciphering mode info" is present in step 1, new ciphering configuration is applied on DL SRB3 using the re-initialised COUNT-C HFN by the start value as stored in step 2.
7	→	UPLINK DIRECT TRANSFER	NAS message embedded in this is IDENTITY RESPONSE. SS confirms that new integrity protection configuration is applied on UL SRB3 by UE. If IE "Ciphering mode info" is present in step 1, new ciphering configuration is applied on UL SRB3 using the re-initialised COUNT-C HFN by the start value as stored in step 2.

Specific Message Contents

UTRAN MOBILITY INFORMATION (Step 1) - for PS domain testing only

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Ciphering mode info	If network does not apply ciphering, set this IE to "Not
	present". If network applies ciphering, this IE present
	with the values of the sub IEs as stated below.
- Ciphering mode command	Start/restart
- Ciphering algorithm	Set to an algorithm that is different from the one
	indicated in the SECURITY MODE COMMAND during
	the initial condition set-up.
- Ciphering activation time for DPCH	Not Present
- Radio bearer downlink ciphering activation time	Not present
info	
Integrity protection mode info	
 Integrity protection mode command 	Start
 Downlink integrity protection activation info 	Not Present
- Integrity protection algorithm	UIA1
- Integrity protection initialisation number	SS selects an arbitrary 32 bits number for FRESH
New U-RNTI	
- SRNC Identity	An arbitrary 12-bits string which is different from original
0.7117	SRNC
- S-RNTI	An arbitrary 20-bits string which is different from original
N. O. DNITI	S-RNTI
New C-RNTI	Not Present
CN Information info	Notareant
- PLMN identity - CN common GSM-MAP NAS system information	Not present
- GSM-MAP NAS system information	00 01H
- CN domain related information	00 0 11 1
- CN domain identity	PS
- CN domain specific NAS system information	
- GSM-MAP NAS system information	05 00H
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	cs
- CN domain specific NAS system information	
- GSM-MAP NAS system information	1E 01H
- CN domain specific DRX cycle length coefficient	7
Downlink counter synchronisation info	
- RB with PDCP information list	Not Present
	Not Present

UTRAN MOBILITY INFORMATION (Step 1) - for CS domain testing only

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark

Ciphering mode info	If network does not apply ciphering, set this IE to "Not present". If network applies ciphering, this IE present
	with the values of the sub IEs as stated below.
- Ciphering mode command	Start/restart
- Ciphering algorithm	Set to an algorithm that is different from the one
	indicated in the SECURITY MODE COMMAND during
	the initial condition set-up.
- Ciphering activation time for DPCH	(256+CFN-(CFN MOD 8 + 8)) MOD 256
- Radio bearer downlink ciphering activation time	
info	
- Radio bearer activation time	
- RB identity	1
- RLC sequence number	Current RLC SN
- RB identity	2
- RLC sequence number	Current RLC SN+2
- RB identity	3
- RLC sequence number	Current RLC SN
- RB identity	4
- RLC sequence number	Current RLC SN
Integrity protection mode info	
- Integrity protection mode command	Start
- Downlink integrity protection activation info	Not Present
- Integrity protection algorithm	UIA1
 Integrity protection initialisation number 	SS selects an arbitrary 32 bits number for FRESH
New U-RNTI	
- SRNC Identity	An arbitrary 12-bits string which is different from original
	SRNC
- S-RNTI	An arbitrary 20-bits string which is different from original
	S-RNTI
New C-RNTI	Not Present
CN Information info	
- PLMN identity	Not present
- CN common GSM-MAP NAS system information	
- GSM-MAP NAS system information	00 01H
- CN domain related information	PG
- CN domain identity	PS
- CN domain specific NAS system information	05 0011
- GSM-MAP NAS system information	05 00H 7
- CN domain specific DRX cycle length coefficient - CN domain identity	CS
- CN domain identity - CN domain specific NAS system information	03
- GSM-MAP NAS system information	1E 01H
- CN domain specific DRX cycle length coefficient	7
Downlink counter synchronisation info	'
	Not Present
- RB with PDCP information list	Not Present

UTRAN MOBILITY INFORMATION CONFIRM (Step 2) - for PS domain testing only

The same message sub-type found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink DCCH with the following exceptions:

Information Element	Value/remark
Uplink counter synchronisation info	
- RB with PDCP information list	Check that this IE is not present.
- START list	Check that this IE is correct value.

UTRAN MOBILITY INFORMATION CONFIRM (Step 2) - for CS domain testing only

Check that the UE uses the same message sub-type found in TS 34.108 clause 9, with the following exception.

Information Element	Value/remark
COUNT-C activation time	Check that this IE is present.
Uplink counter synchronisation info	
- RB with PDCP information list	Not present
- START list	Check that this IE has the correct value.

UE CAPABILITY ENQUIRY (Step 3)

Use the same message sub-type found in [9] TS 34.108 clause 9.

UE CAPABILITY INFORMATION (Step 4)

Check that the UE uses the same message sub-type found in TS 34.108 clause 9.

UE CAPABILITY INFORMATION CONFIRM (Step 5)

Use the same message sub-type found in [9] TS 34.108 clause 9.

8.3.3.3.5 Test requirement

After step 1, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC which includes a calculated new START value according to the formula "START $_{\rm X}$ ' = MSB $_{20}$ (MAX {COUNT-C, COUNT-I | radio bearers and signalling radio bearers using the most recently configured CK $_{\rm X}$ and IK $_{\rm X}$ }) + 2", calculated IE "Integrity Check Info" using the new FRESH value as included in IE "Integrity protection initialisation number" in IE "Integrity protection mode info" in UTRAN MOBILITY INFORMATION message and COUNT-I that includes subsequent HFN as used in the old integrity protection configuration. The UE, further more, shall apply the new integrity protection configuration for the first received/sent RRC message on SRB0, SRB3, and SRB4 after receiving the UTRAN MOBILITY INFORMATION message (i.e. immediately). For SRB2 the new integrity protection configuration shall be applied from and including the received UTRAN MOBILITY INFORMATION message (UL).

After step 3, the UE shall respond with a UE CAPABILITY INFORMATION message to SS.

After step 6, the UE shall respond with an IDENTITY RESPONSE message to SS and apply new ciphering configuration on UL SRB3.

8.3.3.4 UTRAN Mobility Information: Shared Network

8.3.3.4.1 Definition

8.3.3.4.2 Conformance requirement

- $1. \ \ If the \ IE \ "CN \ information \ info" \ is \ present \ in \ a \ message, the \ UE \ shall:$
 - 1> if the IE "Primary PLMN Identity" is present:
 - 2> forward the content of the IE "Primary PLMN identity" to upper layers.
 - 1> else:
 - 2> if the IE "PLMN Identity" is present:
 - 3> forward the content of the IE "PLMN identity" to upper layers.
- 2. The UE shall, in the INITIAL DIRECT TRANSFER message:
 - 1> set the IE "NAS message" as received from upper layers; and
 - 1> set the IE "CN domain identity" as indicated by the upper layers; and
 - 1> set the IE "Intra Domain NAS Node Selector" as follows:

- 2> derive the IE "Intra Domain NAS Node Selector" from TMSI/PMTSI, IMSI, or IMEI; and
- 2> provide the coding of the IE "Intra Domain NAS Node Selector" according to the following priorities:
 - 1. derive the routing parameter for IDNNS from TMSI (CS domain) or PTMSI (PS domain) whenever a valid TMSI/PTMSI is available;
 - 2. base the routing parameter for IDNNS on IMSI when no valid TMSI/PTMSI is available;
 - 3. base the routing parameter for IDNNS on IMEI only if no (U)SIM is inserted in the UE.
- 1> if the UE, on the existing RRC connection, has received a dedicated RRC message containing the IE "Primary PLMN Identity" in the IE "CN Information Info":
 - 2> set the IE "PLMN identity" in the INITIAL DIRECT TRANSFER message to the latest PLMN information received via dedicated RRC signalling. If NAS has indicated the PLMN towards which a signalling connection is requested, and this PLMN is not in agreement with the latest PLMN information received via dedicated RRC signalling, then the initial direct transfer procedure shall be aborted, and NAS shall be informed.

References

- 1. 3GPP TS 25.331 clause 8.6.1.2
- 2. 3GPP TS 25.331 clause 8.1.8.2

8.3.3.4.3 Test purpose

- To verify that the UE reacts on the IE "Primary PLMN identity" in message UTRAN MOBILITY INFORMATION, and forwards this IE to NAS.
- To verify that the UE sets the IE "PLMN Identity" in the INITIAL DIRECT TRANSFER message to the correct PLMN information received in UTRAN MOBILITY INFORMATION message.

8.3.3.4.4 Method of test

Initial condition

System Simulator:

- Cell 1 broadcasting PLMN1 on BCCH.
- For MASTER INFORMATION BLOCK see specific message content

User Equipment:

The UE is equipped with a USIM containing default values. The HPLMN (MCC+MNC) of the IMSI for the USIM is set to PLMN1.

The UE is registered in CS and PS domains on PLMN1 (MM Idle, SM Inactive, GMM Idle) and is in state CS-DCCH_DCH (state 6-5) as specified in clause 7.4 of TS 34.108.

Test procedure

The UE is registered in CS and PS domains in RRC state Cell_DCH. The SS transmits message UTRAN MOBILITY INFORMATION containing Rel-6 IE "Primary PLMN info". The PLMN code is different from the RPLMN, which triggers LA/RA update. The UE responds with an INTIAL DIRECT TRANSFER message containing IE "PLMN Identity" with the same value as previously received in message UTRAN MOBILITY INFORMATION.

Expected Sequence

Step	Direction		Direction		Direction		Message	Comment
	UE	SS						
1				The initial state of the UE is				
				CELL_DCH state.				
2	+	•	UTRAN MOBILITY INFORMATION	Primary PLMN identity = PLMN2.				
				LA/R A update is initiated by UE				
				NAS.				
3)	•	UTRAN MOBILITY INFORMATION					
			CONFIRM					
4)	·	INITIAL DIRECT TRANSFER	PLMN identity = PLMN2				

Specific message contents

MASTER INFORMATION BLOCK

Use the same message sub-type found in clause 6.1.0a.3 of TS 34.108, with the following exception.

- MIB value tag	Set to (Current MIB value tag + 1)
- Multiple PLMN List	
- MIB PLMN Identity	TRUE
- Multiple PLMNs (1)	
- MNC	11

UTRAN MOBILITY INFORMATION (Step 2)

Information Element	Value/remark
CN information info	
- PLMN identity	Not Present
- CN common GSM-MAP NAS system information	
- GSM-MAP NAS system information	00 01H
- CN domain related information	
- CN domain identity	PS
- CN domain specific NAS system information	
- GSM-MAP NAS system information	05 00H
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CN domain specific NAS system information	
- GSM-MAP NAS system information	1E 01H
- CN domain specific DRX cycle length coefficient	7
- Primary PLMN identity	PLMN-2

INITIAL DIRECT TRANSFER (Step 3)

Information Element	Value/remark
PLMN identity	PLMN-2

8.3.3.4.5 Test requirements

In step 4, the UE shall respond with an INITIAL DIRECT TRANSFER message. The IE "PLMN identity" shall be set to PLMN2.

8.3.4 Active set update in soft handover (FDD)

8.3.4.1 Active set update in soft handover: Radio Link addition

8.3.4.1.1 Definition

8.3.4.1.2 Conformance requirement

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified otherwise in the following. The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information";
- 1> perform the physical layer synchronisation procedure B as specified in TS 25.214;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE COMPLETE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the completion of the Physical Layer synchronization B, specified in TS 25.214;

• • •

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.1.3 Test purpose

1. To confirm that the UE continues to communicate with the SS on both the additional radio link and an already existing radio link after the radio link addition.

8.3.4.1.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.3.4.1

Parameter	Unit	Cell 1				Cel	12		
		T0 T1 T2 T3			T0	T1	T2	T3	
UTRA RF Channel		Mid Range Test Frequency			Mid Range Test Frequency				
Number									
CPICH Ec	dBm/3.84MHz	-60	-60	OFF	-60	-75	-60	-60	OFF

Table 8.3.4.1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

Initially, the UE goes to connected mode and establishes a radio access bearer in CELL_DCH state in cell 1.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.1. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC

which includes the IE "Radio Link Addition Information" (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID).

When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC without waiting for the physical channel synchronisation B.

SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.1. UE shall not detect the DPCH from cell 1 but continue to communicate through the another DPCH from cell 2. The UE shall transmit a MEASUREMENT REPORT message which indicates the event '1b' for cell 1.

SS shall transmit a UE CAPA BILITY ENQUIRY message to confirm that the UE can respond this message through the DPCH in cell 2. The UE shall transmit a UE CAPABILITY ENQUIRY INFORMATION message. Then SS transmits a UE CAPA BILITY INFORMATION CONFIRM message.

The SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.1. UE shall detect DPCH from cell 1, but not detect the DPCH from cell 2, but continue to communicate through DPCH from cell 1. The UE shall transmit a MEASUREMENT REPORT message which indicates the event '1b' for cell 2.

SS shall transmit a UE CAPABILITY ENQUIRY message to confirm that the UE can respond this message through the DPCH in cell 1. The UE shall transmit a UE CAPABILITY INFORMATION message. Then SS transmits a UE CAPABILITY INFORMATION CONFIRM message. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment		
	UE	SS				
1				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.1.		
2	_	→ MEASUREMENT REPORT		See specific message contents for this message		
3	+		ACTIVE SET UPDATE	SS transmits this message in cell 1 on downlink DCCH using AM RLC. The message includes IE "Radio Link Addition Information". (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID in cell 2)		
4	→		ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link to cell 2, without interfering with existing connections on the radio link in cell 1.		
5				SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.1		
5a	\rightarrow		MEASUREMENT REPORT	See specific message contents for this message		
6	+		UE CAPABILITY ENQUIRY	Use default message.		
7	\rightarrow		UE CAPABILITY INFORMATION	Use default message.		
8	+		UE CAPABILITY INFORMATION CONFIRM	Use default message.		
9			Void			
9a			Void			
10				SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.1		

10a	\rightarrow	MEASUREMENT REPORT	See specific message contents
			for this message
11	+	UE CAPABILITY ENQUIRY	Use default message.
12	\rightarrow	UE CAPABILITY INFORMATION	Use default message.
13	+	UE CAPABILITY INFORMATION CONFIRM	Use default message.
14	$\leftarrow \rightarrow$	CALL C.3	If the test result of C.3
			indicates that UE is in
			CELL_DCH state, the test
			passes, otherwise it fails.

Specific Message Content

The contents of SIB11 broadcasted in cell 1 shall be in accordance with the default SIB11 as specified in section 6.1 of TS 34.108.

The contents of SIB12 in cell 1, and SIB11 and SIB12 in cell 2 shall be in accordance with the default SIBs as specified in TS 34.108.

MEASUREMENT REPORT (Step 2)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	11
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is absent
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	Onconce that this it is absent
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	l'u
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark	Version
Radio link addition information		
- Primary CPICH Info		
- Primary Scrambling Code	Refer to clause titled "Default settings for cell	
	No.2 (FDD)" in clause 6.1 of TS 34.108	
- Downlink DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH can be used.	
- DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- Secondary CPICH info	Not Present	
- DL channelisation code	This IE is repeated for all existing downlink	
	DPCHs allocated to the UE	
- Secondary scrambling code	1	
- Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical	
	radio parameter sets"	
- Code Number	For each DPCH, assign the same code	
	number in the current code given in cell 1.	
- Scrambling code change	Not Present	
- TPC Combination Index	0	
- SSDT Cell Identity	Not Present	R99 and Rel-4
		only
- Close loop timing adjustment mode	Not Present	
- TFCI Combining Indicator	FALSE	
- SCCPCH information for FACH	Not Present	R99 and Rel-4
		only

MEASUREMENT REPORT (Step 5a)

NOTE 1: UE may optionally include Cell measured results IE for Cell 1

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	UE may optionally include report for Cell 1
- Cell Identity	Checked that this IE is absent
Cell synchronisation information Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
 Intra-frequency measurement event results 	
- Intra-frequency event identity	1b
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

MEASUREMENT REPORT (Step 10a)

NOTE 1: UE may optionally include Cell measured results IE for Cell 2

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
 Intra-frequency measured results 	
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	UE may optionally include report for Cell 2
- Cell Identity	Checked that this IE is absent
Cell synchronisation information Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
 Intra-frequency measurement event results 	
- Intra-frequency event identity	1b
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

8.3.4.1.5 Test requirement

After step 1 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 3 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set additional procedure.

After step 5 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 6 the UE shall transmit a UE CAPABILITY INFORMATION message.

After step 10 the UE shall trans mit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 11 the UE shall trans mit a UE CAPABILITY INFORMATION message.

8.3.4.2 Active set update in soft handover: Radio Link removal

8.3.4.2.1 Definition

8.3.4.2.2 Conformance requirement

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following.

The UE may:

1> maintain a list of the set of cells to which the UE has Radio Links if the IE "Cell ID" is present.

The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information";
- 1> remove the RLs indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;
- 1> perform the physical layer synchronisation procedure B as specified in TS 25.214;
- 1> if the radio link currently considered to be the serving HS-DSCH radio link is indicated in the IE "Radio Link Removal Information":
 - 2> no longer consider any radio link as the serving HS-DSCH radio link;
 - 2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25.
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE COMPLETE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the completion of the Physical Layer synchronisation B, as specified in TS 25.214;

1> the procedure ends on the UE side.

. . .

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.2.3 Test purpose

- 1. To confirm that the UE continues to communicate with the SS on the remaining radio link after radio link removal on the active set.
- 2. To confirm that the UE is not using the removed radio link to communicate with the SS.

8.3.4.2.4 Method of test

Initial Condition

System Simulator: 2 cells - both Cell 1 and Cell 2 are active

Specific Message Contents

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

System Information Block type 11

Use the default system information block with the same type specified in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Intra-frequency measurement reporting criteria	
- Parameters required for each event	3 kinds
- Intra-frequency event identity	1a
- Time to trigger	5000

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.3.4.2

Parameter	Unit	Cell 1				Cel	I 2		
		T0	T1	T2	Т3	T0	T1	T2	T3
UTRARF Channel Number		Mid Range Test Frequency			ency	Mid F	Range Te	st Frequ	ency
CPICH Ec	dBm/3.84MHz	-60	-60	-75	-60	-75	-60	-60	OFF

Table 8.3.4.2 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

At the start of the test, the UE goes to connected mode and establishes a radio access bearer service in the CELL_DCH state in cell 1.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.2. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID).

When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.2. UE shall transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 1 according to IE "Intrafrequency event identity", which is set to '1b' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS remove the radio link from cell 1 and then SS transmits an ACTIVE SET UPDATE message, which includes IE "Radio Link Removal Information" and specifying the P-CPICH information of the cell to be removed.

When the UE receives this message, the UE RRC entity shall request UE L1 entity to terminate transmission and reception of the radio link from cell 1. Then the UE transmits an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

SS shall transmit a UE CAPABILITY ENQUIRY message to confirm that the UE can respond this message through the DPCH in cell 2. The UE shall transmit a UE CAPABILITY INFORMATION message. Then SS transmits a UE CAPABILITY INFORMATION CONFIRM message.

SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.2 so as to generate a radio link failure condition. The UE shall detect the radio link failure UE shall re-select to cell 1 and transmit a CELL UPDATE message. SS transmits a CELL UPDATE CONFIRM message after it receive CELL UPDATE message from UE. Then the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE SS		1	
1				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.2
2	7		MEASUREMENT REPORT	See specific message contents for this message
3	*		ACTIVE SET UPDATE	SS transmits this message in cell 1 on downlink DCCH using AM RLC. The message includes IE "Radio Link Addition Information". (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID in cell 2)
4	→		ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link to cell 2, without interfering with existing connections on the radio link in cell 1.
5				SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.2
6	→		MEASUREMENT REPORT	See specific message contents for this message
7	← A		ACTIVE SET UPD ATE	The SS transmits this message on downlink DCCH using AM RLC which includes IE "Radio Link Removal Information".
8	→		ACTIVE SET UPDATE COMPLETE	The UE shall remove the radio link associated with cell 1.
9	+	-	UE CAPABILITY ENQUIRY	Use default message.

10	\rightarrow	UE CAPABILITY INFORMATION	Use default message.
11	+	UE CAPABILITY INFORMATION CONFIRM	Use default message.
12			SS configures its downlink
			transmission power settings
			according to columns "T3" in
			table 8.3.4.2
13	\rightarrow	CELL UPDATE	UE sends this message in cell
			1.
14	+	CELL UPDATE CONFIRM	See message content.
15	\rightarrow	PHYSICAL CHANNEL RECONFIGURATION	
		COMPLETE	
16	$\leftarrow \rightarrow$	CALL C.3	If the test result of C.3
			indicates that UE is in
			CELL_DCH state, the test
			passes, otherwise it fails.

Specific Message Contents

The contents of SIB11 broadcasted in cell 1 shall be in accordance with the default SIB11 as specified in section 6.1 of TS 34.108:

The contents of SIB12 in cell 1, and SIB11 and SIB12 in cell 2 shall be in accordance with the default SIBs as specified in TS 34.108.

MEASUREMENT REPORT (Step 2)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	11
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	
- Cell Identity	Checked that this IE is absent
Cell synchronisation information Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C- SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
 Intra-frequency measurement event results 	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in Annex A with the following exceptions:

Information Element	Value/remark	Version
Radio link addition information		
- Primary CPICH Info		
- Primary Scrambling Code	Refer to clause titled "Default settings for	
	cell No.2 (FDD)" in clause 6.1 of TS 34.108	
- Downlink DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH can be used.	
- DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- Secondary CPICH info	Not Present	
- DL channelisation code	This IE is repeated for all existing downlink	
	DPCHs allocated to the UE	
- Secondary scrambling code	1	
- Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical	
	radio parameter sets"	
- Code Number	For each DPCH, assign the same code	
	number in the current code given in cell 1.	
- Scrambling code change	Not Present	
- TPC Combination Index	0	
- SSDT Cell Identity	Not Present	R99 and Rel-4
,		only
- Close loop timing adjustment mode	Not Present	,
- TFCI Combining Indicator	FALSE	
- SCCPCH information for FACH	Not Present	R99 and Rel-4
		only

MEASUREMENT REPORT (Step 6)

Information Element	Value/remark
Message Type	
Integrity check info	
 Message authentication code RRC Message sequence number 	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I. This IE is checked to see if it is present. The value is used
	by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
 Intra-frequency measured results list Cell measured results 	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information - CHOICE mode	Checked that this IE is absent FDD
- Primary CPICH info- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
 Cell measured results 	
- Cell Identity	Checked that this IE is absent
Cell synchronisation informationCHOICE mode	Checked that this IE is absent FDD
Primary CPICH infoPrimary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results Event results	Checked that this IE is absent
- CHOICE event result	Intra-frequency measurement event results
 Intra-frequency event identity Cell measurement event results 	1b
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 7)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Radio link removal information	1 radio link to be removed
- Primary CPICH info	
- Primary scrambling code	Set to the same P-CPICH scrambling code assigned for
	cell 1

CELL UPDATE (Step 13)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in TS 34.108, clause 9 with the following exceptions:

Information Element	Value/remark
AM_RLC error indication (RB2, RB3 or RB4)	Not checked
Cell Update Cause	"radio link failure"

CELL UPDATE CONFIRM (Step 14)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
UplinkDPCH Info	Set to the same values as RADIO BEARER SETUP
	message for "Packet to CELL_DCH from CELL_FACH in
	PS" or "Non speech to CELL_DCH from CELL_FACH in
	CS" or "Speech to CELL_DCH from CELL_FACH in CS"
Downlink information common for all radio links	Set to the same values as RADIO BEARER SETUP
	message for "Packet to CELL_DCH from CELL_FACH in
	PS" or "Non speech to CELL_DCH from CELL_FACH in
	CS" or "Speech to CELL_DCH from CELL_FACH in CS"
Downlink information for each radio link list	Set to the same values as RADIO BEARER SETUP
	message for "Packet to CELL_DCH from CELL_FACH in
	PS" or "Non speech to CELL_DCH from CELL_FACH in
	CS" or "Speech to CELL_DCH from CELL_FACH in CS"

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 15)

Use the same message found in TS 34.108 clause 9, with the exceptions of the following IEs:

Information Element	Value/remark		
Uplink counter synchronisation info	This IE is not checked.		

8.3.4.2.5 Test requirement

After step 1 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 3 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set additional procedure.

After step 5 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 7 the UE shall remove the radio link from cell 1 and it shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC.

After step 10 the UE shall trans mit a UE CAPABILITY INFORMATION message.

After step 12 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "radio link failure".

After step 14, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

8.3.4.3 Active set update in soft handover: Combined radio link addition and removal

8.3.4.3.1 Definition

8.3.4.3.2 Conformance requirement

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following. The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information";
- 1> remove the RLs indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;
- 1> perform the physical layer synchronisation procedure B as specified in TS 25.214;

- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE COMPLETE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the completion of the Physical Layer synchronization B, specified in TS 25.214;

. . .

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.3.3 Test purpose

1. To confirm that the UE continues to communicate with the SS on the added radio link and removes radio link which exists prior to the execution of active set update procedure.

8.3.4.3.4 Method of test

Initial Condition

System Simulator: 3 cells- Cell 1, Cell 2 and Cell 3 are active, with downlink transmission power settings according to columns "T0" in table 8.3.4.3.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE [Active set is not full.]

Specific Message Content

For system information block 11 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

System Information Block type 11

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Intra-frequency measurement reporting criteria	
- Parameters required for each event	3 kinds
- Intra-frequency event identity	1a
- Time to trigger	5000

Test Procedure

Table 8.3.4.3

Parameter	Unit	Cell 1				Cell 2			Cell 3							
		T0	T1	T2	T3	T4	T0	T1	T2	T3	T4	T0	T1	T2	T3	T4
UTRARF Channel Number		Mid R	ange -	Γest F	requer	ncy	Mid F	Range	Test F	reque	ncy	Mid R	ange	Test I	Freque	ency
CPICH Ec	dBm/ 3.84 MHz	-60	-60	-60	OFF	-60	-80	-60	-60	OFF	-70	-80	-80	-60	-60	OFF

Table 8.3.4.3 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution.

The UE goes to connected mode and establishes a radio access bearer in the CELL_DCH state in cell 1.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.3. UE transmits a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intrafrequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE in cell 1 an ACTIVE SET UPDATE message which includes IE "Radio Link Addition Information", indicating the addition of cell 2 into the active set, on DCCH using AM RLC.

When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.3. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 3 according to IE "Intra-frequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 3 and then the SS transmits to the UE an ACTIVE SET UPDATE message which includes IE "Radio Link Addition Information" and IE "Radio Link Removal Information", indicating the removal of cell 2 and addition of cell 3 into the active set, on DCCH using AM RLC.

When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links and then the UE removes the radio link specified in an ACTIVE SET UPDATE message. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.3. The UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 1 according to IE "Intra-frequency event identity" which is set to '1b' in the SYSTEM INFORMATION BLOCK TYPE 11.

After the MEASUREMENT REPORT message is received, the SS shall transmit a UE CAPABILITY ENQUIRY message to confirm that the UE can respond to this message through the DPCH in cell 3. The UE shall transmit a UE CAPABILITY INFORMATION message. Then SS transmits a UE CAPABILITY INFORMATION CONFIRM message.

SS configures its downlink transmission power settings according to columns "T4" in table 8.3.4.3. The UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 3 according to IE "Intra-frequency event identity" which is set to '1b' in the SYSTEM INFORMATION BLOCK TYPE 11.

After the MEASUREMENT REPORT is received, the SS shall transmit a UE CAPABILITY ENQUIRY message to confirm that the UE can respond to this message through the DPCH in cell 1. The UE shall transmit a UE CAPABILITY INFORMATION message. Then SS transmits a UE CAPABILITY INFORMATION CONFIRM message.

Expected sequence

Step			Comment
	UE SS		
0a			SS configures the initial active
			set with only cell 1. SS
			configures its downlink
			transmission power settings
			according to columns "T1" in
			table 8.3.4.3
0b	\rightarrow	MEASUREMENT REPORT	See specific message contents
			for this message
0c	←	ACTIVE SET UPDATE	The SS transmits this message
			on downlink DCCH using AM
			RLC which includes IE "Radio
			Link Addition Information" for
			cell 2.
0d	\rightarrow	ACTIVE SET UPDATE COMPLETE	The UE adds the radio link in
			cell 2.
1			SS configures its downlink
			transmission power settings
			according to columns "T2" in
			table 8.3.4.3
2	\rightarrow	MEASUREMENT REPORT	See specific message contents
			for this message
3	+	ACTIVE SET UPD ATE	The SS transmits this message
			on downlink DCCH using AM
			RLC which includes IE "Radio
			Link Addition Information" for
			cell 3 and IE "Radio Link
			Removal Information" for cell 2.
4	\rightarrow	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new
			radio link in cell 3 and removes
			the old radio link in cell 2.
4a			SS configures its downlink
			transmission power settings
			according to columns "T3" in
			table 8.3.4.3
4b	\rightarrow	MEASUREMENT REPORT	See specific message contents
			for this message.
5	+	UE CAPABILITY ENQUIRY	Use default message.
6	\rightarrow	UE CAPABILITY INFORMATION	Use default message.
7	←	UE CAPABILITY INFORMATION CONFIRM	Use default message.
8			SS configures its downlink
			transmission power settings
			according to columns "T4" in
			table 8.3.4.3
8a	\rightarrow	MEASUREMENT REPORT	See specific message contents
			for this message.
9	←	UE CAPABILITY ENQUIRY	Use default message.
10	\rightarrow	UE CAPABILITY INFORMATION	Use default message.
11	+	UE CAPABILITY INFORMATION CONFIRM	Use default message.
L	I		

Specific Message Content

MEASUREMENT REPORT (Step 0b)

NOTE 1: Cell measured results for cells 1 and 2 may appear in either order (i.e. cell 1 then cell 2 or cell 2 then cell 1)

NOTE 2: Cell measured results for cell 3 may or may not be present (depends upon the capability of the UE and test uncertainties in power level)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
 Intra-frequency measured results 	
- Cell measured results	See Note 1
- Cell Identity	Checked that this IE is absent
Cell synchronisation information Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	See Note 2
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	Checked that this IE is absent
Intra-frequency measurement event results Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 0c)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark	Version
Radio link addition information		
- Primary CPICH Info		
- Primary Scrambling Code	Set to same code as assigned for cell 2	
 Downlink DPCH info for each RL 		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH can be used.	
- DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- Secondary CPICH info	Not Present	
- DL channelisation code	This IE is repeated for all existing downlink	
	DPCHs allocated to the UE	
- Secondary scrambling code	1	
- Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical	
	radio parameter sets"	
- Code Number	For each DPCH, assign the same code number	
	in the current code given in cell 1.	
- Scrambling code change	No code change	
- TPC Combination Index	0	
- SSDT Cell Identity	Not Present	R99 and Rel-4
		only
- Close loop timing adjustment mode	Not Present	
- TFCI Combining Indicator	FALSE	
- SCCPCH information for FACH	Not Present	R99 and Rel-4
		only

MEASUREMENT REPORT (Step 2)

NOTE 1: Cell measured results for cells 1, 2 and 3 may appear in any order.

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1 1
Measured Results	
 Intra-frequency measured results 	
- Cell measured results	See Note 1
- Cell Identity	Checked that this IE is absent
Cell synchronisation information Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C- SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	See Note 1
- Cell Identity	Checked that this IE is absent
Cell synchronisation information Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	Checked that this IE is absent
 Intra-frequency measurement event results Intra-frequency event identity 	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark	Version
Radio link addition information		
- Primary CPICH Info		
- Primary Scrambling Code	Set to same code as assigned for cell 3	
- Downlink DPCH info for each RL	_	
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH can be used.	
- DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- Secondary CPICH info	Not Present	
- DL channelisation code	This IE is repeated for all existing downlink	
	DPCHs allocated to the UE	
- Secondary scrambling code	1	
- Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical	
	radio parameter sets"	
- Code Number	For each DPCH, assign the same code number	
	in the current code given in cell 1.	
- Scrambling code change	No code change	
- TPC Combination Index	0	
- SSDT Cell Identity	Not Present	R99 and Rel-4
	l	only
- Close loop timing adjustment mode	Not Present	
- TFCI Combining Indicator	FALSE	
- SCCPCH information for FACH	Not Present	R99 and Rel-4 only
Radio link removal information		
- Primary CPICH Info		
- Primary Scrambling Code	Set to same code as assigned for cell 2	

MEASUREMENT REPORT (Step 4b)

NOTE 1: UE may optionally include Cell measured results IE for Cell 1 and 2.

NOTE 2: Cell measured results for cells 1 and 2 may appear in any order.

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	UE may optionally include report for Cell 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	UE may optionally include report for Cell 2
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	Checked that this IE is absent
- Intra-frequency measurement event results	
- Intra-frequency event identity	1b
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

MEASUREMENT REPORT (Step 8a)

NOTE: UE may optionally include Cell measured results IE for Cell 3.

Information Element	Value/remark				
Message Type					
Integrity check info					
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.				
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.				
Measurement identity	1				
Measured Results					
- Intra-frequency measured results					
- Cell measured results					
- Cell Identity	Checked that this IE is absent				
- Cell synchronisation information	Checked that this IE is absent				
- Primary CPICH info					
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108				
- CPICH Ec/N0	Checked that this IE is absent				
- CPICH RSCP	Checked that this IE is present				
- Pathloss	Checked that this IE is absent				
- Cell measured results					
- Cell Identity	Checked that this IE is absent				
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference				
- Primary CPICH info					
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108				
- CPICH Ec/N0	Checked that this IE is absent				
- CPICH RSCP	Checked that this IE is present				
- Pathloss	Checked that this IE is absent				
- Cell measured results	UE may optionally include report for Cell 3				
- Cell Identity	Checked that this IE is absent				
- Cell synchronisation information	Checked that this IE is absent				
- Primary CPICH info					
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108				
- CPICH Ec/N0	Checked that this IE is absent				
- CPICH RSCP	Checked that this IE is present				
- Pathloss	Checked that this IE is absent				
Measured results on RACH	Checked that this IE is absent				
Additional measured results	Checked that this IE is absent				
Event results	Checked that this IE is absent				
- Intra-frequency measurement event results					
- Intra-frequency event identity	1b				
- Cell measurement event results					
- Primary CPICH info					
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108				

8.3.4.3.5 Test requirement

At step 0a the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 0c the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH.

After step 1 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 3 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH.

After step 4a the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 5 the UE shall transmit a UE CAPABILITY INFORMATION message on the uplink DCCH in cell 3.

After step 8 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 9 the UE shall transmit a UE CAPABILITY INFORMATION message on the uplink DCCH in cell 1.

8.3.4.4 Active set update in soft handover: Invalid Configuration

8.3.4.4.1 Definition

8.3.4.4.2 Conformance requirement

If any of the following conditions are valid:

. . .

a radio link in the IE "Radio link addition information" is also present in the IE "Radio Link Removal Information"; and/or

. . .

- the variable INVALID_CONFIGURATION is set to TRUE:

the UE shall:

- 1> keep the active set as it was before the ACTIVE SET UPDATE message was received;
- 1> transmit an ACTIVE SET UPDATE FAILURE message on the DCCH using AM RLC;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- $1 \!\!> set\ the\ IE\ "failure\ cause"\ to\ "Invalid\ configuration";$
- 1> When the ACTIVE SET UPDATE FAILURE message has been submitted to lower layers for transmission:
 - 2> the procedure ends on the UE side.

Reference

3GPP TS 25.331 clause 8.3.4.5

8.3.4.4.3 Test purpose

1. To confirm that the UE transmits an ACTIVE SET UPDATE FAILURE message on the DCCH using AM RLC, if the received ACTIVE SET UPDATE message includes a radio link which is specified in both IE "Radio Link Addition Information" and IE "Radio Link Removal Information".

8.3.4.4.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.3.4.4

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRARF Channel Number		Mid Range Test		Mid Range Test	
		Frequency		Frequ	iency
CPICH Ec	dBm/3.84MHz	-60	-60	-75	-60

Table 8.3.4.4 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The UE establishes a radio access bearer in the CELL_DCH state in cell 1. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.4. UE shall be triggered to transmit a M EASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. SS then transmits an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the same primary scrambling code in IE "Primary CPICH Info" of both IE "Radio Link Addition Information" and IE "Radio Link Removal Information". When the UE receives this message, it transmits an ACTIVE SET UPDATE FAILURE message which is set to "Invalid configuration" in IE "failure cause" on the uplink DCCH using AM RLC to the SS. UE then send another MEASUREMENT REPORT to SS 4s after step 2. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direc	tion	Message	Comment
	UE	SS		
1				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.4
2)		MEASUREMENT REPORT	
3	*	-	ACTIVE SET UPD ATE	The SS transmits this message on downlink DCCH using AM RLC which includes the same primary scrambling code in IE "Primary CPICH Info" of both IE "Radio Link Addition Information" and IE "Radio Link Removal Information".
4)	•	ACTIVE SET UPDATE FAILURE	The message shall state "Invalid configuration" in IE "failure cause".
5	7	>	MEASUREMENT REPORT	
6	↓.	→	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in the default message content clause, with the following exceptions:

Information Element	Value/remark	Version
Radio link addition information		
- Primary CPICH Info		
- Primary Scrambling Code	Set to same code as assigned for cell 2	
- Downlink DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH can be used.	
- DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- Secondary CPICH info	Not Present	
- DL channelisation code	This IE is repeated for all existing downlink	
	DPCHs allocated to the UE	
- Secondary scrambling code	1	
- Spreading factor	Reference TS 34.108 clause 6.10 Parameter	
	set	
- Code Number	For each DPCH, assign the same code number	
	in the current code given in cell 1.	
- Scrambling code change	Not Present	
- TPC Combination Index	0	
- SSDT Cell Identity	Not Present	R99 and Rel-4
	N . 5	only
- Close loop timing adjustment mode	Not Present	
- TFCI Combining Indicator	FALSE	D00 1D14
- SCCPCH information for FACH	Not Present	R99 and Rel-4 only
Radio link removal information		····,
- Primary CPICH Info		
- Primary Scrambling Code	Set to same code as assigned for cell 2	

ACTIVE SET UPDATE FAILURE (Step 4)

Information Element	Value/remark
Integrity check info	Not Checked
Failure cause	Check to see if it's set to 'Invalid configuration'

8.3.4.4.5 Test requirement

After step 1 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 3 the UE shall transmit an ACTIVE SET UPDATE FAILURE message, setting "Invalid configuration" in IE "failure cause" and sent on the uplink DCCH using AM RLC.

After step 4 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC, 4s after step 2.

8.3.4.5 Active set update in soft handover: Reception of an ACTIVE SET UPDATE message in wrong state

8.3.4.5.1 Definition

8.3.4.5.2 Conformance requirement

If the UE is in another state than CELL_DCH state upon reception of the ACTIVE SET UPDATE message, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> transmit a ACTIVE SET UPDATE FAILURE message on the uplink DCCH using AM RLC;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> set the IE "failure cause" to the cause value "protocol error";
- 1> include the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state";
- 1> when the ACTIVE SET UPDATE FAILURE message has been delivered to lower layers for transmission:
 - 2> continue with any ongoing processes and procedures as if the ACTIVE SET UPDATE message has not been received;
 - 2> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.4.0

8.3.4.5.3 Test purpose

1. To confirm that the UE transmits an ACTIVE SET UPDATE FAILURE message when it receives an ACTIVE SET UPDATE message in any state other then CELL_DCH.

8.3.4.5.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.4.5

Parameter	Unit	Cell 1	Cell 2
UTRARF Channel Number		Mid	Mid
		Range	Range
		Test	Test
		Frequenc	Frequenc
		У	У
CPICH Ec	dBm/3.84MHz	-60	-70

Table 8.3.4.5 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

At the start of the test, the UE establishes a radio access bearer service in the CELL_FACH state in cell 1. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" indicating the addition of cell 2 into the active set. When the UE receives this message, UE shall transmit ACTIVE SET UPDATE FAILURE message, with the IE "failure cause" set to the cause value "protocol error" and includes the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state", on the uplink DCCH using AM RLC. UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically. SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction	Message	Comment
	UE SS]	
0a	←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b	\rightarrow	MEASUREMENT REPORT	
2		Void	
3	+	ACTIVE SET UPDATE	The SS transmits this message on downlink DCCH using AM RLC which includes IE "Radio Link Addition Information".
4)	ACTIVE SET UPD ATE FAILURE	IE "failure cause" set to the cause value "protocol error" and includes the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state".
5	\rightarrow	MEASUREMENT REPORT	
6	←→	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Content

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark	Version
Measurement Identity	1	
Measurement Command	Setup	
Measurement reporting mode		
- Measurement Report Transfer Mode	Acknowledged mode RLC	
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting	
Additional measurement list	Not Present	
CHOICE measurement type	Traffic Volume Measurement	
- Traffic volume measurement object list		
- Uplink transport channel type	RACHorCPCH	R99 and Rel-4
		only
	RACH	Rel-5
- UL Target Transport Channel ID	Not Present	
- Traffic volume measurement quantity		
- Measurement quantity	RLC Buffer Payload	
- Time Interval to take an average or a variance	Not Present	
- Traffic volume reporting quantity		
- RLC Buffer Payload for each RB	True	
- Average of RLC Buffer Payload for each RB	False	
- Variance of RLC Buffer Payload for each RB	False	
- Measurement validity		
- UE state	All states	
- CHOICE Reporting criteria	Periodical Reporting Criteria	
- Amount of reporting	Infinity	
- Reporting interval	8000	
DPCH compressed mode status	Not Present	

MEASUREMENT REPORT (Step 0b and 5)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions and the order in which the RBs are reported is not checked:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	20
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark	Version
Radio link addition information		
- Primary CPICH Info		
- Primary Scrambling Code	Set to same code as assigned for cell 2	
- Downlink DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH can be used.	
- DPCH frame offset	0	
- Secondary CPICH info	Not Present	
- DL channelisation code	This IE is repeated for all existing downlink	
	DPCHs allocated to the UE	
- Secondary scrambling code	1	
- Spreading factor	Reference TS 34.108 clause 6.10 Parameter	
	set	
- Code Number	For each DPCH, assign the same code	
	number in the current code given in cell 1.	
- Scrambling code change	Not Present	
- TPC Combination Index	0	
- SSDT Cell Identity	Not Present	R99 and Rel-4 only
- Close loop timing adjustment mode	Not Present	
- TFCI Combining Indicator	FALSE	
- SCCPCH information for FACH	Not Present	R99 and Rel-4 only

8.3.4.5.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

After step 3 the UE shall transmit an ACTIVE SET UPDATE FAILURE message on the DCCH. In this message, the value "Message not compatible with receiver state" shall be set in IE "Protocol Error Information".

After step 4, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

- 8.3.4.6 Void
- 8.3.4.7 Active set update in soft handover: Invalid Message Reception
- 8.3.4.7.1 Definition
- 8.3.4.7.2 Conformance Requirement

If the ACTIVE SET UPDATE message contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> transmit a ACTIVE SET UPDATE FAILURE message on the uplink DCCH using AM RLC;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Rejected transactions" in the variable TRANSACTIONS; and
- 1> set the IE "failure cause" to the cause value "protocol error";
- 1> include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION;

- 1> when the ACTIVE SET UPDATE FAILURE message has been delivered to lower layers for transmission:
 - 2> continue with any ongoing processes and procedures as if the invalid ACTIVE SET UPDATE message has not been received;
 - 2> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.7.3 Test Purpose

1. To confirm that the UE retains its active set list and transmits an ACTIVE SET UPDATE FAILURE message when it receives an invalid ACTIVE SET UPDATE message.

8.3.4.7.4 Method of test

Initial Condition

System Simulator: 2 cells – both cell 1 and cell 2 are active.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE (Integrity protection algorithm is not applied at the start of test)

Test Procedure

Table 8.3.4.7

Parameter	Unit	Cell 1 Cell 2		12	
		T0	T1	T0	T1
UTRARF Channel Number		Mid Range Test Mid Range Tes		ge Test	
		Frequ	iency	Frequ	iency
CPICH Ec	dBm/3.84MHz	-60	-60	-75	-60

Table 8.3.4.7 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The UE establishes a radio access bearer in CELL_DCH in cell 1. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.7. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. SS transmits an ACTIVE SET UPDATE message which contains an unexpected critical message extension. The UE shall transmit an ACTIVE SET UPDATE FAILURE message, stating the reason "Message extension not comprehended" in the IE "Protocol error information". UE then send another MEASUREMENT REPORT to SS 4s after step 2. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected Sequence

Step	Direc	tion	Message	Comment
	UE	SS		
1				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.7
2	->	>	MEASUREMENT REPORT	See specific Message contents
3	(-	ACTIVE SET UPD ATE	The SS transmits this message on downlink DCCH using AM RLC which does not include any IEs except IE "Message Type"
4	-)		ACTIVE SET UPDATE FAILURE	The message shall state "Message extension not comprehended " in IE "protocol error information".
5	->)	MEASUREMENT REPORT	See specific Message contents
6	←	→	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

MEASUREMENT REPORT (Step 2 &5)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information - Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primaryscrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- Intra-frequency measurement event results	
 Intra-frequency event identity 	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary s crambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 3)

Use the ACTIVE SET UPDATE message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Critical extensions	'FF'H

ACTIVE SET UPDATE FAILURE (Step 4)

Information Element	Value/remark
Protocol Error Information	
- Protocol Error Cause	Message extension not comprehended

8.3.4.7.5 Test Requirement

After step 1 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 3 the UE shall transmit an ACTIVE SET UPDATE FAILURE message on the DCCH. In this message, the value "Message extension not comprehended" shall be set in IE "Protocol Error Information".

After step 4 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC, 4s after step 2.

8.3.4.8 Active set update in soft handover: Radio Link addition in multiple radio link environment

8.3.4.8.1 Definition

8.3.4.8.2 Conformance requirement

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified otherwise in the following. The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information";
- 1> perform the physical layer synchronisation procedure B as specified in TS 25.214;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE COMPLETE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the completion of the Physical Layer synchronization B, specified in TS 25.214;

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.8.3 Test purpose

To confirm that the UE communicates with the SS on all radio link in the active set and keeps the connection when some of the radio links are faded out.

8.3.4.8.4 Method of test

Initial Condition

System Simulator: 4 cells - Cell 1, 2, 3 and 7 are active. The chip-timing between the cells shall always be within ± 148 chip.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.3.4.8-1

Cell	UTRARF Channel Number
Cell 1	Mid Range Test Frequency
Cell 2	Mid Range Test Frequency
Cell 3	Mid Range Test Frequency
Cell 7	Mid Range Test Frequency

Table 8.3.4.8-2

		Time							
Parameter	Unit	T0	T1	T2	T3	T4	T5	T6	T7
Cell 1 CPICH Ec	dBm/3.84MHz	-60	-60	-60	-60	-70	-70	-70	-60
Cell 2 CPICH Ec	dBm/3.84MHz	-70	-60	-60	-60	-60	-70	-70	-70
Cell 3 CPICH Ec	dBm/3.84MHz	-70	-70	-60	-60	-60	-60	-70	-70
Cell 7 CPICH Ec	dBm/3.84MHz	-70	-70	-70	-60	-60	-60	-60	-70

Table 8.3.4.8-1 defines the UTRA RF Channel Number for the different cells. Table 8.3.4.8-2 illustrates the downlink power to be applied for the 4 cells at various time instants of the test execution.

Initially, the UE goes to connected mode and establishes a radio access bearer in CELL_DCH state in cell 1.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.8-2. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2, according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID).

When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC without waiting for the physical channel synchronisation B.

SS shall transmit a UE CAPA BILITY ENQUIRY message to confirm that the UE can respond this message through the DPCH in cell 1 and cell 2. The UE shall transmit a UE CAPABILITY ENQUIRY INFORMATION message. Then SS transmits a UE CAPABILITY INFORMATION CONFIRM message.

SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.8-2. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 3, according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 3 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 and cell 2 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID).

When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links. The UE shall trans mit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC without waiting for the physical channel synchronisation B.

SS shall transmit a UE CAPA BILITY ENQUIRY message to confirm that the UE can respond this message through the DPCH in cell 1, cell 2 and cell 3. The UE shall transmit a UE CAPABILITY ENQUIRY INFORMATION message. Then SS transmits a UE CAPABILITY INFORMATION CONFIRM message.

SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.8-2. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 7, according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 7 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1, cell 2 and cell 3 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID).

When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links. The UE shall trans mit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC without waiting for the physical channel synchronisation B.

SS shall transmit a UE CAPA BILITY ENQUIRY message to confirm that the UE can respond this message through the DPCH in cell 1, cell 2, cell 3 and cell 7. The UE shall transmit a UE CAPABILITY ENQUIRY INFORMATION message. Then SS transmits a UE CAPABILITY INFORMATION CONFIRM message.

SS configures its downlink transmission power settings according to columns "T4" in table 8.3.4.8-2. The UE shall continue to communicate through at least cell 2, cell 3 and cell 7. The UE shall transmit a MEASUREMENT REPORT message which indicates the event '1b' for cell 1.

SS shall transmit a UE CAPA BILITY ENQUIRY message to confirm that the UE can respond this message through the DPCH in cell 2, cell 3 and cell 7. The UE shall transmit a UE CAPABILITY ENQUIRY INFORMATION message. Then SS transmits a UE CAPABILITY INFORMATION CONFIRM message.

SS configures its downlink transmission power settings according to columns "T5" in table 8.3.4.8-2. The UE shall continue to communicate through at least cell 3 and cell 7. The UE shall transmit a MEASUREMENT REPORT message which indicates the event 'lb' for cell 2.

SS shall transmit a UE CAPABILITY ENQUIRY message to confirm that the UE can respond this message through the DPCH in cell 3 and cell 7. The UE shall transmit a UE CAPABILITY ENQUIRY INFORMATION message. Then SS transmits a UE CAPABILITY INFORMATION CONFIRM message.

SS configures its downlink transmission power settings according to columns "T6" in table 8.3.4.8-2. The UE shall continue to communicate through at least cell 7. The UE shall transmit a MEASUREMENT REPORT message which indicates the event 'lb' for cell 3.

SS shall transmit a UE CAPA BILITY ENQUIRY message to confirm that the UE can respond this message through the DPCH in cell 7. The UE shall transmit a UE CAPABILITY ENQUIRY INFORMATION message. Then SS transmits a UE CAPA BILITY INFORMATION CONFIRM.

SS configures its downlink transmission power settings according to columns "T7" in table 8.3.4.8-2. The UE shall continue to communicate through at least cell 1. The UE shall transmit a MEASUREMENT REPORT message which indicates the event 'lb' for cell 7.

SS shall transmit a UE CAPA BILITY ENQUIRY message to confirm that the UE can respond this message through the DPCH in cell 1. The UE shall transmit a UE CAPABILITY ENQUIRY INFORMATION message. Then SS transmits a UE CAPABILITY INFORMATION CONFIRM message.

SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	p Direction		Message	Comment		
-	UE	SS				
1				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.8-2.		
2	1	>	MEASUREMENT REPORT	See specific message contents for this message (event '1a' for cell 2)		
3	•	(ACTIVE SET UPDATE	SS transmits this message in cell 1 on downlink DCCH using AM RLC. The message includes IE "Radio Link Addition Information". (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio link with Primary CPICH info used for the reference ID in cell 2)		
4	-)	ACTIVE SET UPDATE COMPLETE	The UE shall configure new radio link to cell 2 without interfering with existing connections on the radio link in cell 1.		
5	•	_	UE CAPABILITY ENQUIRY	Use default message. Sent on cell 1 and cell 2.		
6	-	>	UE CAPABILITY INFORMATION	Use default message.		
7	←	_	UE CAPABILITY INFORMATION CONFIRM	Use default message.		
8				SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.8-2.		

Step	Direction	Message	Comment		
	UE SS	Ī			
9	\rightarrow	MEASUREMENT REPORT	See specific message contents for this		
			message (event '1a' for cell 3)		
10	←	ACTIVE SET UPDATE	SS transmits this message in cell 1 and cell 2		
			on downlink DCCH using AM RLC. The		
			message includes IE "Radio Link Addition		
			Information". (e.g. Downlink DPCH		
			information and other optional parameters		
			relevant for the additional radio link with		
			Primary CPICH info used for the reference ID		
			in cell 3)		
11	\rightarrow	ACTIVE SET UPDATE COMPLETE	The UE shall configure new radio link to cell 3		
			without interfering with existing connections		
			on the radio links in cell 1 and cell 2.		
12	←	UE CAPABILITY ENQUIRY	Use default message. Sent on cell 1, cell 2		
			and cell 3.		
13	\rightarrow	UE CAPABILITY INFORMATION	Use default message.		
14	←	UE CAPABILITY INFORMATION CONFIRM	Use default message.		
15			SS configures its downlink transmission		
			power settings according to columns "T3" in		
			table 8.3.4.8-2.		

Step	Direction	Message	Comment
	UE SS	_	
16	\rightarrow	MEASUREMENT REPORT	See specific message contents for this
			message (event '1a' for cell 7)
17	+	ACTIVE SET UPDATE	SS transmits this message in cell 1, cell 2 and
			cell 3 on downlink DCCH using AM RLC. The
			message includes IE "Radio Link Addition
			Information". (e.g. Downlink DPCH
			information and other optional parameters
			relevant for the additional radio link with
			Primary CPICH info used for the reference ID
18	→	ACTIVE SET UPDATE COMPLETE	in cell 7) The UE shall configure new radio link to cell 7
10	,	ACTIVE SET OF DATE CONTINUES	without interfering with existing connections
			on the radio links in cell 1, cell 2 and cell 3.
19	+	UE CAPABILITY ENQUIRY	Use default message. Sent on cell 1, cell 2,
	,	oz ora releti i ziradiki	cell 3 and cell 7.
20	\rightarrow	UE CAPABILITY INFORMATION	Use default message.
21	-	UE CAPABILITY INFORMATION CONFIRM	Use default message.
22			SS configures its downlink transmission
			power settings according to columns "T4" in
	,	ME AGUIDENENT DEDORT	table 8.3.4.8-2.
23	\rightarrow	MEASUREMENT REPORT	See specific message contents for this
24	←	UE CAPABILITY ENQUIRY	message (event '1b' for Cell 1) Use default message. Sent on cell 2, cell 3
24	`	OL CAI ADILIT I ENGOINT	and cell 7.
25	\rightarrow	UE CAPABILITY INFORMATION	Use default message.
26	←	UE CAPABILITY INFORMATION CONFIRM	Use default message.
27			SS configures its downlink transmission
			power settings according to columns "T5" in
			table 8.3.4.8-2.
28	\rightarrow	MEASUREMENT REPORT	See specific message contents for this
		LIE OAD ADULTY ENGLUDY	message (event '1b' for Cell 2)
29	←	UE CAPABILITY ENQUIRY	Use default message. Sent on cell 3 and cell 7.
30	\rightarrow	UE CAPABILITY INFORMATION	Use default message.
31	←	UE CAPABILITY INFORMATION CONFIRM	Use default message.
32			SS configures its downlink transmission
			power settings according to columns "T6" in table 8.3.4.8-2.
33	→	MEASUREMENT REPORT	See specific message contents for this
	_	WE TOOKEWENT INCH ON	message (event '1b' for Cell 3)
34	←	UE CAPABILITY ENQUIRY	Use default message. Sent on cell 7.
35	\rightarrow	UE CAPABILITY INFORMATION	Use default message.
36	←	UE CAPABILITY INFORMATION CONFIRM	Use default message.
37			SS configures its downlink transmission
			power settings according to columns "T7" in
	,	ME AGUIDEMENT DECOT	table 8.3.4.8-2.
38	→	MEASUREMENT REPORT	See specific message contents for this message (event '1b' for cell 7)
39	+	UE CAPABILITY ENQUIRY	Use default message. Sent on cell 1.
40	→	UE CAPABILITY INFORMATION	Use default message.
41	←	UE CAPABILITY INFORMATION CONFIRM	Use default message.
42	←→	CALL C.3	If the test result of C.3 indicates that UE is in
			CELL_DCH state, the test passes, otherwise
			it fails.

Specific Message Content

The contents of SIB11 broadcasted in cell 1 shall be in accordance with the default SIB11 as specified in section 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Intra-frequency measurement reporting criteria	Taladii Siladii
- Parameters required for each event	3 kinds
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range Constant	10 (5 dB)
- Cells forbidden to affect Reporting range	Not Present
- W	0 (0.0)
- Hysteresis	0 (0.0)
- Threshold Used Frequency	Not Present
- Reporting deactivation threshold	4
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	4
- Reporting interval	4000
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells
	on used frequency
 Maximum number of reported cells 	4
 Intra-frequency event identity 	1b
- Triggering condition 1	Active set cells
- Triggering condition 2	Not Present
- Reporting Range Constant	10 (5 dB)
 Cells forbidden to affect Reporting range 	Not Present
- W	0 (0.0)
- Hysteresis	0 (0.0)
- Threshold Used Frequency	Not Present
 Reporting deactivation threshold 	Not Present
 Replacement activation threshold 	Not Present
- Time to trigger	640
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells
	on used frequency
 Maximum number of reported cells 	4

The contents of SIB12 in cell 1, and SIB11 and SIB12 in cell 2, cell 3, and cell 7 shall be in accordance with the default SIBs as specified in TS 34.108.

MEASUREMENT REPORT (Step 2)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most
	significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	Cell 1. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
0710117 410	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
Drim any CDICH info	SFIN frame difference
- Primary CPICH info	Defer to clause titled "Default actings for call No.2 (EDD)"
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
CDICH Fo/NO	in clause 6.1 of TS 34.108
- CPICH Ec/N0 - CPICH RSCP	Checked that this IE is absent Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 3. See Note 2
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-
Con Synomonication information	SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 7. See Note 2
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	Defer to cloude sitled "Defeult a strings for sell No. 7 (EDD)"
- Primary scrambling code	Refer to clause titled "Default settings for cell No.7 (FDD)" in clause 6.1 of TS 34.108
CDICH Ec/NO	Checked that this IE is absent
- CPICH Ec/N0 - CPICH RSCP	Checked that this IE is absent Checked that this IE is present
- CPICH RSCP - Pathloss	Checked that this IE is present Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	Oncomed that this in is absent
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	15
- Primary CPICH info	Cell 2.
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
g codo	in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1 and 2 may appear in any order.

NOTE 2: Cell measured results for cells 3 and 7 may or may not be present (depends upon the capability of the UE and test uncertainties in power level). If present they may appear in any order.

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark	Version
Radio link addition information	Cell 2	
- Primary CPICH Info		
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108	
- Downlink DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH can be used.	
- DPCH frame offset	Calculated value from Cell synchronisation information	
- Secondary CPICH info	Not Present	
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE	
- Secondary scrambling code	1	
- Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical radio parameter sets"	
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.	
- Scrambling code change	Not Present	
- TPC Combination Index	0	
- SSDT Cell Identity	Not Present	R99 and Rel-4 only
- Close loop timing adjustment mode	Not Present	
- TFCI Combining Indicator	FALSE	
- SCCPCH information for FACH	Not Present	R99 and Rel-4 only

MEASUREMENT REPORT (Step 9)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is
	compared against the XMAC-I value computed by SS. The
	first/ leftmost bit of the bit string contains the most
	significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used
	by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	Cell 1. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
, ,	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	onooned that the 12 to about
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
a.y corag code	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 3. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-
	SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)"
, ,	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 7. See Note 2
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-
·	SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.7 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	Cell 3.
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)"
	in clause 6.1 of TS 34.108
	0.0000 0.1 01 10 0 11 00

NOTE 1: Cell measured results for cells 1, 2 and 3 may appear in any order.

NOTE 2: Cell measured results for cell 7 may or may not be present (depends upon the capability of the UE and test uncertainties in power level).

ACTIVE SET UPDATE (Step 10)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark	Version
Radio link addition information	Cell 3	
- Primary CPICH Info		
- Primary Scrambling Code	Refer to clause titled "Default settings for cell	
	No.3 (FDD)" in clause 6.1 of TS 34.108	
- Downlink DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH can be used.	
- DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- Secondary CPICH info	Not Present	
- DL channelisation code	This IE is repeated for all existing downlink	
	DPCHs allocated to the UE	
- Secondary scrambling code	1	
- Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical	
	radio parameter sets"	
- Code Number	For each DPCH, assign the same code number	
	in the current code given in cell 1.	
- Scrambling code change	Not Present	
- TPC Combination Index	0	
- SSDT Cell Identity	Not Present	R99 and Rel-4
·		only
- Close loop timing adjustment mode	Not Present	_
- TFCI Combining Indicator	FALSE	
- SCCPCH information for FACH	Not Present	R99 and Rel-4
		only

MEASUREMENT REPORT (Step 16)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is
	compared against the XMAC-I value computed by SS. The
	first/ leftmost bit of the bit string contains the most
	significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used
	by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Cell 1. See Note 1
- Cell measured results - Cell Identity	Checked that this IE is absent
- Cell identity - Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	Checked that this ie is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
I many conditioning code	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 3. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info - Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)"
- Fillinary Sciambling Code	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 7. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-
	SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.7 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- Intra-frequency measurement event results	10
Intra-frequency event identity Cell measurement event results	1a
- Cell measurement event results - Primary CPICH info	Cell 7.
- Primary CPICH IIIIo - Primary scrambling code	Refer to clause titled "Default settings for cell No.7 (FDD)"
1 milary columning code	in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1, 2, 3 and 7 may appear in any order.

ACTIVE SET UPDATE (Step 17)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark	Version
Radio link addition information	Cell 7	
- Primary CPICH Info		
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.7 (FDD)" in clause 6.1 of TS 34.108	
- Downlink DPCH info for each RI	110.7 (1 DD) 111 clause 0.1 of 13 34.100	
	FDD	
- CHOICE mode	i — —	
- Primary CPICH usage for channel estimation	P-CPICH can be used.	
- DPCH frame offset	Calculated value from Cell synchronisation information	
- Secondary CPICH info	Not Present	
- DL channelisation code	This IE is repeated for all existing downlink	
	DPCHs allocated to the UE	
- Secondary scrambling code	1	
- Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical	
3	radio parameter sets"	
- Code Number	For each DPCH, assign the same code number	
	in the current code given in cell 1.	
- Scrambling code change	Not Present	
- TPC Combination Index	0	
- SSDT Cell Identity	Not Present	R99 and Rel-4
- 33DT Cell Identity	Not i lesent	
Class last timing adjustment made	Not Propert	only
- Close loop timing adjustment mode	Not Present	
- TFCI Combining Indicator	FALSE	D00 D - 4
- SCCPCH information for FACH	Not Present	R99 and Rel-4 only

MEASUREMENT REPORT (Step 23)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	Cell 2. See Note 1.
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
ODIOLIE ALO	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 3. See Note 1
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information Primary CPICH info 	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 7. See Note 1
- Cell Identity	Checked that this IE is absent Checked that this IE is absent
Cell synchronisation information Primary CPICH info	Checked that this ie is absent
- Primary crieffillio	Refer to clause titled "Default settings for cell No.7 (FDD)"
- 1 minary scrambling code	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is absent
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 1. See Note 2
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
 Intra-frequency measurement event results 	
 Intra-frequency event identity 	1b
- Cell measurement event results	
- Primary CPICH info	Cell 1.
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
	in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 2, 3 and 7 may appear in any order.

NOTE 2: Cell measured results for cell 1 may or may not be present (depends upon the capability of the UE and test uncertainties in power level).

MEASUREMENT REPORT (Step 28)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	Cell 3. See Note 1.
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)"
ODIOLI E ALO	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 7. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information - Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.7 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 1. See Note 2
- Cell Identity	Checked that this IE is absent Checked that this IE is absent
- Cell synchronisation information - Primary CPICH info	Checked that this ie is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
- 1 minary scrambling code	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. See Note 2
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
 Intra-frequency measurement event results 	
 Intra-frequency event identity 	1b
- Cell measurement event results	
- Primary CPICH info	Cell 2.
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
	III Clause 0.1 01 13 34.100

NOTE 1: Cell measured results for cells 3 and 7 may appear in any order.

NOTE 2: Cell measured results for cell 1 and cell 2 may or may not be present (depends upon the capability of the UE and test uncertainties in power level). If present they may appear in any order.

MEASUREMENT REPORT (Step 33)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity Measured Results	1
- Intra-frequency measured results	
- Cell measured results	Cell 7.
- Cell Identity	Checked that this IE is absent
,	Checked that this IE is absent
- Cell synchronisation information	Checked that this ie is absent
- Primary CPICH info - Primary scrambling code	Refer to clause titled "Default settings for cell No.7 (FDD)"
- Fillinary Scrambling Code	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	
	Checked that this IE is present
- Pathloss - Cell measured results	Checked that this IE is absent Cell 1. See Note 1
	Checked that this IE is absent
- Cell Identity	
- Cell synchronisation information - Primary CPICH info	Checked that this IE is absent
	Defer to clause titled "Default a attinge for call No. 1 (EDD)"
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
ODIOLI E - /NO	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	Defer to clause titled "Default a attinge for call No. 2 (EDD)"
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
- CPICH Ec/N0	in clause 6.1 of TS 34.108
- CPICH EC/NU - CPICH RSCP	Checked that this IE is absent
	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 3. See Note 1 Checked that this IE is absent
- Cell Identity - Cell synchronisation information	
	Checked that this IE is absent
- Primary CPICH info	Refer to close a titled "Default settings for sell No.2 (EDD)"
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH EC/NU - CPICH RSCP	
- CPICH RSCP - Pathloss	Checked that this IE is present Checked that this IE is absent
Measured results on RACH	
Additional measured results	Checked that this IE is absent Checked that this IE is absent
Event results	CHECKER MAT MIS IE IS ADSEM
- Intra-frequency measurement event results	16
- Intra-frequency event identity	1b
Cell measurement event results Primary CPICH info	Cell 3.
	Refer to clause titled "Default settings for cell No.3 (FDD)"
- Primary scrambling code	in clause 6.1 of TS 34.108
	III Clause 0.1 ULTS 34.100

NOTE 1: Cell measured results for cells 1. 2 and 3 may or may not be present (depends upon the capability of the UE and test uncertainties in power level). If present they may appear in any order.

MEASUREMENT REPORT (Step 38)

Integrity check info This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. first/ leftmost bit of the bit string contains the most significant bit of the MAC-I. This IE is checked to see if it is present. The value is compared against the MAC-I. This IE is checked to see if it is present. The value is by SS to compute the XMAC-I value. Measurement identity	sed
- Message authentication code This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. first leftmost bit of the bit string contains the most significant bit of the bit string contains the most significant bit of the MAC-I. This IE is checked to see if it is present. The value is by SS to compute the XMAC-I value. Measurement identity Measured Results - Intra-frequency measured results - Cell measured results - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell Identity - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH BSCP - Pathloss - CPICH Ec/N0 - CPICH Ec/N0 - CPICH HSCP - Pathloss - CPICH Ec/N0 - CPICH BSCP - Pathloss - CPICH Ec/N0 - CPICH RSCP - Pathloss - CPICH Ec/N0 - CPICH RSCP - Pathloss - CPICH Ec/N0 - CPICH RSCP - Pathloss - CPICH BSCP - Pathlos - CPICH BSCP - Pathlos - CPICH BSCP	sed
compared against the XMAC-I value computed by SS. first leftmost bit of the bit string contains the most significant bit of the MAC-I. This IE is checked to see if it is present. The value is by SS to compute the XMAC-I value. Measurement identity Measured Results Intra-frequency measured results Cell measured results Cell synchronisation information Primary CPICH info Primary scrambling code CPICH Ec/N0 Cell ceked that this IE is absent Cell dentity Cell synchronisation information Checked that this IE is absent Cell measured results Cell 2. See Note 1 Checked that this IE is absent	sed
- RRC Message sequence number Measurement identity Measured Results - Intra-frequency measured results - Cell measured results - Cell synchronisation information - Primary CPICH info - Pathloss - Cell Identity - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH Bascp - Cell dentity - Cell synchronisation information - Primary CPICH info - Pathloss - CPICH Ec/N0 - CPICH Ec/N0 - CPICH RSCP - Pathloss - CPICH Identity - Cell synchronisation information - Primary CPICH info - Primary CPICH info - Primary CPICH info - CPICH Ec/N0 - CPICH RSCP - Pathloss - CPICH Ec/N0 - CPICH E	
Measured Results - Intra-frequency measured results - Cell measured results - Cell dentity - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell identity - Cell synchronisation information - Primary CPICH info - Primary Scrambling code - CPICH RSCP - Pathloss - Cell dentity - Cell synchronisation information - Primary CPICH info - Primary Scrambling code - CPICH Ec/N0 - Cell synchronisation information - Primary CPICH info - Primary Scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - CPICH Ec/N0 - CPICH Ec/N0 - CPICH RSCP - Pathloss - CPICH Ec/N0 -	"(ח
- Intra-frequency measured results - Cell measured results - Cell dentity - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell dentity - Cell synchronisation information - Primary Scrambling code - CPICH Ec/N0 - CPICH measured results - Cell dentity - Cell synchronisation information - Primary CPICH info - Primary Scrambling code - CPICH Ec/N0 - CPICH Ec/N0 - Cell synchronisation information - Primary CPICH info - Primary CPICH info - CPICH measured results - CPI	"(ח
- Cell measured results - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - Pathloss - Cell dentity - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH RSCP - Pathloss - Cell dentity - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH Ec/N0 - CPICH Ec/N0 - CPICH SCP - Pathloss - CPICH Ec/N0 - CPICH Ec/N0 - CPICH Ec/N0 - CPICH RSCP - Pathloss - CPICH Ec/N0 - CPICH RSCP - Pathloss - CPICH Ec/N0 - CPICH RSCP - Pathloss - CPICH Ec/N0 - CPICH SCP - CPICH Ec/N0 - CPICH SCP - Pathloss - CPICH Ec/N0 - CPICH SCP - Pathloss - CPICH Ec/N0 -	ח)"
- Cell Identity - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell Identity - Cell synchronisation information - Primary CPICH info - Primary Scrambling code - CPICH RSCP - Pathloss - Cell Identity - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH Ec/N0 - CPICH RSCP - Pathloss - CPICH Ec/N0 - CPICH RSCP - Pathloss - CPICH RSCP	"וח
- Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell Identity - Cell synchronisation information - Primary CPICH info - Primary Scrambling code - Cell RSCP - Pathloss - Cell reasured results - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell synchronisation information - Primary scrambling code - CPICH RSCP - Pathloss - Cell measured results - Cell synchronisation information - Primary CPICH info - Primary CPICH info - CPICH RSCP - Pathloss - Cell measured results - Cell synchronisation information - Primary CPICH info - CPICH Ec/N0 - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell synchronisation information - Primary CPICH info	ח)"
- Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell dentity - Cell synchronisation information - Primary CPICH info - CPICH Ec/N0 - CPICH RSCP - Cell dentity - Cell synchronisation de code - CPICH Ec/N0 - CPICH Ec/N0 - CPICH RSCP - Pathloss - CPICH RSCP - CPICH RSCP - CPICH Ec/N0 - CPICH RSCP - Pathloss - CPICH RSCP - Pathloss - CPICH RSCP	"(ח
in clause 6.1 of TS 34.108 - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell measured results - Cell synchronisation information - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell measured results - Cell synchronisation information - Primary CPICH info - CPICH RSCP - Pathloss - Cell measured results - Cell synchronisation information - Primary CPICH info	"וח
- CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - Cell synchronisation information - Primary CPICH info - CPICH Ec/N0 - CPICH RSCP - Pathloss - CPICH Ec/N0 - CPICH RSCP - Pathloss - CPICH RSCP - Pathloss - Cell dentity - Cell synchronisation information - Primary CPICH info - Primary CPICH info - CPICH RSCP - Pathloss - Cell measured results - Cell ldentity - Cell synchronisation information - Primary CPICH info - CPICH RSCP - Pathloss - Cell measured results - Cell synchronisation information - Primary CPICH info - Checked that this IE is absent	ر ر
- CPICH RSCP - Pathloss - Cell measured results - Cell Identity - Cell synchronisation information - Primary CPICH info - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - CPICH RSCP - Pathloss - Cell measured results - Cell measured results - Cell measured results - Cell measured results - Cell synchronisation information - Primary CPICH info - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell synchronisation information - Primary CPICH info Checked that this IE is absent - Checked that this IE is absent	
- Pathloss - Cell measured results - Cell Identity - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell measured results - Cell measured results - Cell synchronisation information - Primary CPICH info - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell synchronisation information - Primary CPICH info - Checked that this IE is absent	
- Cell measured results - Cell Identity - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - Cell synchronisation information - Cell synchronisation information - Cell synchronisation information - Primary CPICH info	
- Cell Identity - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell synchronisation information - Primary CPICH info - Cell synchronisation information - Primary CPICH info - Cell synchronisation information - Primary CPICH info	
- Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - Cell synchronisation information - Primary CPICH info - Cell synchronisation information - Primary CPICH info	
- Primary CPICH info - Primary scrambling code Refer to clause titled "Default settings for cell No.2 (FE in clause 6.1 of TS 34.108 - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - Cell synchronisation information - Primary CPICH info	
- Primary scrambling code Refer to clause titled "Default settings for cell No.2 (FE in clause 6.1 of TS 34.108 - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - Cell synchronisation information - Primary CPICH info	
in clause 6.1 of TS 34.108 - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - Cell synchronisation information - Primary CPICH info	D \"
- CPICH Ec/N0 - CPICH RSCP - Checked that this IE is absent - Pathloss - Cell measured results - Cell Identity - Cell synchronisation information - Primary CPICH info	D)"
- CPICH RSCP - Pathloss - Cell measured results - Cell Identity - Cell synchronisation information - Primary CPICH info	
- Pathloss Checked that this IE is absent - Cell measured results Cell 3. See Note 1 - Cell Identity Checked that this IE is absent - Cell synchronisation information - Primary CPICH info	
- Cell measured results - Cell Identity - Cell synchronisation information - Primary CPICH info	
- Cell Identity - Cell synchronisation information - Primary CPICH info Checked that this IE is absent Checked that this IE is absent	
- Cell synchronisation information - Primary CPICH info	
- Primary scrambling code Refer to clause titled "Default settings for cell No.3 (FD	D)"
in clause 6.1 of TS 34.108	
- CPICH Ec/N0 Checked that this IE is absent	
- CPICH RSCP Checked that this IE is present	
- Pathloss Checked that this IE is absent	
- Cell measured results Cell 7. See Note 1	
- Cell Identity Checked that this IE is absent	
- Cell synchronisation information Checked that this IE is absent	
- Primary CPICH info	"עם
- Primary scrambling code Refer to clause titled "Default settings for cell No.7 (FD in clause 6.1 of TS 34.108	(ט
- CPICH Ec/N0 Checked that this IE is absent	
- CPICH RSCP Checked that this IE is absent	
- Pathloss Checked that this IE is present	
Measured results on RACH Checked that this IE is absent	
Additional measured results Checked that this IE is absent	
Event results	
- Intra-frequency measurement event results	
- Intra-frequency event identity 1b	
- Cell measurement event results	
- Primary CPICH info Cell 7.	
- Primary scrambling code Refer to clause titled "Default settings for cell No.7 (FD	
in clause 6.1 of TS 34.108	D)"

NOTE 1: Cell measured results for cells 2, 3 and 7 may or may not be present (depends upon the capability of the UE and test uncertainties in power level). If present they may appear in any order.

8.3.4.8.5 Test requirement

After step 1 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 3 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set additional procedure.

After step 5 the UE shall transmit a UE CAPABILITY INFORMATION message.

After step 8 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 10 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set additional procedure.

After step 12 the UE shall trans mit a UE CAPABILITY INFORMATION message.

After step 15 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 17 the UE shall trans mit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set additional procedure.

After step 19 the UE shall trans mit a UE CAPABILITY INFORMATION message.

After step 22 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 24 the UE shall trans mit a UE CAPABILITY INFORMATION message.

After step 27 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 29 the UE shall trans mit a UE CAPABILITY INFORMATION message.

After step 32 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 34 the UE shall trans mit a UE CAPABILITY INFORMATION message.

After step 37 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 39 the UE shall trans mit a UE CAPABILITY INFORMATION message.

8.3.4.9 Active set update in soft handover: Radio Link removal (stop of HS-PDSCH reception)

8.3.4.9.1 Definition and applicability

All UEs which support FDD and HS-PDSCH.

8.3.4.9.2 Conformance requirement

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following. The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information";
- 1> remove the RLs indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;
- 1> perform the physical layer synchronisation procedure B as specified in TS 25.214;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE COMPLETE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the completion of the Physical Layer synchronization B, specified in TS 25.214;

. . .

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.9.3 Test purpose

- 1. To confirm that the UE continues to communicate with the SS on the remaining radio link after radio link removal on the active set.
- 2. To confirm that UE removes the HS-PDSCH configuration when the serving HS-DSCH radio link is removed.
- 3. To confirm that the UE is not using the removed radio link to communicate with the SS.

8.3.4.9.4 Method of test

Initial Condition

System Simulator: 2 cells - both Cell 1 and Cell 2 are active

Specific Message Contents

System Information Block type 11

Use the default system information block with the same type specified in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Intra-frequency measurement reporting criteria	
- Parameters required for each event	3 kinds
- Intra-frequency event identity	1a
- Time to trigger	5000

UE: PS-DCCH+DTCH_DCH_HSDSCH (state 6-17) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.4.9

Parameter	Unit	Cell 1			Cell 2		12		
		T0	T1	T2	T3	T0	T 1	T2	T3
UTRARF Channel Number		Mid Range Test Frequency Mid Range Test Fre			st Frequ	ency			
CPICH Ec	dBm/3.84MHz	-60	-60	-75	-60	-75	-60	-60	OFF

Table 8.3.4.9 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

At the start of the test, the UE is in CELL_DCH state and has a radio bearer mapped on HS-DSCH established in cell 1.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.9. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID).

When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.9. UE shall transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 1 according to IE "Intrafrequency event identity", which is set to '1b' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS remove the radio link from cell 1 and then SS transmits an

ACTIVE SET UPDATE message, which includes IE "Radio Link Removal Information" and specifying the P-CPICH information of the cell to be removed.

When the UE receives this message, the UE RRC entity shall request UE L1 entity to terminate transmission and reception of the radio link from cell 1. Then the UE transmits an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

SS shall transmit a UE CAPA BILITY ENQUIRY message to confirm that the UE can respond this message through the DPCH in cell 2. The UE shall transmit a UE CAPABILITY INFORMATION message. Then SS transmits a UE CAPABILITY INFORMATION CONFIRM message.

SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.9 so as to generate a radio link failure condition. The UE shall detect the radio link failure UE shall re-select to cell 1 and transmit a CELL UPDATE message. SS transmits a CELL UPDATE CONFIRM message after it receive CELL UPDATE message from UE. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities..

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1			SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.9
2	→	MEASUREMENT REPORT	See specific message contents for this message
3	+	ACTIVE SET UPDATE	SS transmits this message in cell 1 on downlink DCCH using AM RLC. The message includes IE "Radio Link Addition Information". (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID in cell 2)
4	→	ACTIVE SET UPD ATE COMPLETE	The UE shall configure a new radio link to cell 2, without interfering with existing connections on the radio link in cell 1.
5			SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.9
6	→	MEASUREMENT REPORT	See specific message contents for this message
7	+	ACTIVE SET UPD ATE	The SS transmits this message on downlink DCCH using AM RLC which indudes IE "Radio Link Removal Information".
8	\rightarrow	ACTIVE SET UPD ATE COMPLETE	The UE shall remove the radio link associated with cell 1 and stop HS-PDSCH reception.
9	+	UE CAPABILITY ENQUIRY	Use default message.

10	\rightarrow	UE CAPABILITY INFORMATION	Use default message.
11	←	UE CAPABILITY INFORMATION CONFIRM	Use default message.
12			SS configures its downlink
			transmission power settings
			according to columns "T3" in
			table 8.3.4.9
13	\rightarrow	CELL UPDATE	UE sends this message in cell
			1.
14	-	CELL UPDATE CONFIRM	See message content.
15	\rightarrow	UTRAN MOBILITY INFORMATION	
		CONFIRM	

Specific Message Contents

MEASUREMENT REPORT (Step 2)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	Defends alone without IID of suits attinger for soil N = 0 (EDD).
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 3)

Information Element	Value/remark	Version
Radio link addition information		
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 2	
- Downlink DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH may be used.	
- DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- Secondary CPICH info	Not present	
- DL channelisation code	This IE is repeated for all existing downlink	
	DPCHs allocated to the UE	
- Secondary s crambling code	1	
- Spreading factor	Refer to the parameter set in TS 34.108	
- Code number	For each DPCH, assign the same code number	
	in the current code given in cell 1.	
- Scrambling code change	Not present	
- TPC combination index	0	
- SSDT cell identity	Not present	R99 and Rel-4
		only
 Close loop timing adjustment mode 	Not present	
- TFCI combining indicator	FALSE	
- SCCPCH information for FACH	Not present	R99 and Rel-4
		only

MEASUREMENT REPORT (Step 6)

Information Element	Value/remark
Message Type	
Integrity check info	
 Message authentication code RRC Message sequence number 	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I. This IE is checked to see if it is present. The value is used
	by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
 Intra-frequency measured results list Cell measured results 	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information - CHOICE mode	Checked that this IE is absent FDD
 Primary CPICH info Primary scrambling code 	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
Cell synchronisation informationCHOICE mode	Checked that this IE is absent FDD
- Primary CPICH info- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results Event results	Checked that this IE is absent
- CHOICE event result	Intra-frequency measurement event results
 Intra-frequency event identity Cell measurement event results 	1b
- CHOICE mode - Primary CPICH info	FDD
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 7)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Radio link removal information	1 radio link to be removed
- Primary CPICH info	
- Primary scrambling code	Set to the same P-CPICH scrambling code assigned for
	cell 1

CELL UPDATE (Step 13)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in TS 34.108, clause 9 with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"radio link failure"

CELL UPDATE CONFIRM (Step 14)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'

8.3.4.9.5 Test requirement

After step 1 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 3 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set additional procedure.

After step 5 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 7 the UE shall remove the radio link from cell 1 and it shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC. UE shall stop HS-DSCH reception.

After step 10 the UE shall trans mit a UE CAPABILITY INFORMATION message.

After step 12 the UE shall trans mit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "radio link failure".

After step 14, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

8.3.4.10 Active set update in soft handover: Radio Link addition and serving HS-DSCH / E-DCH cell change

8.3.4.10.1 Definition and applicability

All UEs which support FDD and HS-PDSCH and E-DPDCH.

8.3.4.10.2 Conformance requirement

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified otherwise in the following. The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information";
- 1> perform the physical layer synchronisation procedure B as specified in TS 25.214;

. . .

- 1> if the IE "E-HICH information" is included:
 - 2> store this E-HICH configuration for the concerning radio link.
- 1> if the IE "E-HICH information" is included:
 - 2> store this E-RGCH configuration for the concerning radio link, if included.
- 1> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28 in TS 25.331;
- 1> if the radio link currently considered to be the serving HS-DSCH radio link is indicated in the IE "Radio Link Removal Information":
 - 2> no longer consider any radio link as the serving HS-DSCH radio link;
 - 2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25 in TS 25.331.
- 1> if "Serving HS-DSCH cell information" IE is present, act on received information elements as specified in subclause 8.6 in TS 25.331:

- 2> if the IEs " Δ_{ACK} ", " Δ_{NACK} ", and "HARQ_preamble_mode" are present, act on the received information elements;
- 2> if the new H-RNTI and "Primary CPICH info" are included:
 - 3> consider the cell indicated in Primary CPICH as serving HS-DSCH cell and no longer consider any other radio link as serving HS-DSCH cell.
- 2> if the IE "MAC-hs reset indicator" is included:
 - 3> reset the MAC-hs entity.
- 2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25 in TS 25.331.
- 1> if the IE "E-DCH reconfiguration information" is included:
 - 2> if the IE "E-DCH RL In fo other cells" is present:
 - 3> if the IE "E-HICH Information" is present:
 - 4> store the E-HICH and E-RGCH information (if present), contained therein, for the indicated radio link.
 - 3> if the IE "E-HICH release indicator" is present:
 - 4> delete the stored E-HICH, E-AGCH and E-RGCH (if any) configurations.
 - 3> if the IE "E-RGCH release indicator" is set present:
 - 4> delete the stored E-RGCH configuration for this RL.
 - 2> if the IE "E-DCH RL Info new serving cell" is present:
 - 3> consider the cell indicated in "Primary CPICH info" as serving E-DCH radio link and no longer consider any other radio link as serving E-DCH radio link;
 - 3> store the E-HICH and E-RGCH information (if present), contained therein, for the new serving E-DCH radio link;
 - 3> if the IE "E-RGCH release indicator" is present:
 - 4> delete the stored E-RGCH configuration for this RL.
 - 3> store the newly received E-A GCH configuration.
 - 2> if the IEs "E-DPCCH/DPCCH power offset" and/or "Reference E-TFCI PO" and/or "Power offset for scheduling info" are present, act on the received information elements.
 - 2> if the serving E-DCH radio link was another radio link than this radio link prior to reception of the message:
 - 3> if the IE "New Primary E-RNTI" is not included:
 - 4> clear the Primary E-RNTI stored in the variable E RNTI.
 - 3> if the IE "New Secondary E-RNTI" is not included:
 - 4> clear the Secondary E-RNTI stored in the variable E_RNTI.
- 1> if the radio link currently considered to be the serving E-DCH radio link is indicated in the IE "Radio Link Removal Information":
 - 2> no longer consider any radio link as the serving E-DCH radio link.

. . .

- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE COMPLETE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the completion of the Physical Layer synchronization B, specified in TS 25.214;

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.10.3 Test purpose

To confirm that the UE performs a radio link addition with serving HS-DSCH / E-DCH serving cell change according to the received ACTIVE SET UPDATE message.

8.3.4.10.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active

UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-18) under condition A13, as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports HS-PDSCH
- UE supports E-DPDCH

Test Procedure

Table 8.3.4.10

Parameter	Unit	Cell 1		Cell 2		
		T0	T1	T0	T1	
UTRARF Channel Number		Mid Range Test Frequency		Mid Ran Frequ	•	
CPICH Ec	dBm/3.84MHz	-60	-70	-70	-60	

Table 8.3.4.10 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The downlink transmission power is set according to values in column "T0" in table 8.3.4.10. The UE has a radio bearer mapped to the E-DCH/HS-DSCH and the signalling radio bearers mapped on E-DCH/DCH in cell 1.

The SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.10. The UE transmits a MEASUREMENT REPORT message, which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity" set to 1a.

The SS trans mits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which adds a second radio link in cell 2 and also changes the E-DCH and HS-DSCH serving cell to cell 2. When the UE receives this message, the UE shall configure layer 1 to begin reception on DPCH as well as E-DCH transmission and HS-DSCH reception using the new radio link in cell 2. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

To check that the UE is sending to both cells of the active set, the SS triggers the UE to send a UE CAPABILITY INFORMATION which it receives from the other cells than it has received the ACTIVE SET UPDATE COMPLETE.

SS calls for generic procedure C.3 to check that the UE is in CELL DCH state.

Expected sequence

Step	Direction	Message	Comment
	UE SS	1	
1		Void	
2		Void	
3	SS		SS configures its downlink transmission power settings according to columns "T1" in table
			8.3.4.10
4	→	MEASUREMENT REPORT	See specific message contents for this message
5	\	ACTIVE SET UPDATE	The SS instructs the UE to add cell 2 in the active set and perform a serving E-DCH and HS-DSCH cell change to cell 2
6	SS		At the activation time, the SS changes the serving E-DCH and HS-DSCH radio link to cell 2 and performs MAC-hs reset.
7	→	ACTIVE SET UPD ATE COMPLETE	The UE adds the radio link in cell 2 and performs a serving E-DCH and HS-DSCH cell change to cell 2. SS receives this message from cell 2.
7a			SS is reconfigured to listen on cell
7b	+	UE CAPABILITY ENQUIRY	
7c	→	UE CAPABILITY INFORMATION	SS receives this message from cell 1
7d	+	UE CAPABILITY INFORMATION CONFIRM	
8	←→	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

MEASUREMENT REPORT (Step 4)

Use the same message as specified in 34.108 except for the following:

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
Cell synchronisation information Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	onostica and in in in about
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 5)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark	Version
Activation time	(256+CFN-(CFN MOD 8 + 8)) MOD 256	
New H-RNTI	'0101 0101 0101 0101'	
New Primary E-RNTI	'0101 0101 0101 0101'	
Radio link addition information		
- Primary CPICH Info		
- Primary Scrambling Code	Refer to clause titled "Default settings for cell	
	No.2 (FDD)" in clause 6.1 of TS 34.108	
- Downlink DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH can be used.	
- DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- Secondary CPICH info	Not Present	
- DL channelisation code	This IE is repeated for all existing downlink	

I	DPCHs allocated to the UE	į
- Secondary scrambling code	1	
- Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical	
- Opreading factor	radio parameter sets"	
- Code Number	For each DPCH, assign the same code	
- Gode Number	number in the current code given in cell 1.	
- Scrambling code change	Not Present	
- TPC Combination Index	1	
- Close loop timing adjustment mode	Not Present	
- TFCI Combining Indicator	FALSE	
- E-HICH Information	I ALGE	
- Channelisation code	4	
- Signature sequence	1	
- CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequence - RG combination index	0	
	0	
Serving HS-DSCH cell information	Not Propert	
- AACK	Not Present	
- Anack	Not Present	
- HARQ_preamble_mode	0	
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- Downlink HS-PDSCH Information		
- HS-SCCH Info	50.0	
- CHOICE mode	FDD	
- DL Scrambling Code	Not Present	
- HS-SCCH Channelisation Code		
Information	_	
- HS-SCCH Channelisation Code	7	
- Measurement Feedback Info		
- CHOICE mode	FDD	
- Measurement Power Offset	6 dB	
- CQI Feedback cycle, k	4 ms	
- CQI repetition factor	1	
- Δ _{CQI}	5 (corresponds to 0dB in relative power offset)	
- CHOICE mode	FDD (no data)	
- HARQ Info	Not Present	
- MAC-hs reset indicator	TRUE	
E-DCH reconfiguration information		
- E-DCH RL Info new serving cell		
- Primary CPICH info	0-44-4	
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- E-AGCH Info	10	
- E-AGCH Channelisation Code	10	
- Serving Grant	Not Present	
- E-DPCCH/DPCCH power offset	Not Present	
- Reference E-TFCIs	Not present	
- Power Offset for Scheduling Info	Not Present	
- 3-Index-Step Threshold	Not Present	
- 2-Index-Step Threshold	Not Present	
- E-HICH Information	Not Present	
- CHOICE E-RGCH Information	Not Present	
- E-DCH RL Info other cells	Not Present	

8.3.4.10.5 Test requirement

After step 3 the UE shall transmit a MEASUREMENT REPORT message.

After step 6 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message.

8.3.4.11 Active set update in soft handover: Radio Link addition/removal and serving HS-DSCH / E-DCH cell change, with discontinuous uplink transmission

8.3.4.11.1 Definition and applicability

All UEs which support FDD and UL DTX

8.3.4.11.2 Conformance requirement

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following.

The UE may:

1> maintain a list of the set of cells to which the UE has Radio Links if the IE "Cell ID" is present.

The UE shall:

1> first add the RLs indicated in the IE "Radio Link Addition Information";

. .

- 1> transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the completion of the Physical Layer synchronisation B, as specified in TS 25.214;
- 1> the procedure ends on the UE side.

. . .

- 1> if any of the IEs "DTX-DRX timing information" or "DTX-DRX information" are stored in the UE:
 - 2> determine the value for the DTX_DRX_STATUS variable and take the corresponding actions as described in subclause 8.5.34.

...

If the UE receives RRC CONNECTION SETUP, ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message:

1> the UE shall determine the value for the DTX_DRX_STATUS variable.

The variable DTX_DRX_STATUS shall be set to TRUE only when all the following conditions are met:

- 1> the UE is in CELL_DCH state;
- 1> both variables HS_DSCH RECEPTION and E_DCH_TRANSMISSION are set to TRUE;
- 1> no DCH transport channel is configured;
- 1> the variable DTX_DRX_PARAMS is set;
- 1> the UE has received the IE "DTX-DRX timing information".

If any of the above conditions is not met and the variable DTX_DRX_STATUS is set to TRUE, the UE shall:

- 1> set the variable DTX_DRX_STATUS to FALSE;
- 1> clear the variable DTX_DRX_PARAMS;
- 1> stop DTX-DRX mode related activities.

If variable DTX_DRX_STATUS is set to true and the serving HS-DSCH cell was changed as a result of the received message the UE shall instruct the physical layer to consider HS-SCCH orders were never received.

Whenever the variable DTX_DRX_STATUS is set to TRUE after receiving this message and the value of IE "DTX-DRX timing information" included in this message is not "Continue", the UE shall:

- 1> if the variable DTX_DRX_STATUS was set to TRUE before receiving this message:
 - 2> re-configure the physical layer to perform discontinuous uplink DPCCH transmission and enable discontinuous downlink reception operations according to the variable DTX_DRX_PARAMS at the CFN corresponding to the frame boundary that is offset by the value of the IE "Enabling Delay" from the frame boundary where uplink transmission starts with new configuration;

2> let the MAC layer continue with the current restriction on E-DCH trans mission and monitoring of absolute and relative grant channels from the frame boundary where the uplink transmission starts with the new configuration and for the duration of the IE "Enabling Delay".

1> else:

- 2> perform discontinuous uplink DPCCH transmission and enable discontinuous downlink reception operations by configuring the physical layer according to the variable DTX_DRX_PARAMS at the CFN corresponding to the frame boundary that is offset by the value of the IE "Enabling Delay" from the frame boundary where uplink transmission starts with new configuration.
- 1> configure the MAC layer to start restricting E-DCH trans missions and monitor absolute and relative grant channels at the CFN corresponding to the frame boundary that is offset by the value of IE "Enabling Delay" from the frame boundary where uplink transmission starts with new configuration taking into account the IEs "UE DTX DRX Offset", "MAC DTX Cycle", "MAC Inactivity Threshold" and "Inactivity Threshold for UE Grant Monitoring".

. . .

If the IE "DTX-DRX timing information" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:

- 1> if the CHOICE "timing" is set to "New timing":
 - 2> use the newly received DTX-DRX timing configuration.
- 1> determine the value for the DTX_DRX_STATUS variable and take the corresponding actions as described in subclause 8.5.34.

. .

If the IE "DTX-DRX information" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:

- 1> store the contents of the IE in the variable DTX_DRX_PARAMS;
- 1> determine the value for the DTX_DRX_STATUS variable and take the corresponding actions as described in subclause 8.5.34;
- 1> if the value of the IE "UE DTX cycle 2" is not an integer multiple of the value of the IE "UE DTX cycle 1"; or
- 1> if the value of the IE "UE DTX cycle 2" is not an integer multiple or a divisor of the value of the IE "CQI Feedback cycle, k"; or
- 1> if the value of the IE "UE DPCCH burst 1" is greater than the value of the IE "UE DTX cycle 1"; or
- 1> if the value of the IE "UE DPCCH burst 2" is greater than the value of the IE "UE DTX cycle 2"; or
- 1> if the IE "UE DTX long preamble length" is set to 4 or 15 slots and the value of the IE "Inactivity Threshold for UE DTX cycle 2" is less than 4 TTIs (for 10ms E-DCH TTI) or 8 TTIs (for 2ms E-DCH TTI); or
- 1> if the IE "UE DRX cycle" is not an integer multiple or a divisor of the value of the IE "UE DTX cycle 1"; or
- 1> if the IE "DRX Information" is included in this message while the IE "DTX information" is not included in this message; or
- 1> if the value of the IE "UE DTX cycle 1" is not an integer multiple or a divisor of the value of the IE "MAC DTX cycle":
 - 2> the UE behaviour is unspecified.

Reference

3GPP TS 25.331 clause 8.2.2.3, 8.3.4, 8.5.34, 8.6.6.38, 8.6.6.39

8.3.4.11.3 Test purpose

- 1. To confirm that the UE performs a radio link addition involving a HS-DSCH / E-DCH serving cell change, with discontinuous transmissions according to the received ACTIVE SET UPDATE message.
- 2. To confirm that the UE performs a further radio link addition in the absence of discontinuous transmission according to the received ACTIVE SET UPDATE message.
- 3. To confirm that UE performs further radio link removal of a non DTX-DRX cell, with discontinuous transmissions according to the received ACTIVE SET UPDATE message.

8.3.4.11.4 Method of test

Initial Condition

System Simulator: 3 cells - Cell 1, 2 are active and cell 3 is switched off

UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-18) under condition A20, as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports DPCCH Discontinuous Transmission

Test Procedure

Table 8.3.4.11

Parameter	Unit	Cell 1			Cell 2			Cell 3					
		T0	T1	T2	T3	T0	T1	T2	T3	T0	T1	T2	T3
UTRARF Channel Number		Mid R	Mid Range Test Frequency			Mid Range Test Frequency			luency	Mid Range Test Frequency			
CPICH Ec	dBm/3.84MHz	-60	-70	-70	-70	-70	-60	-60	-60	OFF	OFF	-60	OFF

Table 8.3.4.11 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution.

The downlink transmission power is set according to values in column "T0" in table 8.3.4.11. The UE has a radio bearer mapped to the E-DCH/HS-DSCH with UL DTX configured and the signalling radio bearers mapped on E-DCH/DCH in cell 1.

The SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.11. The UE transmits a MEASUREMENT REPORT message, which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity" set to 1a.

The SS trans mits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which adds a second radio link in cell 2 and also changes the E-DCH and HS-DSCH serving cell to cell 2. When the UE receives this message, the UE shall configure layer 1 to begin E-DCH transmission and HS-DSCH reception, with UL DPCCH discontinuous transmission, using the new radio link in cell 2. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

The SS waits to allow sufficient time for DTX cycle 2 to be active, and CQI DTX Timer to expire, and then verifies that the time between 11 consecutive CQI indications is 320ms if 2ms TTI is used, or 400ms if 10ms TTI is used.

The SS shall transmit a UE CAPA BILITY ENQUIRY message to confirm that the UE can respond this message through the E-DCH in cell 1 and cell 2. The UE shall transmit a UE CAPA BILITY ENQUIRY INFORMATION message. Then SS transmits a UE CAPA BILITY INFORMATION CONFIRM message.

The SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.11. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 3. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added for non CPC cell 3 and then the SS transmits to the UE an ACTIVE SET UPDATE message on DCCH using AM RLC which includes the IE "Radio Link Addition Information" (e.g. Downlink F-DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID). As discontinuous transmission is not configured by ACTIVE SET UPDATE, the UE sets up continuous transmission on all cells.

To check that the UE is sending to all cells of the active set, the SS triggers the UE to send a UE CAPA BILITY INFORMATION which it receives from the cells which received the ACTIVE SET UPDATE COMPLETE.

The SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.11. The UE shall transmit a MEASUREMENT REPORT message which indicates the event '1b' for cell 3.

The SS trans mits to the UE an ACTIVE SET UPDATE message in cell 1 and 2 on DCCH using AM RLC which removes a radio link in cell 3. When the UE receives this message, the UE shall set up UL DPCCH discontinuous transmission on all cells. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

The SS waits to allow sufficient time for DTX cycle 2 to be active, and CQI DTX Timer to expire, and then verifies that the time between 11 consecutive CQI indications is 320ms if 2ms TTI is used, or 400ms if 10ms TTI is used.

The SS shall transmit a UE CAPA BILITY ENQUIRY message to confirm that the UE can respond this message through the E-DCH in cell 1 and cell 2. The UE shall transmit a UE CAPA BILITY ENQUIRY INFORMATION message. Then SS transmits a UE CAPA BILITY INFORMATION CONFIRM message.

SS calls for generic procedure C.3 to check that the UE is in CELL_DCH state.

Expected sequence

Step	Direction UE SS	Message	Comment
1	SS		SS configures its downlink
-			transmission power settings
			according to columns "T1" in table
			8.3.4.10
2	\rightarrow	MEASUREMENT REPORT	See specific message contents for
_		WE TO STEEL THE TELL STEEL	this message (event '1a' for cell 2)
3	+	ACTIVE SET UPDATE	The SS instructs the UE to add cell
"	`	ACTIVE SET OF DATE	2, with CPC enabled, in the active
			set, and perform a serving E-DCH
			and HS-DSCH cell change to cell 2
4	\rightarrow	ACTIVE SET UPD ATE COMPLETE	The UE adds the radio link in cell
4	7	ACTIVE SET OF DATE CONFLETE	2. SS receives this message on
			cell 1.
			1
			UE performs a serving E-DCH and
			HS-DSCH cell change to cell 2
			with discontinuous transmission
			activated at the activation time.
5	SS		At the activation time, the SS
			changes the serving E-DCH and
			HS-DSCH radio link to cell 2 and
			performs MAC-hs reset.
6	SS		The SS waits to allow sufficient
			time for DTX cycle 2 to be active,
			and CQI DTX Timer to expire, and
			then verifies that the time between
			11 consecutive CQI indications is
			320ms if 2ms TTI is used, or
			400ms if 10ms TTI is used (i.e.
			duration of 10 consecutive DTX
			cycle 2).
7			SS is reconfigured to listen on cell
			2
8	←	UE CAPABILITY ENQUIRY	
9	\rightarrow	UE CAPABILITY INFORMATION	SS receives this message on cell
10	-	UE CAPABILITY INFORMATION	
		CONFIRM	
11	SS		SS configures its downlink
			transmission power settings
			according to columns "T2" in table
			8.3.4.11
12	\rightarrow	MEASUREMENT REPORT	See specific message contents for
			this message (event '1a' for cell 3
13	←	ACTIVE SET UPDATE	SS transmits this message on
. •			downlink DCCH using AM RLC.
			The message includes IE "Radio
			Link Addition Information". (e.g.
			Downlink F-DPCH information and
			other optional parameters relevant
			for the additional radio link with
			Primary CPICH info used for the
			reference ID in cell 3). Note that
			discontinuous transmission is not
			configured for this cell and
			subsequently all cells in the active
4.4		ACTIVE OF LIDD ATE OOMELETS	Set
14	\rightarrow	ACTIVE SET UPDATE COMPLETE	The UE shall add new radio link to
			cell 3 without interfering with
			existing connections on the radio
			links in cell 1 and cell 2. CPC
			should be deactivated

- 4 4 -			The 00
14a	SS		The SS waits to allow sufficient
			time for Activation time in Step no:
			13 to expire, and then verifies that
			the time between 11 consecutive CQI indications is 40ms. (i.e.
			`
			duration of 10 consecutive CQI
15			feedback cycles).
15			SS is reconfigured to listen on cell
16			Line defection appears count on call
16	←	UE CAPABILITY ENQUIRY	Use default message sent on cell
17		UE CAPABILITY INFORMATION	2.
	→ ←	UE CAPABILITY INFORMATION	SS receives this message on cell 2
18	-	CONFIRM	Use default message
19		VOID	
19a	SS		SS configures its downlink
			transmission power settings
			according to columns "T3" in table
10			8.3.4.11
19	SS		SS configures its downlink
			transmission power settings
			according to columns "T3" in table 8.3.4.11
20	\rightarrow	MEASUREMENT REPORT	See specific message contents for
20	7	IVIEASUREIVIENT REPORT	this message (event '1b' for cell 3)
21	-	ACTIVE SET UPDATE	The SS transmits this message on
	`	NOTIVE SET ST BATE	downlink DCCH using AM RLC
			which includes IE "Radio Link
			Removal Information" with CPC
			enabled, in the active set.
22	\rightarrow	ACTIVE SET UPDATE COMPLETE	The UE shall remove the radio link
			associated with cell 3.
23	SS		The SS waits to allow sufficient
			time for DTX cycle 2 to be active,
			and CQI DTX Timer to expire, and
			then verifies that the time between
			11 consecutive CQI indications is
			320ms if 2ms TTI is used, or
			400ms if 10ms TTI is used (i.e.
			duration of 10 consecutive DTX
			cycle 2).
24	←	UE CAPABILITY ENQUIRY	Use default message sent on cell 1
			and cell 2.
25	\rightarrow	UE CAPABILITY INFORMATION	SS receives this message on cell 2
26	←	UE CAPABILITY INFORMATION CONFIRM	Use default message
27	$\leftarrow \rightarrow$	CALL C.3	If the test result of C.3 indicates
-'	` /	0, EL 0.0	that UE is in CELL_DCH state, the
			test passes, otherwise it fails.
			rest passes, unterwise it ialis.

Specific Message Content

The contents of SIB11 broadcasted in cell 1 shall be in accordance with the default SIB11 as specified in section 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Intra-frequency measurement reporting criteria	
- Reporting deactivation threshold	3

MEASUREMENT REPORT (Step 2)

Use the same message as specified in 34.108 except for the following:

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	Cell 1. See Note 1
 Intra-frequency measured results 	
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. See Note 1
- Cell Identity	Checked that this IE is present
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- Intra-frequency measurement event results	10
- Intra-frequency event identity	1a
- Cell measurement event results	Call 2
- Primary CPICH info	Cell 2
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1, 2 may appear in any order.

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark	Version
Activation time	(256+CFN-(CFN MOD 8 + 8)) MOD 256	
New H-RNTI	0101 0101 0101 0101'	
DTX-DRX timing information		
CHOICE timing	Continue	
DTX-DRX Information	Not Present	
Radio link addition information		
- Primary CPICH Info		
- Primary Scrambling Code	Refer to clause titled "Default settings for cell	
	No.2 (FDD)" in clause 6.1 of TS 34.108	
- Downlink F-DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH can be used.	
- F-DPCH frame offset	Calculated value from Cell synchronisation information	
	iniomation	
- F-DPCH slot format	3 if UE supports enhanced F-DPCH,	
. 2. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6.	otherwise Not Present	
- Secondary CPICH info	Not Present	
- Code number	12	
- TPC Combination Index	1	
- TFCI Combining Indicator - E-HICH Information	FALSE	
- Channelisation code	4	
- Signature sequence	1	
- CHOICE E-RGCH Information	·	
- E-RGCH Information		
- Signature Sequence	0	
- RG combination index	0	
Serving HS-DSCH cell information	Not Drocont	
- AACK	Not Present Not Present	
- Anack	0	
- HARQ_preamble_mode - Primary CPICH info	O	
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- Downlink HS-PDSCH Information	3	
- HS-SCCH Info		
- CHOICE mode	FDD	
- DL Scrambling Code	Not Present	
- HS-SCCH Channelisation Code		
Information - HS-SCCH Channelisation Code	7	
- Measurement Feedback Info	'	
- CHOICE mode	FDD	
- Measurement Power Offset	6 dB	
- CQI Feedback cycle, k	4 ms	
- CQI repetition factor	1	
- Acqi	5 (corresponds to 0dB in relative power offset)	
- CHOICE mode	FDD (no data)	
- HARQ Info - MAC-hs reset indicator	Not Present TRUE	
E-DCH reconfiguration information	INUE	
- E-DCH RL Info new serving cell		
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- E-AGCH Info		
- E-AGCH Channelisation Code	10	
- Serving Grant	Not Present	
- E-DPCCH/DPCCH power offset	Not Present	
Reference E-TFCIs Power Offset for Scheduling Info	Not present Not Present	
- 3-Index-Step Threshold	Not Present	
- ozinaez-oreh milesmora	INOUT TESETIL	

- 2-Index-Step TI	reshold	Not Present	
- E-HICH Informa	ation	Not Present	
- CHOICE E-RG	CH Information	Not Present	
- E-DCH RL Info o	ther cells	Not Present	

MEASUREMENT REPORT (Step 12)

Use the same message as specified in 34.108 except for the following:

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	Cell 1. See Note 1
 Intra-frequency measured results 	
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
ODIOU E AIO	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP - Pathloss	Checked that this IE is present
T diminate	Checked that this IE is absent Cell 2. See Note 1
- Cell measured results - Cell Identity	
- Cell identity - Cell synchronisation information	Checked that this IE is present Checked that this IE is absent
- Primary CPICH info	Checked that this in is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
a., colag codo	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 3. See Note 1
- Cell Identity	Checked that this IE is present
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
ODIOLIE ALO	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent Checked that this IE is absent
Additional measured results Event results	CHECKEU HIALHIS IE IS AUSEHL
Intra-frequency measurement event results Intra-frequency event identity	1a
- Intra-frequency event identity - Cell measurement event results	l'a
- Primary CPICH info	Cell 3
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
1 many columning code	in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1, 2, 3 may appear in any order.

ACTIVE SET UPDATE (Step 13)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark	Version
Activation time	(256+CFN-(CFN MOD 8 + 8)) MOD 256	
New H-RNTI	'0101 0101 0101 0101'	
New Primary E-RNTI	'0101 0101 0101 0101'	
DTX-DRX timing information	Not Present	
DTX-DRX Information	Not Present	
DRX Information	Not Present	
HS-SCCH less information	Not Present	
Radio link addition information	Cell 3	
- Primary CPICH Info		
- Primary Scrambling Code	Refer to clause titled "Default settings for cell	
	No.2 (FDD)" in clause 6.1 of TS 34.108	
- Downlink F-DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH can be used.	
- F-DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- F-DPCH slot format	3 if UE supports enhanced F-DPCH,	
	otherwise Not Present	
- Secondary CPICH info	Not Present	
- Code number	12	
- TPC Combination Index	2	
- TFCI Combining Indicator	FALSE	
- E-HICH Information		
- Channelisation code	4	
- Signature sequence	1	
- CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequence	0	
- RG combination index	0	

MEASUREMENT REPORT (Step 20)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	
Measured Results	
Intra-frequency measured results Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information - Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	UE may optionally include report for Cell 3
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information - Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	Onecked that this ie is absent
- Intra-frequency measurement event results	
- Intra-frequency event identity	1b
- Cell measurement event results	
- Primary CPICH info	Cell 3
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
NOTE 1 HE	in clause 6.1 of TS 34.108

NOTE 1: UE may optionally include Cell measured results IE for Cell 3

ACTIVE SET UPDATE (Step 21)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Radio link removal information	1 radio link to be removed
- Primary CPICH info	
- Primary scrambling code	Set to the same P-CPICH scrambling code assigned for cell 3
DTX-DRX timing information	
CHOICE timing	
- New timing	
- Enabling Delay	0
- UE DTX DRX Offset	1 if 2ms TTI selected, otherwise 0
DTX-DRX Information	
- CHOICE E-DCH TTI length	Unless stated otherwise, this should be set to 2ms if the UE supports 2ms TTI, or 10ms if the UE does not
	support 2ms TTI.
- UE DTX cycle 1	8 if 2ms TTI selected, otherwise 10
- UE DTX cycle 2	16 if 2ms TTI selected, otherwise 20
- MAC DTX cycle	8 if 2ms TTI selected, otherwise 10
- Inactivity Threshold for UE DTX cycle 2	o ii zino i ii oolooloo, oliioi woo io
- UE DTX long preamble length	4
- MAC Inactivity Threshold	1 if 2ms TTI selected, otherwise 8
- CQI DTX Timer	32
- UE DPCCH burst 1	1
- UE DPCCH burst 2	1
DRX Information	
- UE DRX cycle	8 if 2ms TTI selected, otherwise 10
- Inactivity Threshold for UE DRX cycle	32
- Inactivity Threshold for UE Grant Monitoring	32 if 2ms TTI selected, otherwise 8
- UE DRX Grant Monitoring	TRUE
Uplink DPCCH slot format information	1

8.3.4.11.5 Test requirement

After step 1 the UE shall transmit a MEASUREMENT REPORT message.

At step 6 the time between 11 consecutive CQI indications shall be 320ms if 2ms TTI is used, or 400ms if 10ms TTI is used.

After step 13 the UE shall trans mit an ACTIVE SET UPDATE COMPLETE message.

 $After\,step\,\,19\,the\,\,UE\,shall\,trans\,m\!it\,\,a\,\,MEASUREMENT\,\,REPORT\,\,message\,\,with\,\,event\,\,1B.$

After step 21 the UE shall trans mit an ACTIVE SET UPDATE COMPLETE message

At step 23 the time between 11 consecutive CQI indications shall be 320ms if 2ms TTI is used, or 400ms if 10ms TTI is used.

8.3.4.12 Active set update in soft handover: Radio Link addition/removal (stop and start of UL 16QAM)

8.3.4.12.1 Definition and applicability

All UEs which support FDD, E-DCH and UL 16 QAM.

8.3.4.12.2 Conformance requirement

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following.

The UE may:

1> maintain a list of the set of cells to which the UE has Radio Links if the IE "Cell ID" is present.

The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information";
- 1> remove the RLs indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;
- 1> perform the physical layer synchronisation procedure B as specified in [29];
- 1> if the IE "E-HICH information" is included:
 - 2> store this E-HICH configuration for the concerning radio link.
- 1> if the IE "E-HICH information" is included:
 - 2> store this E-RGCH configuration for the concerning radio link, if included.
- 1> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28;
- 1> if the IE "MAC-es/e reset indicator" is included in the IE "UL 16QAM configuration":
 - 2> reset the MAC-es/e / MAC-is/i entity [15].
- NOTE 1: If the IE "MAC-es/e reset indicator" is not included in the IE "UL 16QAM configuration" and 16QAM operations starts or stops, the UE behaviour is unspecified.
- 1> if the IE "UL 16QAM settings" is not included in the IE "16QAM configuration":
 - 2> indicate to lower layers to stop any operation in 16QAM mode.
- NOTE 2: If the IE "UL 16QAM configuration" is not included and 16QAM mode operation is currently ongoing, the UE behaviour is unspecified.

. . .

If the IE "E-DCH Info" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:

- 1> for FDD:
 - 2> if the IE "E-DPCCH Info" is included:
 - 3> store the newly received E-DPCCH configuration.
 - 2> if the IE "E-DPDCH Info" is included:
 - 3> store the newly received E-DPDCH configuration.
 - 2> if the IE "UL 16QAM settings" is not included:
 - 3> indicate to lower layers to stop any operation in 16QAM mode.

. . .

If the IE "UL 16QAM settings" is included, the UE shall:

1> indicate to lower layers to operate in 16QAM mode, using the parameters contained in the IE.

٠.

Reference

3GPP TS 25.331 clause 8.3.4.3, 8.6.6.37, 8.6.6.42

8.3.4.12.3 Test purpose

1. To confirm that the UE starts E-DCH transmission using 16AM modulation according to the ACTIVE SET UPDATE message.

2. To confirm that the UE stops E-DCH transmission using 16AM modulation according to the ACTIVE SET UPDATE message.

8.3.4.12.4 Method of test

Initial Condition

System Simulator: 2 cells - both Cell 1 and Cell 2 are active

UE: Idle state (State 3 or State 7) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD

- UE supports HS-PDSCH

UE supports UL 16QAM

- UE fully supports F-DPCH

Specific Message Contents

System Information Block type 11

Use the default system information block with the same type specified in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Intra-frequency measurement reporting criteria	
- Parameters required for each event	3 kinds
- Intra-frequency event identity	1a
- Time to trigger	1000

Test Procedure

Table 8.3.4.12

Parameter	Unit	Cell 1				Cell 2					
		T0	T1	T2	Т3	T4	T0	T1	T2	T3	T4
UTRARF Channel Number		Mid Range Test Frequency			Mid Range Test Frequency						
CPICH Ec	PICH Ec dBm/3.84MHz		-60	-60	-60	-75	-75	-60	-75	-60	-60

 $Table\ 8.3.4.12\ illustrates\ the\ downlink\ power\ to\ be\ applied\ for\ the\ 2\ cells\ at\ various\ time\ instants\ of\ the\ test\ execution.$

The UE is brought to the CELL_DCH state after a successful incoming call attempt. The SS follows the procedure in TS 34.108 clause 7.1.3 (Mobile Terminated), to set up a user RAB, but with the default RAB replaced by the one described in 34.108, clause 6.10.2.4.6.3: Interactive or background / PS RAB + SRBs mapped onto E-DCH and HS-DSCH.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.12. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" and UL 16QAM parameters.

When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current downlink activities of existing radio links. Up link should be configured for 16QAM transmission. The UE shall

transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. UL 16QAM transmission should be checked by SS

SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.12. UE shall transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intrafrequency event identity", which is set to '1b' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS remove the radio link from cell 2 and then SS transmits an ACTIVE SET UPDATE message, which includes IE "Radio Link Removal Information" and specifying the P-CPICH information of the cell to be removed.

When the UE receives this message, the UE RRC entity shall request UE L1 entity to terminate transmission and reception of the radio link from cell 2. Then the UE transmits an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. UL 16 QAM is still active on cell 1.

SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.12. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information", excludes UL 16QAM settings and also changes the E-DCH and HS-DSCH serving cell to cell 2. When the UE receives this message, the UE RRC entity shall request UE L1 entity to terminate transmission and reception of the radio link from cell 1

The UE shall then transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC UE should revert to normal E-DCH transmission and this should be checked by SS on cell 2.

Expected main sequence

Step	Direction	Message	Comment
-	UE SS	1	
1	-	Paging Type 1	
1a	\rightarrow	RRC CONNECTION REQUEST	
1b	←	RRC CONNECTION SETUP	
1c	\rightarrow	RRC CONNECTION SETUP COMPLETE	
1d	\rightarrow	SERVICE REQUEST	
1e	←	AUTHENTICATION AND CIPHERING	
		REQUEST	
1f	\rightarrow	AUTHENTICATION AND CIPHERING	
		RESPONSE	
1g	←	SECURITY MODE COMMAND	
1h	\rightarrow	SECURITY MODE COMPLETE	
1i	-	ACTIVATE RB TEST MODE	
1j	→	ACTIVATE RB TEST MODE COMPLETE	
1k	,	RADIO BEARER SETUP	RRC RAB SETUP
110	`	IN DIO DEFINEN GETOI	See specific message contents
			for this message
11	\rightarrow	RADIO BEARER SETUP COMPLETE	ioi una message
2		INADIO BEANEN SETOT COMILETE	SS configures its downlink
			transmission power settings
			according to columns "T1" in
			table 8.3.4.12
3	\rightarrow	MEASUREMENT REPORT	See specific message contents
٥	7	INILAGUREINI REPORT	for this message (event '1a' for
			cell 2)
4	+	ACTIVE SET UPDATE	SS transmits this message in
4		ACTIVE SET OF DATE	cell 1 on downlink DCCH using
			AM RLC. The message
			includes IE "Radio Link
			Addition Information" for cell 2
			and "16QAM configuration" and
			"UL 16QAM settings"
5	→	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new
	,	NOTIVE SET OF BATE SOWN LETE	radio link to cell 2, with UL
			16QAM active
6	←→	Check for UL 16QAM	SS should verify that UL
	` ,	one of the drawn	16QAM is activated on E-DCH
			according to the sub test
			procedure below
7			SS configures its downlink
•			transmission power settings
			according to columns "T2" in
			table 8.3.4.12
8	\rightarrow	MEASUREMENT REPORT	See specific message contents
		_	for this message (event '1b' for
			cell 2)
9	←	ACTIVE SET UPD ATE	The SS transmits this message
			on downlink DCCH using AM
			RLC which includes IE "Radio
			Link Removal Information".
10	\rightarrow	ACTIVE SET UPDATE COMPLETE	The UE shall remove the radio
1 .			link associated with cell 2.
11	$\leftarrow \rightarrow$	Check for UL 16QAM on cell 1	SS should verify that UL
			16QAM is activated on E-DCH
			according to the sub test
			procedure below
12			SS configures its downlink
			transmission power settings
			according to columns "T3" in
			table 8.3.4.12
13	\rightarrow	MEASUREMENT REPORT	See specific message contents
			for this message (event '1a' for
			cell 2)
	ı	1	,

14	←	ACTIVE SET UPD ATE	SS transmits this message in
			cell 1 on downlink DCCH using
			AM RLC. The message
			includes IE "Radio Link
			Addition Information" for cell 2
			and specifically excludes
			"16QAM configuration" and "UL
			16QAM settings"
15	\rightarrow	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new
			radio link to cell 2 but with UL
			16 QAM inactive
16	$\leftarrow \rightarrow$	Check for UL QPSK	SS should verify that "normal"
			E-DCH transmission (QPSK) is
			activated on E-DCH according
			to the sub test procedure below
17			SS configures its downlink
			transmission power settings
			according to columns "T4" in
			table 8.3.4.12
18	\rightarrow	MEASUREMENT REPORT	See specific message contents
			for this message (event '1b' for
			cell 1)
19	←	ACTIVE SET UPDATE	The SS transmits this message
			on downlink DCCH using AM
			RLC which includes IE "Radio
			Link Removal Information" for
			cell 1.
20	\rightarrow	ACTIVE SET UPDATE COMPLETE	The UE shall remove the radio
			link associated with cell 1.
21	$\leftarrow \rightarrow$	Check for UL QPSK	SS should verify that "normal"
			E-DCH transmission (QPSK) is
			activated on E-DCH according
			to the sub test procedure below
22	←	DEACTIVATE RB TEST MODE	
23	\rightarrow	DEACTIVATE RB TEST MODE COMPLETE	

Test Procedure to Check for UL 16QAM and QPSK

Refer to section 14.7.1a.3 for the specific parameters related to the loopback test for this section.

Expected sub sequence

Specific Message Contents

RADIO BEARER SETUP (Step 1k)

The contents of the Radio Bearer Setup message is identical to the message sub-type titled as "This IE is needed for "Packet to CELL_DCH / E-DCH / HS-DSCH using one multiplexing option (1/1) and SRBs mapped on E-DCH/HS-DSCH" as found in 34.108 clause 9 with the following exception

Information Element	Value/remark
- RAB information for setup	
- R AB info	
- PDCP info	Not Present
E-DCH info	
- MAC-es/e reset indicator	TRUE
- E-DPCCH info	
- E-DPCCH/DPCCH power offset	1
- Happy bit delay condition	100 ms
- E-TFC Boost Info	Not Present
- E-DPDCH power interpolation	Not Present
- E-DPDCH info	
- E-TFCI table index	1
- E-DCH minimum set E-TFCI	9
- Reference E-TFCIs	5 E-TFCIs
- Reference E-TFCI	11
- Reference E-TFCI PO	4
- Reference E-TFCI	67
- Reference E-TFCI PO	18
- Reference E-TFCI	71
- Reference E-TFCI PO	23
- Reference E-TFCI	75
- Reference E-TFCI PO	26
- Reference E-TFCI	81
- Reference E-TFCI PO	27
- Maximum channelisation codes	2sf2and2sf4
- PLnon-max	0.84
- Scheduling Information Configuration	
 Periodicity for Scheduling Info – no grant 	Not Present
 Periodicity for Scheduling Info – grant 	Not Present
- Power Offset for Scheduling Info	0
- 3-Index-Step Threshold	Not Present
- 2-Index-Step Threshold	Not Present
- Scheduled Transmission configuration	
- 2ms scheduled transmission grant HARQ process	Not Present
allocation	
- Serving Grant	Not Present

MEASUREMENT REPORT (Step 3, 13)

Information Element	Value/remark		
Message Type			
Integrity check info			
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.		
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.		
Measurement identity	1		
Measured Results			
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)		
- Cell measured results	· ,		
- Cell Identity	Checked that this IE is absent		
 Cell synchronisation information Primary CPICH info 	Checked that this IE is absent		
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108		
- CPICH Ec/N0	Checked that this IE is absent		
- CPICH RSCP	Checked that this IE is present		
- Pathloss	Checked that this IE is absent		
- Cell measured results			
- Cell Identity	Checked that this IE is absent		
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference		
- Primary CPICH info			
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108		
- CPICH Ec/N0	Checked that this IE is absent		
- CPICH RSCP	Checked that this IE is present		
- Pathloss	Checked that this IE is absent		
Measured results on RACH	Checked that this IE is absent		
Additional measured results Event results	Checked that this IE is absent		
- Intra-frequency measurement event results			
- Intra-frequency event identity	1a		
- Cell measurement event results			
- Primary CPICH info			
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108		

ACTIVE SET UPDATE (Step 4)

Information Element	Value/remark	Version
Radio link addition information		
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 2	
- Downlink F-DPCH info for each RL	, ,	
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH may be used.	
- F-DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- F-DPCH slot format	Not present	
- Secondary CPICH info	Not present	
- Secondary scrambling code	Not present	
- Code number	F-DPCH code number as used in Cell1	
- TPC Combination Index	0	
- TFCI combining indicator	FALSE	
- E-HICH Information		
- Channelisation code	4	
- Signature sequence	1	
- CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequence	0	
- RG combination index	0	
UL 16QAM configuration		
- BetaEd gain E-AGCH table selection	1	
- MAC-es/e reset indicator	TRUE	
- E-TFCI table index	Not Present	
E-DCH reconfiguration information same serving cell		
- E-DPCCH/DPCCH power offset	0	
- Reference E-TFCIs	2 E-TFCIs	
- Reference E-TFCI	11	
- Reference E-TFCI PO	4	
- Reference E-TFCI	83	
- Reference E-TFCI PO	16	

MEASUREMENT REPORT (Step 8)

Message Type Integrity check info	
Integrity check info	
	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I. This IE is checked to see if it is present. The value is used
	by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results list	
- Cell measured results	
	Checked that this IE is absent
j	Checked that this IE is absent
- Primary CPICH info	FDD
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
	Checked that this IE is absent
	Checked that this IE is present
	Checked that this IE is absent
- Cell measured results	
	Checked that this IE is absent
,	Checked that this IE is absent
	FDD
- Primary CPICH info	Defeate along titled "Defeate atting of the all No. 4 (EDD)"
	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
	Checked that this IE is absent
	Checked that this IE is present
	Checked that this IE is absent
	Checked that this IE is absent
	Checked that this IE is absent
Event results	later for more and an and an and the
	Intra-frequency measurement event results
	1b
- Cell measurement event results	EDD
******	FDD
- Primary CPICH info - Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 9)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9.1, with the following exceptions:

Information Element	Value/remark
Radio link removal information	1 radio link to be removed
- Primary CPICH info	
- Primary scrambling code	Set to the same P-CPICH scrambling code assigned for
	cell 2
UL 16QAM configuration	
- BetaEd gain E-AGCH table selection	1
- MAC-es/e reset indicator	TRUE
- E-TFCI table index	Not Present

ACTIVE SET UPDATE (Step 14)

Information Element	Valuationaula	Version
New H-RNTI	Value/remark '0101 0101 0101 0101'	version
New Primary E-RNTI	0101 0101 0101 0101 0101 0101 0101 0101	
Radio link addition information		
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 2	
- Downlink F-DPCH info for each RL	3	
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH may be used.	
- F-DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- F-DPCH slot format	Not present	
- Secondary CPICH info	Not present	
- Secondary scrambling code	Not present	
- Code number	F-DPCH code number as used in Cell1	
- TPC Combination Index	0	
- TFCI combining indicator	FALSE	
- E-HICH Information - Channelisation code		
- Signature sequence	4 1	
- CHOICE E-RGCH Information	ľ	
- E-RGCH Information		
- Signature Sequence	0	
- RG combination index	0	
Serving HS-DSCH cell information		
- Δ _{ACK}	Not Present	
- Anack	Not Present	
- HARQ_preamble_mode	0	
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- Downlink HS-PDSCH Information		
- HS-SCCH Info - CHOICE mode	FDD	
- DL Scrambling Code	Not Present	
- HS-SCCH Channelisation Code Information	TWO THE SEME	
- HS-SCCH Channelisation Code	7	
- Measurement Feedback Info		
- CHOICE mode	FDD	
- Measurement Power Offset	6 dB	
- CQI Feedback cycle, k	4 ms	
- CQI repetition factor	1	
- Acqi	5 (corresponds to 0dB in relative power offset)	
- CHOICE mode	FDD (no data)	
- HARQ Info	Not Present TRUE	
- MAC-hs reset indicator E-DCH reconfiguration information	INUE	
- E-DCH RL Info new serving cell		
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- E-AGCH Info	. , , , , , , , , , , , , , , , , , , ,	
- E-AGCH Channelisation Code	10	
- Serving Grant	Not Present	
- E-DPCCH/DPCCH power offset	Not Present	
- Reference E-TFCIs	Not Present	
- Power Offset for Scheduling Info	Not Present	
- 3-Index-Step Threshold	Not Present	
- 2-Index-Step Threshold - E-HICH Information	Not Present Not Present	
- CHOICE E-RGCH Information	NOTE 1636111	
- E-DCH RL Info other cells	Not Present	
UL 16QAM configuration	Not Present	
- MAC-es/e reset indicator	TRUE	
- E-TFCI table index	Not Present	

MEASUREMENT REPORT (Step 18)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9.1, with the following exceptions:

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code - RRC Message sequence number	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I. This IE is checked to see if it is present. The value is used
- INTO Message sequence number	by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
 Intra-frequency measured results list 	
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- CHOIĆE mode - Primary CPICH info	FDD
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
, ,	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- CHOICE event result	Intra-frequency measurement event results
- Intra-frequency event identity	1b
- Cell measurement event results	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 19)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9.1, with the following exceptions:

Information Element	Value/remark
Radio link removal information	1 radio link to be removed
- Primary CPICH info	
- Primary scrambling code	Set to the same P-CPICH scrambling code assigned for
	cell 1

8.3.4.12.5 Test requirement

At step 3 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At step 5 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set addition procedure and active UL 16QAM.

At step 6 the UE shall transmit loop back data on E-DCH using 16QAM.

At step 8 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At step 10 the UE shall remove the radio link from cell 2 and it shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC.

At step 11 the UE shall transmit loop back data on E-DCH using 16QAM.

At step 13 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At step 15 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set addition procedure and deactivate UL 16QAM.

At step 16 the UE shall transmit loop back data on E-DCH using QPSK.

At step 18 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At step 20 the UE shall remove the radio link from cell 1 and it shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC.

At step 21 the UE shall transmit loop back data on E-DCH using QPSK.

8.3.4.13 Active set update in soft handover: Radio Link addition/removal and serving HS-DSCH / E-DCH cell change, with activation/deactivation of 64QAM

8.3.4.13.1 Definition and Applicability

All UEs which support FDD, mac-ehs and 64QAM

8.3.4.13.2 Conformance Requirement

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message on the uplin k DCCH using AM RLC.

Extract From 25.331 clause 8.6.6.36:

If the IE "Downlink HS-PDSCH Information" is included and the UE would be in CELL_DCH state after completion of this procedure, the UE shall:

- 1> for 1.28 Mcps TDD, if the HS-PDSCH has been configured by the IE "DL Multi-carrier information":
 - 2> clear other stored carriers configuration in the IE "DL Multi-carrier information".
- 1> if the IE "HS-SCCH Info" is included:
 - 2> act as specified in subclause 8.6.6.33.
- 1> if the IE "Measurement Feedback Info" is included:
 - 2> act as specified in subclause 8.6.6.34.
- 1> if the IE "HS-DSCH Timeslot Configuration" or "HS-PDSCH Midamble Configuration" is included:
 - 2> store the received configuration;
 - 2> determine the value for the HS_DSCH_RECEPTION variable and take actions as described in subclause 8.5.25.

Extract From 25.331 clause 8.3.4.3:

1> if "Serving HS-DSCH cell information" IE is present, act on received information elements as specified in subclause 8.6:

- 2> if the IEs " Δ_{ACK} ", " Δ_{NACK} ", and "HARQ_preamble_mode" are present, act on the received information elements;
- 2> if the new H-RNTI and "Primary CPICH info" are included:
 - 3> consider the cell indicated in Primary CPICH as serving HS-DSCH cell and no longer consider any other radio link as serving HS-DSCH cell. If the IE "Downlink Secondary Cell Info FDD" is included for a cell associated with the serving HS-DSCH cell, consider that cell a secondary serving HS-DSCH cell.
- 2> if the IE "MAC-hs reset indicator" is included:
 - 3> reset the MAC-hs/ehs entity [15].
- 2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25.

[...]

>FDD				
>>Downlink 64QAM configured	OP	Enumerated (TRUE)	Absence of this IE means that the HS-SCCH does not use the 64QAM format. The presence of this IE means the UE uses the octet aligned table [15].	REL-7
>>HS-DSCH TB size table	CV- Not64QA M	Enumerated (octet aligned)	If this IE is present, octet aligned table [15] is used, else bit aligned table [15] is used.	REL-7

Condition	Explanation	
Not64QAM	This IE is optionally present if 64QAM is not	
	configured and MAC-ehs is configured. Otherwise it is	
	not needed.	

Reference(s)

TS 25.331 clause 8.6.6.36 and 8.3.4.3, 10.3.6.23a

8.3.4.13.3 Test purpose

- 3. To confirm that the UE starts HS-DSCH transmission using DL 64AM modulation according to the ACTIVE SET UPDATE message.
- 4. To confirm that the UE stops HS-DSCH transmission using DL 64AM modulation according to the ACTIVE SET UPDATE message.

8.3.4.13.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 and 2 are active

UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-18) under condition A17b, as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports mac-ehs and 64QAM

- UE fully supports F-DPCH

Test Procedure

Table 8.3.4.13

Parameter	Unit	Cell 1			Cell 2		
		T0	T1	T2	ТО	T1	T2
UTRARF Channel Number		Mid Rar	ige Test Fre	quency	Mid Rar	nge Test F	requency
CPICH Ec	dBm/3.84MHz	-60	-60	-75	-75	-60	-60

Table 8.3.4.13 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.13. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" and DL 64QAM parameters. When the UE receives this message, the UE shall configure layer 1 to begin E-DCH transmission and HS-DSCH reception, with DL 64QAM, using the new radio link and making cell 2 the serving cell. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. The SS transmits a UE CAPABILITY ENQUIRY message on DL SRB2 using the configured 64QAM parameters and the UE shall respond with a UE CAPABILITY INFORMATION message. The SS completes the procedure by transmitting a UE CAPABILITY INFORMATION CONFIRM message, using 64QAM, to the UE.

SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.13. UE shall transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 1 according to IE "Intrafrequency event identity", which is set to '1b' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS will remove the radio link from cell 1 and then SS transmits an ACTIVE SET UPDATE message, which includes IE "Radio Link Removal Information" and specifying the P-CPICH information of the cell to be removed. This also stops HS-DSCH transmission using DL 64AM modulation. When the UE receives this message, the UE RRC entity shall request UE L1 entity to terminate transmission and reception of the radio link from cell 1. Then the UE transmits an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. The SS transmits a UE CAPABILITY ENQUIRY message on DL SRB2 and the UE shall respond with a UE CAPABILITY INFORMATION message. The SS completes the procedure by transmitting a UE CAPABILITY INFORMATION CONFIRM message to the UE.

Expected main sequence

Step	Direction	Message	Comment
-	UE SS	1	
1			UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-18) according to clause 7.4.
2			SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.12
3	→	MEASUREMENT REPORT	See specific message contents for this message (event '1a' for cell 2)
4	-	ACTIVE SET UPDATE	SS transmits this message in cell 1 on downlink DCCH using AM RLC. The message includes IE "Radio Link Addition Information" for cell 2. 64QAM is configured and Cell 2 becomes the serving Cell.
5	→	ACTIVE SET UPD ATE COMPLETE	The UE shall configure a new radio link to cell 2, with DL 64QAM active
6	+	UE CAPABILITY ENQUIRY	SRBs mapped on HS channels hence 64QAM used for signalling
7	\rightarrow	UE CAPABILITY INFORMATION	
8	+	UE CAPABILITY INFORMATION CONFIRM	
			SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.x
9	→	MEASUREMENT REPORT	See specific message contents for this message (event '1b' for cell 1)
10	+	ACTIVE SET UPD ATE	The SS transmits this message on downlink DCCH using AM RLC which includes IE "Radio Link Removal Information". 64QAM is switched off and Cell 2 remains the serving Cell.
11	→	ACTIVE SET UPD ATE COMPLETE	The UE shall remove the radio link associated with cell 1.
12	+	UE CAPABILITY ENQUIRY	SRBs mapped conventionally on HS channels
13	\rightarrow	UE CAPABILITY INFORMATION	
14	←	UE CAPABILITY INFORMATION CONFIRM	SRB2 on HS-DSCH

Specific Message Contents

MEASUREMENT REPORT (Step 3)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
 Intra-frequency measurement event results 	
 Intra-frequency event identity 	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 4)

Information Element	Value/remark	Version
Activation time	(256+CFN-(CFN MOD 8 + 8)) MOD 256	
New H-RNTI	'0101 0101 0101 0101'	
New Primary E-RNTI	'0101 0101 0101 0101'	
Radio link addition information		
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 2	
- Downlink F-DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH may be used.	
- F-DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- F-DPCH slot format	3 if UE supports enhanced F-DPCH, otherwise	
	Not Present	
- Secondary CPICH info	Not present	
- Secondary scrambling code	Not present	
- Code number	F-DPCH code number as used in Cell1	
- TPC Combination Index	1 FALOE	
- TFCI combining indicator	FALSE	
- E-HICH Information		
- Channelisation code	4	
- Signature sequence - CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequence	0	
- RG combination index	0	
Serving HS-DSCH cell information	O	
- Aack	Not Present	
	Not Present	
- ∆ _{NACK} - HARQ_preamble_mode	1	
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- Downlink HS-PDSCH Information	Doctor the primary defaining dead of son 2	
- HS-SCCH Info		
- CHOICE mode	FDD	
- DL Scrambling Code	Not present	
- HS-SCCH Channelisation Code Information	Use 2 HS-SCCH	
- HS-SCCH Channelisation Code	6	
- HS-SCCH Channelisation Code	7	
- Measurement Feedback Info		
- CHOICE mode	FDD	
- Pohsdsch	6 dB	
- CQI Feedback cycle, k	4 ms	
- CQI repetition factor	1	
- ∆ _{CQI}	5 (corresponds to 0dB in relative power offset)	
- CHOICE mode	FDD (no data)	
- Downlink 64QAM configured	TRUE	
- HS-DSCH TB size table	Not Present	
E-DCH reconfiguration information		
- E-DCH RL Info new serving cell		
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- E-AGCH Info		
- E-AGCH Channelisation Code	10	
- Serving Grant	Not Present	
- E-DPCCH/DPCCH power offset	Not Present	
- Reference E-TFCIs	Not Present	
- Power Offset for Scheduling Info	Not Present	
- 3-Index-Step Threshold	Not Present	
- 2-Index-Step Threshold	Not Present	
- E-HICH Information - CHOICE E-RGCH Information	Not Present	
- E-DCH RL Info other cells	Not Present	
F DOLLIVE HING ORDER CEDS	NOCE TOOCHE	

MEASUREMENT REPORT (Step 9)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9.1, with the following exceptions:

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code - RRC Message sequence number	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I. This IE is checked to see if it is present. The value is used
Ç İ	by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
 Intra-frequency measured results list 	
- Cell measured results	
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information 	Checked that this IE is absent
- CHOIĆE mode - Primary CPICH info	FDD
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- CHOICE event result	Intra-frequency measurement event results
- Intra-frequency event identity	1b
- Cell measurement event results	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 10)

Information Element	Value/remark
Activation time	(256+CFN-(CFN MOD 8 + 8)) MOD 256
Radio link removal information	1 radio link to be removed
- Primary CPICH info	
- Primary scrambling code	Set to the same P-CPICH scrambling code assigned for cell 1
Serving Cell Change Parameters	
- HARQ_preamble_mode	1
- Downlink HS-PDSCH Information	
- HS-SCCH Info	
- CHOICE mode	FDD
- DL Scrambling Code	Not present
- HS-SCCH Channelisation Code Information	Use 1 HS-SCCH
- HS-SCCH Channelisation Code	7
- Measurement Feedback Info	
- CHOICE mode	FDD
- Pohsdsch	6 dB
- CQI Feedback cycle, k	4 ms
- CQI repetition factor	1
- ∆ _{CQI}	5 (corresponds to 0dB in relative power offset)
- CHOICE mode	FDD (no data)
- Downlink 64QAM configured	Not Present
- HS-DSCH TB size table	Octet aligned

8.3.4.13.5 Test requirement

At step 3 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At step 5 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set addition procedure and DL 64QAM.

At step 6 the UE should receive UE CAPA BILITY ENQUIRY mapped on DL 64QAM HS-DSCH

At step 9 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At step 11 the UE shall remove the radio link from cell 1 and it shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC.

At step 12 the UE should receive UE CAPABILITY ENQUIRY mapped on DL QPSK HS-DSCH(mac-ehs).

At step 14 the UE should receive UE CAPABILITY INFORMATION CONFIRM.

8.3.4.13a Active set update in soft handover: Radio Link addition/removal and serving HS-DSCH/E-DCH cell change, with activation/deactivation of 64QAM with SRBs mapped to E-DCH/DCH

8.3.4.13a.1 Definition and Applicability

All UEs which support FDD, mac-ehs and 64QAM

8.3.4.13a.2 Conformance Requirement

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

2> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

[...]

If the IE "Downlink HS-PDSCH Information" is included and the UE would be in CELL_DCH state after completion of this procedure, the UE shall:

- 1> for 1.28 Mcps TDD, if the HS-PDSCH has been configured by the IE "DL Multi-carrier information":
 - $2\!\!>$ clear other stored carriers configuration in the IE "DLMulti-carrier information".

- 1> if the IE "HS-SCCH Info" is included:
 - 2> act as specified in subclause 8.6.6.33.
- 1> if the IE "Measurement Feedback Info" is included:
 - 2> act as specified in subclause 8.6.6.34.
- 2> if the IE "HS-DSCH Timeslot Configuration" or "HS-PDSCH Midamble Configuration" is included:
 - 2> store the received configuration;
 - 2> determine the value for the HS_DSCH_RECEPTION variable and take actions as described in subclause 8.5.25.

[...]

- 1> if "Serving HS-DSCH cell information" IE is present, act on received information elements as specified in subclause 8.6:
 - 2> if the IEs " Δ_{ACK} ", " Δ_{NACK} ", and "HARQ_preamble_mode" are present, act on the received information elements;
 - 2> if the new H-RNTI and "Primary CPICH info" are included:
 - 3> consider the cell indicated in Primary CPICH as serving HS-DSCH cell and no longer consider any other radio link as serving HS-DSCH cell. If the IE "Down link Secondary Cell Info FDD" is included for a cell associated with the serving HS-DSCH cell, consider that cell a secondary serving HS-DSCH cell.
 - 2> if the IE "MAC-hs reset indicator" is included:
 - 3> reset the MAC-hs/ehs entity [15].
 - 2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25.

[...]

>FDD				
>>Downlink 64QAM configured	OP	Enumerated (TRUE)	Absence of this IE means that the HS-SCCH does not use the 64QAM format. The presence of this IE means the UE uses the octet aligned table [15].	REL-7
>>HS-DSCH TB size table	CV- Not64QAM	Enumerated (octet aligned)	If this IE is present, octet aligned table [15] is used, else bit aligned table [15] is used.	REL-7

Condition	Explanation
Not64QAM	This IE is optionally present if 64QAM is not configured and MAC-ehs is configured. Otherwise it is not needed.

Reference(s)

TS 25.331 clause 8.6.6.36 and 8.3.4.3, 10.3.6.23a

8.3.4.13a.3 Test purpose

- To confirm that the UE starts HS-DSCH transmission using DL 64AM modulation according to the ACTIVE SET UPDATE message.
- 2. To confirm that the UE stops HS-DSCH transmission using DL 64AM modulation according to the ACTIVE SET UPDATE message.

8.3.4.13a.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 and 2 are active

UE: PS_DCCH DCH+DTCH E_DCH/HS_DSCH (state 6-18) under condition, A17e, as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports mac-ehs and 64QAM

Test Procedure

Table 8.3.4.13a

Parameter	Unit	Cell 1			Cell 2		
		T0	T1	T2	T0	T1	T2
UTRARF Channel Number	-	Mid Rar	ige Test Fre	quency	Mid Rar	nge Test F	requency
CPICH Ec	dBm/3.84MHz	-60	-60	-75	-75	-60	-60

Table 8.3.4.13a illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.13a. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" and DL 64QAM parameters. When the UE receives this message, the UE shall configure layer 1 to begin E-DCH transmission and HS-DSCH reception, with DL 64QAM, using the new radio link and making cell 2 the serving cell. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.13a. UE shall transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 1 according to IE "Intrafrequency event identity", which is set to 'lb' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS will remove the radio link from cell 1 and then SS transmits an ACTIVE SET UPDATE message, which includes IE "Radio Link Removal Information" and specifying the P-CPICH information of the cell to be removed. This also stops HS-DSCH transmission using DL 64AM modulation. When the UE receives this message, the UE RRC entity shall request UE L1 entity to terminate transmission and reception of the radio link from cell 1. Then the UE transmits an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

Expected main sequence

Step	Direction				Message	Comment
	UE S	SS				
1	·			UE: PS_DCCH DCH+DTCH E_DCH/HS_DSCH (state 6-18) according to clause 7.4.		
2				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.13a		
3	→		MEASUREMENT REPORT	See specific message contents for this message (event '1a' for cell 2)		
4	+		ACTIVE SET UPDATE	SS transmits this message in cell 1 on downlink DCCH using AM RLC. The message includes IE "Radio Link Addition Information" for cell 2. 64QAM is configured and Cell 2 becomes the serving Cell.		
5	→		ACTIVE SET UPD ATE COMPLETE	The UE shall configure a new radio link to cell 2, with DL 64QAM active		
				SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.13a		
6	→		MEASUREMENT REPORT	See specific message contents for this message (event '1b' for cell 1)		
7	+		ACTIVE SET UPDATE	The SS transmits this message on downlink DCCH using AM RLC which indudes IE "Radio Link Removal Information". 64QAM is switched off and Cell 2 remains the serving Cell.		
8	\rightarrow		ACTIVE SET UPD ATE COMPLETE	The UE shall remove the radio link associated with cell 1.		

Specific Message Contents

MEASUREMENT REPORT (Step 3)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	· ,
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information Primary CPICH info 	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results Event results	Checked that this IE is absent
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 4)

Information Element	Value/remark	Version
Activation time	(256+CFN-(CFN MOD 8 + 8)) MOD 256	Version
New H-RNTI	'0101 0101 0101 0101'	
New Primary E-RNTI	'0101 0101 0101 0101'	
Radio link addition information		
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 2	
- Downlink DPCH info for each RL	g to the g	
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH may be used.	
- DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- Secondary CPICH info	Not present	
-DL channelisation code	This IE is repeated for all existing downlink	
	DPCHs allocated to the UE	
- Secondary scrambling code	Not present	
-Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical	
	radio parameter sets"	
-Code Number	For each DPCH, assign the same code number	
	in the current code given in cell 1.	
-Scrambling code change	Not Present	
- TPC Combination Index	1	
- TFCI combining indicator	FALSE	
- E-HICH Information		
- Channelisation code	4	
- Signature sequence		
- CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequence - RG combination index	0	
Serving HS-DSCH cell information		
- Dack	Not Present	
- NACK	Not Present	
- HARQ_preamble_mode	1	
- Primary CPICH info	l'	
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- Downlink HS-PDSCH Information	January Samuel S	
- HS-SCCH Info		
- CHOICE mode	FDD	
- DL Scrambling Code	Not present	
- HS-SCCH Channelisation Code Information	Use 2 HS-SCCH	
- HS-SCCH Channelisation Code	6	
- HS-SCCH Channelisation Code	7	
- Measurement Feedback Info		
- CHOICE mode	FDD	
- Pohsdsch	6 dB	
- CQI Feedback cycle, k	4 ms	
- CQI repetition factor	[]	
- CQI	5 (corresponds to 0dB in relative power offset)	
- CHOICE mode	FDD (no data)	
- Downlink 64QAM configured	TRUE	
- HS-DSCH TB size table	Octet Aligned	
E-DCH reconfiguration information		
- E-DCH RL Info new serving cell		
- Primary CPICH info	Cat to the amine and a support line of a set of a set of	
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- E-AGCH Info - E-AGCH Channelisation Code	10	
- E-AGCH Channelisation Code - Serving Grant	10 Not Present	
- Serving Grant - E-DPCCH/DPCCH power offset	Not Present	
- Reference E-TFCIs	Not Present	
- Power Offset for Scheduling Info	Not Present	
- 3-Index-Step Threshold	Not Present	
- 2-Index-Step Threshold	Not Present	
- E-HICH Information	Not Present	
- CHOICE E-RGCH Information		
- E-DCH RL Info other cells	Not Present	

MEASUREMENT REPORT (Step 6)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9.1, with the following exceptions:

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results list	
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- CHOIĆE mode - Primary CPICH info	FDD
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- CHOICE mode - Primary CPICH info	FDD
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
l	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- CHOICE event result	Intra-frequency measurement event results
- Intra-frequency event identity	1b
- Cell measurement event results	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 7)

Information Element	Value/remark
Activation time	(256+CFN-(CFN MOD 8 + 8)) MOD 256
Radio link removal information	1 radio link to be removed
- Primary CPICH info	
- Primary scrambling code	Set to the same P-CPICH scrambling code assigned for cell 1
Serving Cell Change Parameters	
- HARQ_preamble_mode	1
- Downlink HS-PDSCH Information	
- HS-SCCH Info	
- CHOICE mode	FDD
- DL Scrambling Code	Not present
 HS-SCCH Channelisation Code Information 	Use 1 HS-SCCH
- HS-SCCH Channelisation Code	7
- Measurement Feedback Info	
- CHOICE mode	FDD
- Pohsdsch	6 dB
- CQI Feedback cycle, k	4 ms
- CQI repetition factor	1
- □cqi	5 (corresponds to 0dB in relative power offset)
- CHOICE mode	FDD (no data)
- Downlink 64QAM configured	Not Present
- HS-DSCH TB size table	Not Present

8.3.4.13a.5 Test requirement

At step 3 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At step 5 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set addition procedure and DL 64QAM.

At step 6 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At step 8 the UE shall remove the radio link from cell 1 and it shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC.

8.3.4.14 Active Set Update in Soft Handover: Radio Link addition/removal and serving HS-DSCH / E-DCH cell change with activation/deactivation of MIMO

8.3.4.14.1 Definition and applicability

All UE categories which support MIMO and F-DPCH or Enhanced F-DPCH.

8.3.4.14.2 Conformance requirement

If the UE receives an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message:

- 1> if the IE "MIMO parameters" is not included:
 - 2> clear the MIMO_PARAMS variable;
 - 2> trigger lower layers to stop operation in MIMO mode.

1> otherwise:

- 2> for FDD, if the IE "MIMO N_cqi_typeA/M_cqi ratio" is included:
 - 3> store the value of the IE "MIMO N_cqi_typeA/M_cqi ratio" in the MIMO_PARAMS variable.
- 2> for FDD, if the IE "MIMO pilot configuration" is included:
 - 3> store the value of the IE "MIMO pilot configuration" in the MIMO_PARAMS variable.

[...]

If the UE receives an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message, the UE shall:

- 1> take actions related to the MIMO_PARAMS variable as specified in subclause 8.5.32;
- 1> determine the value of the MIMO STATUS variable.

The MIMO_STATUS variable shall be set to TRUE only when all the following conditions are met:

- 1> The UE is in CELL_DCH state;
- 1> the variable HS_DSCH_RECEPTION is set to TRUE;
- 1> for FDD, the variable MIMO_PARAMS contains a value for the IE "MIMO N_cqi_typeA/M_cqi ratio"; and
- 1> for FDD, the variable MIMO_PARAMS contains a value for the IE "MIMO pilot configuration".
- 1> for 1.28 Mcps TDD, the variable MIMO_PARAMS contains a value for the IE "MIMO SF Mode for HS PDSCH dual stream".

If any of the above conditions is not met and the MIMO_STATUS variable is set to TRUE, the UE shall:

- 1> set the MIMO_STATUS variable to FALSE;
- 1> clear the MIMO PARAMS variable;
- 1> trigger lower layers to stop operation in MIMO mode.

[...]

With the exception of the provisions of subclause 6A.3, the following shall apply when the UE is configured in MIM O mode:

1) The UE derives the PCI value as defined in subclause 6A.4 and either a type A or a type B CQI value as defined in subclause 6A.2.2 depending on which type of CQI shall be reported as defined below.

Reference

3GPP TS 25.331 clause 8.5.32, 8.5.33

3GPP TS 25.214 clause 6A.1.2.2

8.3.4.14.3 Test purpose

- 1. To confirm that the UE starts MIMO reception according to the received ACTIVE SET UPDATE message.
- 2. To confirm that the UE maintains MIMO reception according to the received ACTIVE SET UPDATE message
- 3. To confirm that the UE stops MIMO reception according to the received ACTIVE SET UPDATE message.

8.3.4.14.4 Method of test

Initial Condition

System Simulator: 3 cells - Cell 1 non MIMO cell, Cell 2 MIMO configured, Cell 3 MIMO configured

UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-17) under condition A17b, as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE category supports MIMO
- UE fully supports F-DPCH or Enhanced F-DPCH

Test Procedure

Table 8.3.4.14-1

Cell	UTRARF Channel Number
Cell 1	Mid Range Test Frequency
Cell 2	Mid Range Test Frequency
Cell 3	Mid Range Test Frequency

Table 8.3.4.14-2

		Time					
Parameter	Unit	T0	T1	T2	T3	T4	T5
Cell 1 CPICH Ec	dBm/3.84MHz	-60	-60	-75	-75	-75	-60
Cell 2 CPICH Ec	dBm/3.84MHz	-75	-60	-60	-60	-75	-75
Cell 3 CPICH Ec	dBm/3.84MHz	-75	-75	-75	-60	-60	-60

Table 8.3.4.14 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.14-2. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" and MIMO configuration. When the UE receives this message, the UE shall activate MIMO reception and configure SRB and user plane bearers for HS-DSCH reception (L1 configured for MIMO on separate antennae) using the new radio link with cell 2 as the serving cell. The UE shall respond with ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. The SS transmits a UE CAPABILITY ENQUIRY message on DLSRB2 using MIMO configuration. The UE shall respond with a UE CAPABILITY INFORMATION message. The SS completes this part of the procedure by transmitting a UE CAPABILITY INFORMATION CONFIRM message to the UE with SRB using MIMO configuration.

SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.14-2. UE shall transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 1 according to IE "Intra-frequency event identity", which is set to '1b' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS will remove the radio link from cell 1 and then SS transmits an ACTIVE SET UPDATE message using MIMO, which includes IE "Radio Link Removal Information" and specifying the S-CPICH information of the cell to be removed. When the UE receives this message, the UE RRC entity shall request UE L1 entity to terminate transmission and reception of the radio link from cell 1. Then the UE transmits an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC on SRB2. The SS transmits a UE CAPABILITY ENQUIRY message on DL SRB2 from Cell 2 using MIMO configuration and the UE shall respond with a UE CAPABILITY INFORMATION message. The SS completes this part of the procedure by transmitting a UE CAPABILITY INFORMATION CONFIRM message to the UE with SRB configured for MIMO.

The SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.14-2. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 3 according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 3 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 2 on DCCH using AM RLC and MIMO configuration which includes the IE "Radio Link Addition Information" and MIMO parameters. When the UE receives this message, the UE shall maintain MIMO reception but with Cell 3 as the serving cell. The UE shall respond with ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. The SS transmits a UE CAPA BILITY ENQUIRY message on DL SRB2 using MIMO configuration. The UE shall respond with a UE CAPABILITY INFORMATION message. The SS completes this part of the procedure by transmitting a UE CAPABILITY INFORMATION CONFIRM message to the UE with SRB configured for MIMO.

SS configures its downlink transmission power settings according to columns "T4" in table 8.3.4.14-2. UE shall transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to 'lb' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS will remove the radio link from cell 1 and then SS transmits

an ACTIVE SET UPDATE message, which includes IE "Radio Link Removal Information" and specifying the S-CPICH information of the cell to be removed.

SS configures its downlink transmission power settings according to columns "T5" in table 8.3.4.14-2. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 1 according to IE "Intra-frequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 3 and then the SS transmits to the UE an ACTIVE SET UPDATE message from cell 1 on DCCH using MIMO configuration which includes the IE "Radio Link Addition Information" but no MIMO parameters in RRC message. When the UE receives this message, the UE shall deactivate MIMO reception and use cell 1 as the serving cell. The UE shall respond with ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. The SS transmits a UE CAPABILITY ENQUIRY message on DL SRB2 on HS-DSCH. The UE shall respond with a UE CAPABILITY INFORMATION message.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1	←		UE: PS_DCCH+DTCH
			E_DCH/HS_DSCH (state 6-18)
			according to clause 7.4.
2			SS configures its downlink
			transmission power settings
			according to columns "T1" in table
		ME AGUIDENENT DEDOOT	8.3.4.14-2.
3	\rightarrow	MEASUREMENT REPORT	See specific message contents for
			this message (event '1a' for cell 2).
4	+	ACTIVE SET UPD ATE	SS transmits this message in cell 1
			on downlink DCCH using AM RLC.
			The message includes IE "Radio
			Link Addition Information" for cell
			2. Valid MIMO parameters are
			specified and Cell 2 becomes the
		ACTIVE OF LUBB ATE COMPLETE	serving Cell.
5	\rightarrow	ACTIVE SET UPD ATE COMPLETE	
6			At the activation time the SS
			changes the serving E-DCH and
			HS-DSCH link to Cell 2 and
			applies the new configuration.
7	←	UE CAPABILITY ENQUIRY	Use default message. SRB2 is
			sent using the configured L1 MIMO
			configuration. i.e. single data
			stream on antenna 1 and antenna
			2 with separate modulation
			patterns on S-CPICH.
8	→	UE CAPABILITY INFORMATION	
9	+	UE CAPABILITY INFORMATION	SRB2 is sent on HS-DSCH using
		CONFIRM	configured L1 MIMO from Cell 2.
10			SS configures its downlink
			transmission power settings
			according to columns "T2" in table
4.4		ME AGUIDENENT DEDOOT	8.3.4.14-2.
11	\rightarrow	MEASUREMENT REPORT	See specific message contents for
			this message (event '1b' for cell 1).
12	+	ACTIVE SET UPD ATE	The SS transmits this message on
			SRB2 using MIMO configuration
			which includes IE "Radio Link
			Removal Information". Valid MIMO
			configuration parameters are
40		AOTIVE OF LIDE ATE COMPLETE	specified.
13	→ 	ACTIVE SET UPDATE COMPLETE	At the continue tiers of CO
14	SS		At the activation time the SS
	1		removes the radio link associated
4.5			with Cell 1
15	1		SS configures its downlink
			transmission power settings
			according to columns "T3" in table
4.0	 	ME ASUDEMENT DEDOCT	8.3.4.14-2.
16	→	MEASUREMENT REPORT	See specific message contents for
47	,	ACTIVE SET LIDE ATE	this message (event '1a' for cell 3).
17	←	ACTIVE SET UPDATE	SS transmits this message (SRB2
			using MIMO configuration) from cell 2. The message includes IE
			"Radio Link Addition Information"
			for cell 3. Cell 3 to become the
10		ACTIVE SETTIOD ATE COMPLETE	serving Cell.
18	→ SS	ACTIVE SET UPDATE COMPLETE	At the activation time the SS
19	55		
	1		changes the serving E-DCH and HS-DSCH link to Cell 3 and
	1		
			applies the new configuration.

20	-	UE CAPABILITY ENQUIRY	Use default message. SRB2 is sent using the configured L1 MIMO
			configuration from Cell3
21	\rightarrow	UE CAPABILITY INFORMATION	
22	+	UE CAPABILITY INFORMATION CONFIRM	SRB2 is sent on HS-DSCH using configured L1 MIMO
23			SS configures its downlink transmission power settings
			according to columns "T4" in table 8.3.4.14-2
24	\rightarrow	MEASUREMENT REPORT	See specific message contents for this message (event '1b' for cell 2)
25	+	ACTIVE SET UPDATE	The SS transmits this message on SRB2 using MIMO configuration. The RRC message includes IE "Radio Link Removal Information" for Cell 2
26	\rightarrow	ACTIVE SET UPDATE COMPLETE	
27	SS		At the activation time the SS removes the radio link associated with Cell 2
28			SS configures its downlink transmission power settings according to columns "T5" in table 8.3.4.14-2
29	→	MEASUREMENT REPORT	See specific message contents for this message (event '1a' for cell 1)
30	+	ACTIVE SET UPDATE	The SS transmits this message on SRB2 using MIMO configuration. The RRC message includes IE "Radio Link Addition Information" for Cell 1 with MIMO configuration absent. Cell 1 to become the active Cell
31	\rightarrow	ACTIVE SET UPDATE COMPLETE	
32	SS		At the activation time the SS changes the serving E-DCH and HS-DSCH link to Cell 1 and applies the new configuration.
33	+	UE CAPABILITY ENQUIRY	Use default message. SRB2 sent on HS-DSCH from Cell 1
34	\rightarrow	UE CAPABILITY INFORMATION	
35	+	UE CAPABILITY INFORMATION CONFIRM	SRB2 on HS-DSCH from Cell 1

Specific Message Contents

Specific Message Content

The contents of SIB11 broadcasted in cell 1 shall be in accordance with the default SIB11 as specified in section 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Intra-frequency measurement reporting criteria	
 Parameters required for each event 	2 kinds
 Intra-frequency event identity 	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range Constant	10 (5 dB)
 Cells forbidden to affect Reporting range 	Not Present
- W	0 (0.0)
- Hysteresis	0 (0.0)
- Threshold Used Frequency	Not Present
 Reporting deactivation threshold 	3
 Replacement activation threshold 	Not Present
- Time to trigger	640
- Amount of reporting	4
- Reporting interval	4000
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells
	on used frequency
 Maximum number of reported cells 	3
 Intra-frequency event identity 	1b
- Triggering condition 1	Active set cells
- Triggering condition 2	Not Present
- Reporting Range Constant	10 (5 dB)
 Cells forbidden to affect Reporting range 	Not Present
- W	0 (0.0)
- Hysteresis	0 (0.0)
- Threshold Used Frequency	Not Present
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells
	on used frequency
- Maximum number of reported cells	3

The contents of SIB12 in cell 1, and SIB11 and SIB12 in cell 2, cell 3 shall be in accordance with the default SIBs as specified in TS 34.108.

MEASUREMENT REPORT (Step 3)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 3 cells are included (the order in which the different cells are reported is not important)
 Cell measured results 	Cell 1. See Note 1
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information Primary CPICH info 	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 3. See Note 2
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information Primary CPICH info 	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)"
. Initially solutioning soud	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is absent
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	Oncome that the is about
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	""
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1 and 2 may appear in any order.

NOTE 2: Cell measured results for cells 3 may or may not be present (depends upon the capability of the UE and test uncertainties in power level). If present it can appear in any order.

ACTIVE SET UPDATE (Step 4)

Information Floward	Value hamad	Versian
Information Element Activation time	Value/remark (256+CFN-(CFN MOD 8 + 8)) MOD 256	Version
New H-RNTI	10101 0101 0101 0101'	
New Primary E-RNTI	0101 0101 0101 0101	
MIMO Parameters		
- MIMO Operation	Start	
- MIMO N_cqi_typeA/M_cqi ratio	1/1	
- MIMO pilot configuration	Antonia ad O ODIOLI	
- CHOICE Second CPICH pattern - Channelisation code	Antenna1 S-CPICH 13	
Radio link addition information - Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 2	
- Downlink F-DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH may be used.	
- F-DPCH frame offset	Calculated value from Cell synchronisation	
- F-DPCH slot format	information	
יים - די-טרטון אוטנוטוווומנ - די-טרטון אוטנוטוווומנ	3 if UE supports enhanced F-DPCH, otherwise Not Present	
- Secondary CPICH info	Not present	
- Secondary scrambling code	Not present	
- Code number	F-DPCH code number as used in Cell1	
- TPC Combination Index	1	
- TFCI combining indicator	FALSE	
- E-HICH Information - Channelisation code		
- Signature sequence	4	
- CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequence	0	
- RG combination index	0	
Serving HS-DSCH cell information		
- Δ _{ACK}	Not Present	
- Anack	Not Present	
- HARQ_preamble_mode	0	
- Primary CPICH info - Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- Downlink HS-PDSCH Information	Set to the primary scrambling code of cell 2	
- HS-SCCH Info		
- CHOICE mode	FDD	
- DL Scrambling Code	Not present	
- HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code	Use 1 HS-SCCH 7	
Measurement Feedback Info CHOICE mode	FDD	
- Measurement Power Offset	12 (6 dB)	
- CQI Feedback cycle, k	4 ms	
- CQI repetition factor	1	
- Δ _{CQI}	5 (corresponds to 0dB in relative power offset)	
- CHOICE mode	FDD (no data)	
- Downlink 64QAM configured	Not Present	
- HS-DSCH TB size table	Octet Aligned	
- HARQ Info	40	
- Number of Processes - CHOICE Memory Partitioning	12 Implicit	
- MAC-hs reset indicator	TRUE	
E-DCH reconfiguration information		
- E-DCH RL Info new serving cell		
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- E-AGCH Info		
- E-AGCH Channelisation Code	10	
- Serving Grant	Not Present	
- E-DPCCH/DPCCH power offset - Reference E-TFCIs	Not Present Not Present	
Reference E-TFCIs Power Offset for Scheduling Info	Not Present	
- I ower Onserior Someduling lillo	וויטנו ופסכוונ	

	Not Present Not Present	Ì
<u>'</u>	Not Present	
- CHOICE E-RGCH Information		
- E-DCH RL Info other cells	Not Present	

UE CAPABILITY ENQUIRY (Steps 7, 20, 33)

Use the same message sub-type found in TS 34.108 clause 9.1

UE CAPABILITY INFORMATION (Steps 8, 21, 34)

Use the same message sub-type found in TS 34.108 clause 9.

UE CAPABILITY INFORMATION CONFIRM (Steps 9, 22, 35)

Use the same message sub-type found in TS 34.108 clause 9.1

MEASUREMENT REPORT (Step 11)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
 Intra-frequency measured results list Cell measured results 	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- CHOICE mode	FDD
- Primary CPICH info	Cell 2. See Note 1
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- CHOICE mode	FDD
- Primary CPICH info	Cell 1. see Note 1
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- CHOICE mode	FDD
- Primary CPICH info - Primary scrambling code	Cell 3. see Note 1 Refer to clause titled "Default settings for cell No.3 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss Measured results on RACH	Checked that this IE is absent Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	CHECKER MISTE IS SUSHIL
- CHOICE event result	Intra-frequency measurement event results
- Intra-frequency event identity	1b
- Cell measurement event results	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1, 2 and 3 may appear in any order. Cell measured results for cells 1 and 3 may or may not be present (depends upon the capability of the UE and test uncertainties in power level)

ACTIVE SET UPDATE (Step 12)

Information Element	Value/remark	Version
MIMO Parameters		
- MIMO Operation	Continue	
-		
 MIMO N_cqi_typeA/M_cqi ratio 	1/1	
 MIMO pilot configuration 		
 CHOICE Second CPICH pattern 	Antenna1 S-CPICH	
- Channelisation code	13	
Radio link removal information		
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 1	

MEASUREMENT REPORT (Step 16)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 3 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information Primary CPICH info 	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 3. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 1. See Note 2
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
 Primary CPICH info Primary scrambling code 	Refer to clause titled "Default settings for cell No.1 (FDD)"
- Fillinary scrambling code	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is absent
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1, 2 and 3 may appear in any order. Cell measured result for cell 1 may or may not be present (depends upon the capability of the UE and test uncertainties in power level).

ACTIVE SET UPDATE (Step 17)

Activation time (256+CFN-(CFN MOD 8 + 8)) MOD 256 New H-RNTI '0101 0101 0101 0111' New Primary E-RNTI '0101 0101 0101 0111'	Information Floresat	Valuation out	Varaian
Naw H-RNTI MMO Parameters - MMO Operation - MMO Operation - MMO Departments - MMO Operation - MMO Departments - MMO Operation - MMO N_cqi_typeA/M_cqi ratio - MMO N_cqi_typeA/M_cqi ratio - MMO Departments - Channelisation code - Channelisation information - Primary CPICH info - Secondary CPICH info - Primary CPICH info - Channelisation code - Code Number - TPC Combination index - Channelisation code - Signature sequence - CHOICE E-RECH information - Signature sequence - CHOICE E-RECH information - Signature Sequence - CHOICE mode - Dis Scrambling Code - Downlink R-DSCH Information - HS-SCCH Channelisation Code - Neasurement Feedack Information - HS-SCCH Channelisation Code - Neasurement Feedack Information - HS-SCCH Channelisation Code - Neasurement Feedack Information - HS-SCCH Test information - CHOICE mode - Dis Scrambling Code - Downlink R-PSCH information - CHOICE mode - Downlink R-PSCH information - CHOICE mode - Downlink R-PSCH information - CHOICE mode - Neasurement Feedack Information - HS-SCCH Test information - CHOICE mode - Downlink R-PSCH information - CHOICE mode - Downlink R-PSCH information - Primary Scrambling Code - HS-SCCH Test information - Primary Scrambling Code - PRIMARY CPICH information - Primary Scrambling Code - PRIM	Information Element	Value/remark	Version
Naw Primary E-RNT MMO Operation - MMO Operation - MMO Operation - Channelisation code - Cholice Second CPICH pattern - Channelisation code - Primary CPICH Info - Primary Scrambling code - Primary CPICH usage for channel estimation - F-DPCH stot format - Secondary CPICH info			
MMO Parameters - MMO N. cqi_typeA/M. cqi ratio - MMO pilot configuration - MMO pilot configuration - CHOICE Second CPICH pattern - Channelisation code Rado link addition information - Primary CPICH info - Primary Scrambling code - Downlink F3PCF info for each RL - Downlink F3PCF info for each RL - Primary CPICH usage for channel estimation - F-IDPCH frame offset - F-IDPCH frame offset - F-IDPCH state from the set information - Secondary CPICH info - Secondary CPICH info - Secondary Scrambling code - Code Number - TPC Combination index - Chilote F-RGCH information - Signature sequence - CHOICE F-RGCH information - Signature sequence - CHOICE mode - Downlink H3PDSCH information - H3-SCCH Channelisation code - Primary Scrambling code - Downlink H3PDSCH information - H3-SCCH Channelisation code - Measurement Feedback information - H3-SCCH Channelisation code - Downlink H3PDSCH information - H3-SCCH Channelisation code - Do			
- MMO N_cqi_NpeAM_cqi ratio - MMO pilot configuration - CHOICE Second CPICH pattern - Channelisation code Radio link addition information - Primary CPICH Info - Primary CPICH Info - Primary CPICH Info - Primary CPICH Info - Primary CPICH Usage for channel estimation - P-DPCH frame offset - F-DPCH slot format - F-DPCH slot format - Secondary CPICH info - Secondary Scrambling code - Ode Number - TPC Combination Index - Signature sequence - CHOICE FROCH Information - Recombination index - Primary Scrambling Code - Downlink HS-PDSCH Information - H-SSCCH Channelisation Code - Description Radox - CHOICE mode - Downlink HS-DSCH TB size table - HASO GREEN Base table - HASO GRE	MIMO Parameters		
- MMO pilot configuration - CHOICE second CPICH pattern - Channelisation code Radio link addition information - Primary CPICH Info - Primary Carambling code - Downlink F-DPCH info for each RL - CHOICE mode - Primary CPICH usage for channel estimation - F-DPCH frame offset - F-DPCH sol format - Secondary CPICH info - CHOICE F-RGCH Information - F-RGCH Information - F-RGCH Information - F-RGCH Information - Signature Sequence - RG combination index - Service Sequence - RG combination index - Second Sequence - RG combination - Second Sequence - RG com	- MIMO Operation	Start	
- MMO pilot configuration - CHOICE second CPICH pattern - Channelisation code Radio link addition information - Primary CPICH Info - Primary Carambling code - Downlink F-DPCH info for each RL - CHOICE mode - Primary CPICH usage for channel estimation - F-DPCH frame offset - F-DPCH sol format - Secondary CPICH info - CHOICE F-RGCH Information - F-RGCH Information - F-RGCH Information - Signature Sequence - RGCH Channelisation Code Information - HS-SCCH Channelisation Code - Heimary CPICH info - HS-SCCH Channelisation Code - Measurement Feedback Info - CHOICE mode - Downlink 640AM configured - HS-SCCH Channelisation Code - Measurement Fower Offset - Acgi - CHOICE mode - Downlink 640AM configured - HS-SCCH Channelisation Code - HARO Info - Number of Processes - CHOICE Memop Partitioring - MAC-ns reset indicator - Primary Scrambing Code - PROCH Info Reserving Code - PROCH CRORE Reservence - PROCH Reservence - PROCH CRORE Reservence - PROCH CRORE Reservence - PROCH Reservence - PROCH CRORE Reservence - PROCH Rese	-		
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- CHOICE mode - Measurement Power Offset - CQI Feedback cycle, k - CQI repetition factor - A _{CQI} - CHOICE mode - Downlink 64QAM configured - HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs FDD (12 (6 dB) 4 ms 12 (6 dB) 5 (corresponds to 0dB in relative power offset) Coter Aligned HDD (12 (6 dB) 4 ms 12 (6 dB) 4 ms 12 (6 dB) 4 ms 15 (corresponds to 0dB in relative power offset) FDD (no data) Not Present TRUE FDD (no data) Not Present Set to Higned TRUE Set to the primary scrambling code of cell 3	- HS-SCCH Channelisation Code	7	
- Measurement Power Offset - CQI Feedback cycle, k - CQI repetition factor - \(\lambda_{\text{CQI}} \) - CHOICE mode - Downlink 64QAM configured - HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - Serving Grant - E-DCCH/DPCCH power offset - Reference E-TFCIs 12 (6 dB) 4 ms 4 ms 5 (corresponds to 0dB in relative power offset) Not Present 1 (1 (6 dB) 4 ms 4 ms 5 (corresponds to 0dB in relative power offset) 1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1			
- CQI Feedback cycle, k - CQI repetition factor - Δ _{CQI} - CHOICE mode - Downlink 64QAM configured - HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs 4 ms 1 1 5 (corresponds to 0dB in relative power offset) Not Present 1 1 5 (corresponds to 0dB in relative power offset) Not Present 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
- CQI repetition factor - Δ _{CQI} 5 (corresponds to 0dB in relative power offset) - CHOICE mode - Downlink 64QAM configured - HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs 1 5 (corresponds to 0dB in relative power offset) FDD (no data) Not Present Not Present 1 5 (corresponds to 0dB in relative power offset) FDD (no data) Not Present Set to the primary scrambling code of cell 3			
- Δ _{CQI} - CHOICE mode - Downlink 64QAM configured - HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs 5 (corresponds to 0dB in relative power offset) FDD (no data) Not Present TRUE 5 (corresponds to 0dB in relative power offset) FDD (no data) Not Present 5 (corresponds to 0dB in relative power offset) FDD (no data) Not Present 12 - Ctet Aligned - TRUE TRUE Set to the primary scrambling code of cell 3 - Set to the primary scrambling code of cell 3		4 ms 1	
- CHOICE mode - Downlink 64QAM configured - HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs FDD (no data) Not Present Set to the primary scrambling code In Description Not Present Not Present Not Present Not Present Not Present Not Present	1 · · · · · · · · · · · · · · · · · · ·	5 (corresponds to 0dB in relative nower offset)	
- Downlink 64QAM configured - HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs Not Present Octet Aligned TRUE Set to the primary scrambling code of cell 3 Not Present Not Present Not Present Not Present Not Present			
- HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs Octet Aligned Octet Aligned Octet Aligned Octet Aligned Octet Aligned 12 Implicit TRUE Set to the primary scrambling code of cell 3 Not Present Not Present Not Present Not Present		` '	
- HARQ Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs 12 Implicit TRUE Set to the primary scrambling code of cell 3 10 Not Present Not Present Not Present Not Present			
- Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs 12 Implicit TRUE Set to the primary scrambling code of cell 3 13 Implicit TRUE 14 Implicit TRUE 15 Implicit TRUE 16 Implicit TRUE 17 In Implicit TRUE 17 In Implicit TRUE 18 In Implicit TRUE 18 In Implicit TRUE		Octet Aligned	
- CHOICE Memory Partitioning - MAC-hs reset indicator E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs Implicit TRUE Set to the primary scrambling code of cell 3 Not Present Not Present Not Present Not Present		12	
E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs Set to the primary scrambling code of cell 3 10 Not Present Not Present Not Present			
- E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs Set to the primary scrambling code of cell 3 10 Not Present Not Present Not Present		TRUE	
- Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs Set to the primary scrambling code of cell 3 10 Not Present Not Present Not Present			
- Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs Set to the primary scrambling code of cell 3 10 Not Present Not Present Not Present			
- E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs 10 Not Present Not Present Not Present		Sat to the primary scrambling code of call 2	
- E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs 10 Not Present Not Present Not Present		Sectorine primary scrambling code of cell 3	
- Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs Not Present Not Present		10	
- E-DPCCH/DPCCH power offset Not Present - Reference E-TFCIs Not Present			
- Reference E-TFCIs Not Present	- E-DPCCH/DPCCH power offset		
- Power Offset for Scheduling Info Not Present			
	- Power Offset for Scheduling Info	Not Present	

- 3-Index-Step Threshold	Not Present	
- 2-Index-Step Threshold	Not Present	
- E-HICH Information	Not Present	
- CHOICE E-RGCH Information		
- E-DCH RL Info other cells	Not Present	

MEASUREMENT REPORT (Step 24)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
 Intra-frequency measured results list 	
- Cell measured results	Cell 3. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3(FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 1. see Note 1
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information CHOICE mode Primary CPICH info 	Checked that this IE is absent FDD
- Primary Crich into	Poter to clause titled "Default settings for call No.1 (EDD)"
	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. see Note 1
Cell Identity Cell synchronisation information	Checked that this IE is absent Checked that this IE is absent
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
1 mary columning code	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- CHOICE event result	Intra-frequency measurement event results
- Intra-frequency event identity	1b
- Cell measurement event results	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1, 2 and 3 may appear in any order. Cell measured results for cells 1 and 2 may or may not be present (depends upon the capability of the UE and test uncertainties in power level)

ACTIVE SET UPDATE (Step 25)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9.1, with the following exceptions:

Information Element	Value/remark	Version
MIMO Parameters		
- MIMO Operation	Continue	
-		
 MIMO N_cqi_typeA/M_cqi ratio 	1/1	
 MIMO pilot configuration 		
- CHOICE Second CPICH pattern	Antenna1 S-CPICH	
- Channelisation code	13	
Radio link removal information		
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 2	

MEASUREMENT REPORT (Step 29)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 3 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	Cell 3, See Note 1
- Cell Identity	Checked that this IE is absent
Cell synchronisation informationPrimary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 1. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
 Cell measured results 	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	D () () () () () () () ()
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
 Intra-frequency measurement event results Intra-frequency event identity 	13
- Intra-frequency event identity - Cell measurement event results	1a
- Primary CPICH info	
- Primary Scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1, 2 and 3 may appear in any order. Cell measured result for cell 2 may or may not be present (depends upon the capability of the UE and test uncertainties in power level).

ACTIVE SET UPDATE (Step 30)

Activation time (256-CFN-(CFN MOD 8 + 8))MOD 256 New H-RNT (10 10 10 10 11 10 11 10 11 11 10 11 Radio link addition information - Primary CPICH Info - Primary CPICH info Feach RL - CHOICE mode - Primary CPICH info for each RL - CHOICE For mode - Primary CPICH info February CPICH info Secondary CPICH info Secondary crambling code - Oade Number - TPC Combination Index - TPCI combining indicator - CHOICE FACCH Information - Signature sequence - CHOICE FACCH Information - Signature sequence - RG combination index and Serving HS-DSCH relations on this sequence - Primary CPICH info - Primary Scrambling Code - Measurement Power Offset - COI repetition factor - A-C ₂ - COI reset indication code - Downlink B4OAM configured - HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Memory Partitioning - E-DCH RL Info new serving cell - Primary Scrambling code - Cell 1 - Primary Scrambling code - Cell 1 - Primary Scrambling code - Cell 1 - Primary CPICH info - Primary Scrambling code - Cell 1 - Primary CPICH info - CHOICE mode - Downlink B4OAM configured - HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Memory Partitioning - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling code - Cell 1 - Primary CPICH info - Primary Scrambling code - Cell 1 - Primary CPICH info - Primary Scrambling code - Cell 1 - Primary CPICH info - Primary Scrambling code - Cell 1 - Primary CPICH info - Primary Scrambling code - Cell 1 - Primary CPICH info - Primary Scrambling code - Cell 1 - Primary CPICH info - Primary Scrambling code - Cell 1 - Primary CPICH info - Primary Scrambling code - Cell 1 - Primary CPICH info - Primary Scrambling code - Cell 1 - Primary CPICH info - Primary Scrambling code - Cell 1	Information Element	Value/remark	Version
New Primary F-RNTI Radio link addition information - Primary CPICH Info - Primary CPICH Info - Primary CPICH usage for channel estimation - F-DPCH slot format - Secondary CPICH usage for channel estimation - F-DPCH slot format - Secondary Scrambling code - Secondary Scrambling code - Secondary Scrambling code - Secondary Scrambling code - Code Number - TPC Combination Index - CHOICE F-RGCH Information - E-RGCH Information - E-RGCH Information - F-RCSH Information - H-S-SCCH Channelisation Code Information - H-S-SCCH Channelisation Code - Measurement Feedback Info - CHOICE mode - Downlink HS-PDSCH Information - RESCH Channelisation Code Information - RESCH Channelisation Code Information - H-S-SCCH Channelisation Code Information - RESCH Channelisation Code Information -	Activation time	(256+CFN-(CFN MOD 8 + 8)) MOD 256	
Radio link addition information - Primary Scrambling code - Downlink F-DPCH info - Primary CPICH usage for channel estimation - F-DPCH grame offset - F-DPCH slot format - F-DPCH slot format - F-DPCH slot format - Secondary CPICH usage for channel estimation - Secondary Scrambling code - Secondary Scrambling code - Code Number - TPC Combination index - TPC Combination index - TPC Combination index - TPC Combination index - E-HICH Information - Channelsation code - Signature Sequence - CHOICE E-RGCH Information - F-RGCH information - Signature Sequence - RG combination index - Signature Sequence - RG combination index - ANDEX - ANDEX - ANDEX - HARC_preamble_mode - Primary PCPCH info - CHOICE mode - NES-SCCH Channelisation Code - Measurement Feedback Info - CHOICE mode - Measurement Power Offset - CQI repetition factor - A _Q C _Q - CHOICE mode - Downlink 43-QAM configured - HARC Info - Number of Processes - CHOICE Memory Partitioning - Primary Scrambling Code - Primary CPCH info - Pimmary Scrambling Code - Sound Research Sequence - CHOICE Memory Partitioning - Primary Scrambling Code - F-AGCH Info - Primary Scrambling Code - Sound Research Sequence - CHOICE Memory Partitioning - Primary Scrambling Code - F-AGCH Info - Primary Scrambling Code - Primary Scrambling Code - Sound Research Sequence - CHOICE Memory Partitioning - Primary Scrambling Code - Sound Research Sequence - CHOICE Memory Partitioning - Primary Scrambling Code - Sound Research Sequence - CHOICE Memory Partitioning - Primary Scrambling Code - Sound Research Sequence - CHOICE Memory Partitioning - Primary Scrambling Code - Sound Research Sequence - Sound Research S	New H-RNTI		
Radio link addition information - Primary Scrambling code - Downlink F-DPCH info - Primary CPICH usage for channel estimation - F-DPCH grame offset - F-DPCH slot format - F-DPCH slot format - F-DPCH slot format - Secondary CPICH usage for channel estimation - Secondary Scrambling code - Secondary Scrambling code - Code Number - TPC Combination index - TPC Combination index - TPC Combination index - TPC Combination index - E-HICH Information - Channelsation code - Signature Sequence - CHOICE E-RGCH Information - F-RGCH information - Signature Sequence - RG combination index - Signature Sequence - RG combination index - ANDEX - ANDEX - ANDEX - HARC_preamble_mode - Primary PCPCH info - CHOICE mode - NES-SCCH Channelisation Code - Measurement Feedback Info - CHOICE mode - Measurement Power Offset - CQI repetition factor - A _Q C _Q - CHOICE mode - Downlink 43-QAM configured - HARC Info - Number of Processes - CHOICE Memory Partitioning - Primary Scrambling Code - Primary CPCH info - Pimmary Scrambling Code - Sound Research Sequence - CHOICE Memory Partitioning - Primary Scrambling Code - F-AGCH Info - Primary Scrambling Code - Sound Research Sequence - CHOICE Memory Partitioning - Primary Scrambling Code - F-AGCH Info - Primary Scrambling Code - Primary Scrambling Code - Sound Research Sequence - CHOICE Memory Partitioning - Primary Scrambling Code - Sound Research Sequence - CHOICE Memory Partitioning - Primary Scrambling Code - Sound Research Sequence - CHOICE Memory Partitioning - Primary Scrambling Code - Sound Research Sequence - CHOICE Memory Partitioning - Primary Scrambling Code - Sound Research Sequence - Sound Research S	New Primary E-RNTI	'0101 0101 0101 1101'	
- Primary scrambling code - Downlink F-DPCH into for each RL - CHOICE mode - Primary CPICH usage for channel estimation - F-DPCH slot format - F-DPCH slot format - F-DPCH slot format - Secondary CPICH info - Secondary Scrambling code - Code Number - TPC Combination Index - TFCI combining indicator - E-HICH Information - Channelisation code - Signature sequence - CHOICE Red Hinformation - Signature Sequence - Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH cell information - HS-SCCH Channelisation Code - Measurement Feedback kinfo - CHOICE mode - Measurement Feedback kinfo - CHOICE mode - Downlink 64QAM configured - HS-SCCH Channelisation Code - Downlink 64QAM configured - HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator - E-DCH RL Info new serving cell - Primary Scrambling Code - Secondary Scrambling Code - Downlink 64QAM configured - HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator - E-DCH RL Info new serving cell - Primary Scrambling Code - E-AGCH Info - Primary Scrambling Code - Primary Scra			
- Downlink F-DPCH into for each RL - CHOICE mode - Primary CPICH usage for channel estimation - F-DPCH slot format - F-DPCH slot format - Secondary CPICH info - Secondary scrambling code - Code Number - TPC Combination lindex - TFCI combination lindex - Signature sequence - CHOICE E-RGCH Information - Signature sequence - CHOICE Mander - Primary CPICH info - Primary Scrambling Code - Dusvnlink HS-PDSCH cell information - HS-SCCH Channelisation Code linformation - HS-SCCH Information - HS-SCCH Channelisation Code linformation - HS-SCCH Info linfo linformation linformation linformation linformation - HS-DCH RL Info new serving cell - Primary Scrambling code of cell 1 - E-ACCH linfo linfo linformation linforma	- Primary CPICH Info		
- CHOICE mode - Primary CPICH usage for channel estimation - F-DPCH frame offset - F-DPCH slot format - Secondary CPICH info - Secondary Scrambling code - Code Number - TPC Combination Index - TFC combination Index - TFC combining indicator - E-HICH Information - Channels ation code - Signature sequence - CHOICE E-RGCH Information - Signature Sequence - Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH Information - HS-SCCH Channelsation Code - Measurement Power Offset - CAICE mode - Measurement Feedback info - CHOICE mode - Downlink 640AM configured - HS-SCCH Thin factor - Acol - CHOICE mode - Downlink 640AM configured - HS-DSCH TB size table - HARO, Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator - E-DCH RL Info new serving cell - Primary Scrambling Code - E-ASCH Info - Primary Scrambling Code - E-ASCH Channelisation Code	- Primary scrambling code	Primary scrambling code of Cell 1	
P-CPICH may be used. Calculated value from Cell synchronisation information F-DPCH slot format Secondary CPICH info Secondary scrambling code Code Number TPC Combination Index TFC Combination TF			
- F-DPCH frame offset - F-DPCH slot format - F-DPCH slot format - Secondary CPICH info - Secondary scrambling code - Code Number - TPC Combination Index - TFCI combining indicator - E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - Signature Sequence - AANCK - ANNCK - HARQ preamble_mode - Primary CPICH info - CHOICE mode - Du Scrambling Code - Measurement Power Offset - CQI Feedback kycle, k - CQI Feedback kycle, k - CQI Feedback cycle, c - CHOICE mode - Downlink 64QAM configured - HS-DSCH TB size table - HARQ Info - Namber of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator - E-DCH HE configuration information - E-ACCH linfo - Primary Scrambling Code - E-ASCH linfo - Primary Scrambling Code - E-ASCH linfo - Primary Scrambling Code - E-ASCH Channelisation Code	- CHOICE mode		
information 3 if UE supports enhanced F-DPCH, otherwise Not Present Not PALSE F-DPCH code number as used in Cell 1 FALSE F-DPCH code number as used	- Primary CPICH usage for channel estimation	P-CPICH may be used.	
- F-DPCH slot format - Secondary CPICH info - Secondary scrambling code - Code Number - TPC Combination Index - F-DPCH code number as used in Cell1 - F-HCH Information - Channelisation code - Signature sequence - CHOICE F-RECH Information - Signature Sequence - RG combination index - AACK - Not Present Not present - AACK - Not Present Not Present - Not Pre	- F-DPCH frame offset		
Secondary CPICH info Secondary scrambling code Code Number FDPCH code number as used in Cell1 FALSE FA			
- Secondary CPICH info - Secondary scrambling code - Code Number - TPC Combination Index - TFCI combination Index - HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - Signature Sequence - CHOICE Information - Serving HS-DSCH cell information - Serving HS-DSCH cell information - Primary CPICH info - Primary CPICH info - Primary CPICH info - CHOICE mode - Downlink HS-PDSCH Information - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info - CHOICE mode - Dear Information - CHOICE mode - Downlink 640AM configured - HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator - E-DCH reconfiguration information - E-AGCH Info - E-DCH	- F-DPCH slot format	1	
- Secondary scrambling code - Code Number - TPC Combination Index - TFCI combining indicator - E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - E-RGCH Information - Signature Sequence - RG combination index Serving HS-DSCH cell information - AACK - ANACK - ANACK - ANACK - HARQ preamble mode - Primary Scrambling Code - Downlink HS-PDSCH Information - HS-SCCH Channelisation Code - HS-SCCH Channelisation Code - Measurement Feedback Info - CHOICE mode - CQI repetition factor - ACQI - CHOICE mode - Downlink GAQM configured - HS-SCH TB size table - HS-CH CR Memory Partitioning - MAC-hs reset indicator - E-DCH RC Memory Partitioning - MAC-hs reset indicator - E-DCH RC Info - Primary Scrambling Code - Potmary Scrambling Code - Downlink Feedback Info - CHOICE mode - Measurement Fower Offset - CQI repetition factor - CHOICE mode - HS-SCH TB size table - HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator - E-DCH RC Info - Primary Scrambling Code - Primary Scrambling Code - E-AGCH Info - Primary Scrambling Code - E-AGCH Channelisation Code - Set to the primary scrambling code of cell 1 - Frimary Scrambling Code - Set to the primary scrambling code of cell 1 - Frimary Scrambling Code - Set to the primary scrambling code of cell 1			
- Code Number - TPC Combination Index - TFC I combination Index - FLHICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - Signature Sequence - CHOICE Sequence - CHOICE Sequence - RG combination index Serving HS-DSCH cell information - AACK - Not Present Not		· ·	
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- E-AGCH Info - E-AGCH Channelisation Code 10		Set to the primary scrambling code of cell 1	
- E-AGCH Channelisation Code 10		g can be provided in the second secon	
		10	
- Serving Grant Not Present	- Serving Grant	Not Present	
- E-DPCCH/DPCCH power offset Not Present		Not Present	
- Reference E-TFCIs Not Present	- Reference E-TFCIs	Not Present	
- Power Offset for Scheduling Info Not Present			
- 3-Index-Step Threshold Not Present			
- 2-Index-Step Threshold Not Present			
- E-HICH Information Not Present		Not Present	
- CHOICE E-RGCH Information			
- E-DCH RL Info other cells Not Present	- E-DCH RL Into other cells	Not Present	

8.3.4.14.5 Test requirements

At steps 3, 11, 16, 24, 29 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At steps 5, 13, 18 and 26, 31 the UE shall trans mit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the previous ACTIVE SET UPDATE and indicate readiness to accept the new configuration at activation time.

At step 8, 21, 34, the UE should transmit UE CAPABILITY INFORMATION on SRB2.

8.3.4.14a Active Set Update in Soft Handover: Radio Link addition/removal and serving HS-DSCH / E-DCH cell change with activation/deactivation of MIMO with SRBs mapped on E-DCH/DCH

8.3.4.14a.1 Definition and applicability

All UE categories which support MIMO.

8.3.4.14a.2 Conformance requirement

If the UE receives an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message:

- 1> if the IE "MIMO parameters" is not included:
 - 2> clear the MIMO_PARAMS variable;
 - 2> trigger lower layers to stop operation in MIMO mode.
- 1> otherwise:
 - 2> for FDD, if the IE "MIMO N_cqi_typeA/M_cqi ratio" is included:
 - 3> store the value of the IE "MIMO N_cqi_typeA/M_cqi ratio" in the MIMO_PARAMS variable.
 - 2> for FDD, if the IE "MIMO pilot configuration" is included:
 - 4> store the value of the IE "MIMO pilot configuration" in the MIMO_PARAMS variable.

[...]

If the UE receives an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message, the UE shall:

- 1> take actions related to the MIMO_PARAMS variable as specified in subclause 8.5.32;
- 1> determine the value of the MIMO_STATUS variable.

The MIMO_STATUS variable shall be set to TRUE only when all the following conditions are met:

- 1> The UE is in CELL_DCH state;
- 1> the variable HS_DSCH_RECEPTION is set to TRUE;
- 1> for FDD, the variable MIMO_PA RAMS contains a value for the IE "MIMO N_cqi_typeA/M_cqi ratio"; and
- 1> for FDD, the variable MIMO PARAMS contains a value for the IE "MIMO pilot configuration".
- 1> for 1.28 Mcps TDD, the variable MIMO_PARAMS contains a value for the IE "MIMO SF Mode for HS PDSCH dual stream".

If any of the above conditions is not met and the MIMO STATUS variable is set to TRUE, the UE shall:

- 1> set the MIMO_STATUS variable to FALSE;
- 1> clear the MIMO_PARAMS variable;
- 2> trigger lower layers to stop operation in MIMO mode.

[...]

With the exception of the provisions of subclause 6A.3, the following shall apply when the UE is configured in MIMO mode:

1) The UE derives the PCI value as defined in subclause 6A.4 and either a type A or a type B CQI value as defined in subclause 6A.2.2 depending on which type of CQI shall be reported as defined below.

Reference

3GPP TS 25.331 clause 8.5.32, 8.5.33

3GPP TS 25.214 clause 6A.1.2.2

8.3.4.14a.3 Test purpose

- 1. To confirm that the UE starts MIMO reception according to the received ACTIVE SET UPDATE message.
- 2. To confirm that the UE maintains MIMO reception according to the received ACTIVE SET UPDATE mes sage
- 3. To confirm that the UE stops MIMO reception according to the received ACTIVE SET UPDATE message.

8.3.4.14a.4 Method of test

Initial Condition

System Simulator: 3 cells - Cell 1 non MIMO cell, Cell 2 MIMO configured, Cell 3 MIMO configured

UE: PS_DCCH_DCH+DTCH E_DCH/HS_DSCH (state 6-18) under condition A17d, as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE category supports MIMO

Test Procedure

Table 8.3.4.14a-1

Cell	UTRARF Channel Number
Cell 1	Mid Range Test Frequency
Cell 2	Mid Range Test Frequency
Cell 3	Mid Range Test Frequency

Table 8.3.4.14a-2

				Tir	ne		
Parameter	Unit	T0	T1	T2	T3	T4	T5
Cell 1 CPICH Ec	dBm/3.84MHz	-60	-60	-75	-75	-75	-60
Cell 2 CPICH Ec	dBm/3.84MHz	-75	-60	-60	-60	-75	-75
Cell 3 CPICH Ec	dBm/3.84MHz	-75	-75	-75	-60	-60	-60

Table 8.3.4.14a illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.14a-2. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" and MIMO configuration. When the UE receives this message, the UE shall activate MIMO reception (L1 configured for MIMO on separate antennae) using the new radio

link with cell 2 as the serving cell. The UE shall respond with ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. SS configures its downlink trans mission power settings according to columns "T2" in table 8.3.4.14a-2. UE shall transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 1 according to IE "Intra-frequency event identity", which is set to '1b' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS will remove the radio link from cell 1 and then SS transmits an ACTIVE SET UPDATE message using MIMO, which includes IE "Radio Link Removal Information" and specifying the S-CPICH information of the cell to be removed. When the UE receives this message, the UE RRC entity shall request UE L1 entity to terminate transmission and reception of the radio link from cell 1. Then the UE transmits an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC on SRB2.

The SS will trans mit a RLC PDU on DTCH on the MIMO configuration (L1 configured for MIMO on separate antennae). The SS waits for the RLC PDU to be sent back in the UPLINK and verifies the PDU content.

The SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.14a-2. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 3 according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 3 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 2 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" and MIMO parameters. When the UE receives this message, the UE shall maintain MIMO reception but with Cell 3 as the serving cell. The UE shall respond with ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. SS configures its downlink transmission power settings according to columns "T4" in table 8.3.4.14a-2. UE shall transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to 'lb' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS will remove the radio link from cell 1 and then SS transmits an ACTIVE SET UPDATE message, which includes IE "Radio Link Removal Information" and specifying the S-CPICH information of the cell to be removed.

SS configures its downlink transmission power settings according to columns "T5" in table 8.3.4.14a-2. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 1 according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 3 and then the SS transmits to the UE an ACTIVE SET UPDATE message from cell 1 on DCCH which includes the IE "Radio Link Addition Information" but no MIMO parameters in RRC message. When the UE receives this message, the UE shall deactivate MIMO reception and use cell 1 as the serving cell. The UE shall respond with ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction UE SS	Message	Comment
1	←		UE: PS_DCCH_DCH+DTCH
			E_DCH/HS_DSCH (state 6-18) according to clause 7.4.
2			SS configures its downlink
			transmission power settings
			according to columns "T1" in table 8.3.4.14a-2.
3	→	MEASUREMENT REPORT	See specific message contents for
	-		this message (event '1a' for cell 2).
4	+	ACTIVE SET UPDATE	SS transmits this message in cell 1
			on downlink DCCH using AM RLC. The message includes IE "Radio
			Link Addition Information" for cell
			2. Valid MIMO parameters are
			specified and Cell 2 becomes the
5	→	ACTIVE SET UPDATE COMPLETE	serving Cell.
6	,	7.61172 621 61 B7112 66111 2212	At the activation time the SS
			changes the serving E-DCH and
			HS-DSCH link to Cell 2 and
7			applies the new configuration. SS configures its downlink
•			transmission power settings
			according to columns "T2" in table
0		MEASUREMENT REPORT	8.3.4.14a-2.
8	\rightarrow	MEASUREMENT REPORT	See specific message contents for this message (event '1b' for cell 1).
9	←	ACTIVE SET UPDATE	The SS transmits this message
			including IE "Radio Link Removal
			Information". Valid MIMO
			configuration parameters are specified.
10	\rightarrow	ACTIVE SET UPDATE COMPLETE	
11	SS		At the activation time the SS
			removes the radio link associated with Cell 1
12			SS configures its downlink
			transmission power settings
			according to columns "T3" in table 8.3.4.14a-2.
13	\rightarrow	MEASUREMENT REPORT	See specific message contents for
			this message (event '1a' for cell 3).
14	+	ACTIVE SET UPDATE	SS transmits this message from
			cell 2. The message includes IE "Radio Link Addition Information"
			for cell 3. Cell 3 to become the
			serving Cell.
15	→ 00	ACTIVE SET UPDATE COMPLETE	At the particular of the control of
16	SS		At the activation time the SS changes the serving E-DCH and
			HS-DSCH link to Cell 3 and
			applies the new configuration.
17			SS configures its downlink
			transmission power settings according to columns "T4" in table
			8.3.4.14a-2
18	\rightarrow	MEASUREMENT REPORT	See specific message contents for
10		ACTIVE SET UPDATE	this message (event '1b' for cell 2)
19	←	ACTIVE SET UPDATE	The SS transmits this message including the IE "Radio Link
			Removal Information" for Cell 2
20	\rightarrow	ACTIVE SET UPDATE COMPLETE	

21	SS		At the activation time the SS removes the radio link associated with Cell 2
22			SS configures its downlink transmission power settings according to columns "T5" in table 8.3.4.14a-2
23	\rightarrow	MEASUREMENT REPORT	See specific message contents for this message (event '1a' for cell 1)
24	←	ACTIVE SET UPDATE	The SS transmits this message including the IE "Radio Link Addition Information" for Cell 1 with MIMO configuration absent. Cell 1 to become the active Cell
25	\rightarrow	ACTIVE SET UPD ATE COMPLETE	
26	SS		At the activation time the SS changes the serving E-DCH and HS-DSCH link to Cell 1 and applies the new configuration.

Specific Message Contents

The contents of SIB11 broadcasted in cell 1 shall be in accordance with the default SIB11 as specified in section 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Intra-frequency measurement reporting criteria	
- Parameters required for each event	2 kinds
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range Constant	10 (5 dB)
- Cells forbidden to affect Reporting range	Not Present
- W	0 (0.0)
- Hysteresis	0 (0.0)
- Threshold Used Frequency	Not Present
- Reporting deactivation threshold	3
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	4
- Reporting interval	4000
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells
	on used frequency
- Maximum number of reported cells	3
- Intra-frequency event identity	1b
- Triggering condition 1	Active set cells
- Triggering condition 2	Not Present
- Reporting Range Constant	10 (5 dB)
- Cells forbidden to affect Reporting range	Not Present
- W	0 (0.0)
- Hysteresis	0 (0.0)
- Threshold Used Frequency	Not Present
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells
	on used frequency
- Maximum number of reported cells	3

The contents of SIB12 in cell 1, and SIB11 and SIB12 in cell 2, cell 3 shall be in accordance with the default SIBs as specified in TS 34.108.

MEASUREMENT REPORT (Step 3)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9.1, with the following exceptions:

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 3 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	Cell 1. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present Checked that this IE is absent
- Pathloss - Cell measured results	Criecked triat triis ie is absent Cell 2. See Note 1
	Checked that this IE is absent
- Cell Identity - Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-
	SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 3. See Note 2
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	Defends along stitled "Defends estimate for cell No. 2 (FDD)"
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)"
CDICLI Fa/NO	in clause 6.1 of TS 34.108
- CPICH Ec/N0 - CPICH RSCP	Checked that this IE is absent Checked that this IE is present
- Pathloss	Checked that this IE is present Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	Oncome and this is to absort
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1 and 2 may appear in any order.

NOTE 2: Cell measured results for cells 3 may or may not be present (depends upon the capability of the UE and test uncertainties in power level). If present it can appear in any order.

ACTIVE SET UPDATE (Step 4)

Information Floresat	Volum ham only	Varaian
Information Element Activation time	Value/remark (256+CFN-(CFN MOD 8 + 8)) MOD 256	Version
New H-RNTI	10101 0101 0101 0101'	
New Primary E-RNTI	'0101 0101 0101 0101'	
MIMO Parameters		
- MIMO Operation	Start	
- CHOICE mode	FDD	
- MIMO N_cqi_typeA/M_cqi ratio	1/1	
- MIMO pilot configuration	Antonno1 C CDICLI	
- CHOICE Second CPICH pattern Radio link addition information	Antenna1 S-CPICH	
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 2	
- Downlink DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH may be used.	
- DPCH frame offset	Calculated value from Cell synchronisation	
- Secondary CPICH info	information Not present	
-DL channelisation code	This IE is repeated for all existing downlink	
DE GIAITICISATION COGC	DPCHs allocated to the UE	
- Secondary scrambling code	Not present	
-Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical	
	radio parameter sets"	
-Code Number	For each DPCH, assign the same code number	
Sorombling gode change	in the current code given in cell 1. Not Present	
-Scrambling code change - TPC Combination Index	14	
- TFCI combining indicator	FALSE	
- E-HICH Information	1,74202	
- Channelisation code	4	
- Signature sequence	1	
- CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequence - RG combination index	0 0	
Serving HS-DSCH cell information	Ŭ	
- ΔACK	Not Present	
- ANACK	Not Present	
- HARQ_preamble_mode	0	
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- Downlink HS-PDSCH Information - HS-SCCH Info		
- CHOICE mode	FDD	
- DL Scrambling Code	Not present	
- HS-SCCH Channelisation Code Information	Use 1 HS-SCCH	
- HS-SCCH Channelisation Code	7	
- Measurement Feedback Info	500	
- CHOICE mode	FDD 6 dB	
- Pohsdsch - CQI Feedback cycle, k	4 ms	
- CQI reedback cycle, k - CQI repetition factor	1	
- Acqi	5 (corresponds to 0dB in relative power offset)	
- CHOICE mode	FDD (no data)	
- Downlink 64QAM configured	Not Present	
- HS-DSCH TB size table	Octet Aligned	
- HARQ Info		
- Number of Processes	12	
- CHOICE Memory Partitioning	Implicit	
- MAC-hs reset indicator	TRUE	
E-DCH reconfiguration information - E-DCH RL Info new serving cell		
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- E-AGCH Info		
- E-AGCH Channelisation Code	10	
- Serving Grant	Not Present	

- E-DPCCH/DPCCH power offset	Not Present	1
- Reference E-TFCIs	Not Present	
- Power Offset for Scheduling Info	Not Present	
- 3-Index-Step Threshold	Not Present	
- 2-Index-Step Threshold	Not Present	
- E-HICH Information	Not Present	
- CHOICE E-RGCH Information		
- E-DCH RL Info other cells	Not Present	

MEASUREMENT REPORT (Step 8)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
 Intra-frequency measured results list 	
- Cell measured results	
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information 	Checked that this IE is absent
- CHOICE mode	FDD
- Primary CPICH info	Cell 2. See Note 1
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
07:01:7	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Chapted that this IF is absent
- Cell Identity	Checked that this IE is absent Checked that this IE is absent
- Cell synchronisation information - CHOICE mode	FDD
- Primary CPICH info	Cell 1. see Note 1
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
I minuty corumning code	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information 	Checked that this IE is absent
- CHOICE mode	FDD
- Primary CPICH info	Cell 3. see Note 1
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)"
07:01: 7 4:0	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results Event results	Checked that this IE is absent
- CHOICE event result	Intra-frequency measurement event results
- Intra-frequency event identity	1b
- Cell measurement event results	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
, , , , , , , , , , , , , , , , , , , ,	in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1, 2 and 3 may appear in any order. Cell measured results for cells 1 and 3 may or may not be present (depends upon the capability of the UE and test uncertainties in power level).

ACTIVE SET UPDATE (Step 9)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9.1, with the following exceptions:

Information Element	Value/remark	Version
MIMO Parameters		
- MIMO Operation	Continue	
- CHOICE mode	FDD	
 MIMO N_cqi_typeA/M_cqi ratio 	1/1	
 MIMO pilot configuration 		
- CHOICE Second CPICH pattern	Antenna1 S-CPICH	
Radio link removal information		
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 1	

MEASUREMENT REPORT (Step 13)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 3 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information Primary CPICH info 	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 3. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 1. See Note 2
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information Primary CPICH info 	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
 Intra-frequency measurement event results 	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1, 2 and 3 may appear in any order. Cell measured result for cell 1 may or may not be present (depends upon the capability of the UE and test uncertainties in power level).

ACTIVE SET UPDATE (Step 14)

Information Floresat	Valua framoni	Varaian
Information Element Activation time	Value/remark (256+CFN-(CFN MOD 8 + 8)) MOD 256	Version
New H-RNTI	10101 0101 0101 0111'	
New Primary E-RNTI	0101 0101 0101 0111	
MIMO Parameters		
- MIMO Operation	Start	
- CHOICE mode	FDD	
- MIMO N_cqi_typeA/M_cqi ratio	1/1	
- MIMO pilot configuration	Antonio - 4 O ODIOLI	
- CHOICE Second CPICH pattern Radio link addition information	Antenna1 S-CPICH	
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 3	
- Downlink DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH may be used.	
- DPCH frame offset	Calculated value from Cell synchronisation	
0 1 00101111	information	
- Secondary CPICH info	Not present	
-DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE	
- Secondary scrambling code	Not present	
-Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical	
3	radio parameter sets"	
-Code Number	For each DPCH, assign the same code number	
	in the current code given in cell 1.	
-Scrambling code change	Not Present	
- TPC Combination Index	0	
- TFCI combining indicator - E-HICH Information	FALSE	
- Channelisation code	4	
- Signature sequence	1	
- CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequence	0	
- RG combination index	0	
Serving HS-DSCH cell information	Not Present	
- Aack	Not Present	
- Δnacκ - HARQ_preamble_mode	0	
- Primary CPICH info	Ŭ	
- Primary Scrambling Code	Set to the primary scrambling code of cell 3	
- Downlink HS-PDSCH Information		
- HS-SCCH Info		
- CHOICE mode	FDD	
- DL Scrambling Code	Not present	
- HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code	Use 1 HS-SCCH	
- Measurement Feedback Info	'	
- CHOICE mode	FDD	
- Pohsdsch	6 dB	
- CQI Feedback cycle, k	4 ms	
- CQI repetition factor	1	
- Δ _{CQI}	5 (corresponds to 0dB in relative power offset)	
- CHOICE mode	FDD (no data)	
- Downlink 64QAM configured	Not Present	
- HS-DSCH TB size table	Octet Aligned	
- HARQ Info - Number of Process es	12	
- CHOICE Memory Partitioning	Implicit	
- MAC-hs reset indicator	TRUE	
E-DCH reconfiguration information		
- E-DCH RL Info new serving cell		
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 3	
- E-AGCH Info		
- E-AGCH Channelisation Code	10 Not Present	
- Serving Grant	NOTE 1696111	

- E-DPCCH/DPCCH power offset	Not Present	1
- Reference E-TFCIs	Not Present	
- Power Offset for Scheduling Info	Not Present	
- 3-Index-Step Threshold	Not Present	
- 2-Index-Step Threshold	Not Present	
- E-HICH Information	Not Present	
- CHOICE E-RGCH Information		
- E-DCH RL Info other cells	Not Present	

MEASUREMENT REPORT (Step 18)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
 Intra-frequency measured results list 	
- Cell measured results	Cell 3. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3(FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 1. see Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information - CHOICE mode	Checked that this IE is absent FDD
	FDD
- Primary CPICH info - Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
- 1 minary scrambling code	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. see Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- CHOICE event result	Intra-frequency measurement event results
 Intra-frequency event identity Cell measurement event results 	1b
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1, 2 and 3 may appear in any order. Cell measured results for cells 1 and 2 may or may not be present (depends upon the capability of the UE and test uncertainties in power level)

ACTIVE SET UPDATE (Step 19)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9.1, with the following exceptions:

Information Element	Value/remark	Version
MIMO Parameters		
- MIMO Operation	Continue	
- CHOICE mode	FDD	
 MIMO N_cqi_typeA/M_cqi ratio 	1/1	
 MIMO pilot configuration 		
- CHOICE Second CPICH pattern	Antenna1 S-CPICH	
Radio link removal information		
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 2	

MEASUREMENT REPORT (Step 23)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 3 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	Cell 3. See Note 1
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information Primary CPICH info 	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 1. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information 	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
 Intra-frequency measurement event results 	
 Intra-frequency event identity 	1a
 Cell measurement event results 	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1, 2 and 3 may appear in any order. Cell measured result for cell 2 may or may not be present (depends upon the capability of the UE and test uncertainties in power level).

ACTIVE SET UPDATE (Step 24)

Information Element	Value/remark	Version
Activation time	Value/remark (256+CFN-(CFN MOD 8 + 8))MOD 256	Version
New H-RNTI	(250+61 N-(61 N MOD 6 + 6)) MOD 250	
New Primary E-RNTI	0101 0101 0101 1101	
Radio link addition information		
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 1	
- Downlink DPCH info for each RL		
- CHOICE mode	FDD	
 Primary CPICH usage for channel estimation DPCH frame offset 	P-CPICH may be used. Calculated value from Cell synchronisation	
- DPCH lialité diset	information	
- Secondary CPICH info	Not present	
-DL channelisation code	This IE is repeated for all existing downlink	
	DPCHs allocated to the UE	
- Secondary scrambling code	Not present	
-Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical	
	radio parameter sets"	
-Code Number	For each DPCH, assign the same code number	
-Scrambling code change	in the current code given in cell 1. Not Present	
- TPC Combination Index	1	
- TFCI combining indicator	FALSE	
- E-HICH Information		
- Channelisation code	4	
- Signature sequence	1	
- CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequenœ - RG combination index	0	
Serving HS-DSCH cell information		
- Aack	Not Present	
- Anack	Not Present	
- HARQ_preamble_mode	0	
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 1	
- Downlink HS-PDSCH Information		
- HS-SCCH Info - CHOICE mode	FDD	
- CHOICE Mode - DL Scrambling Code	Not present	
- HS-SCCH Channelisation Code Information	Use 1 HS-SCCH	
- HS-SCCH Channelisation Code	7	
- Measurement Feedback Info		
- CHOICE mode	FDD	
- Pohsdsch	6 dB	
- CQI Feedback cycle, k	4 ms	
- CQI repetition factor	5 (corresponds to 0dB in relative power offset)	
- $\Delta_{ extsf{CQI}}$ - CHOICE mode	1 ` ' '	
- CHOICE Mode - Downlink 64QAM configured	FDD (no data) Not Present	
- HS-DSCH TB size table	Octet Aligned	
- HARQ Info		
- Number of Processes	6	
- CHOICE Memory Partitioning	Implicit	
- MAC-hs reset indicator	TRUE	
E-DCH reconfiguration information		
- E-DCH RL Info new serving cell		
 Primary CPICH info Primary Scrambling Code 	Set to the primary scrambling code of cell 1	
- E-AGCH Info	Cot to the printary solaribility code of cell 1	
- E-AGCH Channelisation Code	10	
- Serving Grant	Not Present	
 E-DPCCH/DPCCH power offset 	Not Present	
- Reference E-TFCIs	Not Present	
- Power Offset for Scheduling Info	Not Present	
- 3-Index-Step Threshold	Not Present	
- 2-Index-Step Threshold - E-HICH Information	Not Present Not Present	
- L-mon inionnation	INOUT LESCHIE	

- CHOICE E-RGCH Information		1
- E-DCH RL Info other cells	Not Present	

8.3.4.14a.5 Test requirements

At steps 3, 8, 13, 18, 23 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At steps 5, 10, 15, 20, and 25 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the previous ACTIVE SET UPDATE and indicate readiness to accept the new configuration at activation time.

8.3.4.15 Active set update: Dual Cell (DC) Activation by Serving Cell Change from non DC-HSDPA capable cell to DC-HSDPA capable cell

8.3.4.15.1 Definition and applicability

All UE categories which support Dual Cell HSDPA. UE supports F-DPCH or Enhanced F-DPCH.

8.3.4.15.2 Conformance requirement

The purpose of the active set update procedure is to update the active set of the connection between the UE and UTRAN. This procedure shall be used in CELL_DCH state. The UE should keep on using the old RLs while configuring the new RLs. Also the UE should keep the transmitter turned on during the procedure. This procedure is only used in FDD mode.

. . .

The procedure is initiated when UTRAN orders a UE in CELL_DCH state, to make the following modifications of the active set of the connection:

- a) Radio link addition;
- b) Radio link removal;
- c) Combined radio link addition and removal;
- d) Addition of a radio link to the E-DCH active set;
- e) Removal of a radio link from the E-DCH active set.

The procedure also allows the addition or removal of a radio link on a secondary serving HS-DSCH cell. Radio links on the secondary serving HS-DSCH cell are not part of the active set.

In case a) and c), UTRAN should:

1> prepare new additional radio link(s) in the UTRAN prior to the command to the UE.

In all cases, UTRAN should:

- 1> send an ACTIVE SET UPDATE message on downlink DCCH using AM or UM RLC;
- 1> create active sets that contain at least one common rad io link across a DPCH or F-DPCH frame boundary as the result of one or multiple (parallel) active set update procedures.

UTRAN should include the following information:

- 1> IE "Radio Link Addition Information": Downlink DPCH information and other optional parameters relevant for the radio links to be added along with the IE "Primary CPICH info" used for the reference ID to indicate which radio link to add. This IE is needed in cases a) and c) listed above;
- 1> IE "Downlink Secondary Cell Info FDD": Downlink optional parameters relevant to reception of secondary serving HS-DSCH cell;
- 1> IE "Radio Link Removal Information": IE "Primary CPICH info" used for the reference ID to indicate which radio link to remove. This IE is needed in cases b) and c) listed above;

- 1> IE "E-DCH reconfiguration information": IE "Primary CPICH info" used for the reference ID along with the IE "E-HICH information" to indicate which radio link to add to the E-DCH active set. This IE is needed in case d) above, when the RL added to the E-DCH active set is already in the DCH active set;
- 1> IE "E-DCH reconfiguration information": IE "Primary CPICH info" used for the reference ID along with the IE "E-HICH release indicator" to indicate which radio link to remove from the E-DCH active set. This IE is needed in case e) above, when the RL removed from the E-DCH active set remains in the DCH active set.

. .

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following.

The UE may:

1> maintain a list of the set of cells to which the UE has Radio Links if the IE "Cell ID" is present.

The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information";
- 1> remove the RLs indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;

. . .

- 1> if "Serving HS-DSCH cell information" IE is present, act on received information elements as specified in subclause 8.6:
 - 2> if the IEs " Δ_{ACK} ", " Δ_{NACK} ", and "HARQ_preamble_mode" are present, act on the received information elements;
 - 2> if the new H-RNTI and "Primary CPICH info" are included:
 - 3> consider the cell indicated in Primary CPICH as serving HS-DSCH cell and no longer consider any other radio link as serving HS-DSCH cell. If the IE "Downlink Secondary Cell Info FDD" is included for a cell associated with the serving HS-DSCH cell, consider that cell a secondary serving HS-DSCH cell.
 - 2> if the IE "MAC-hs reset indicator" is included:
 - 3> reset the MAC-hs/ehs entity [15].
 - 2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25.

Reference

3GPP TS 25.331 clause 8.3.4, 8.3.4.2, 8.3.4.3

8.3.4.15.3 Test purpose

To confirm that the UE performs HS-DSCH serving cell change from non DC-HSDPA capable cell to DC-HSDPA capable cell

8.3.4.15.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 non DC-HSDPA cell, Cell 2/3 DC HSDPA cell(s) with cell 2 (Anchor Carrier) and Cell 3 (Secondary Carrier)

UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-17) under condition A17b, as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD

- UE category supports DC HSDPA
- UE supports F-DPCH or Enhanced F-DPCH

Test Procedure

Table 8.3.4.15

Parameter	Unit	Cell 1		Dual Cell (2 and 3)	
		T0	T1	T0	T1
UTRARF Channel Number		Mid Range Test		Mid Range Test	
		Frequency		Frequency (s	see Note 1)
CPICH Ec	dBm/3.84MHz	-60	-70	-70	-60

Note 1: DC HSDPA Cell test frequencies are specified in [9] cl 5.1.1 for the operating band under test. For the secondary Cell 3 no other common physical channel other than CPICH shall be configured [5] cl. 4.2.4. The SFN and Tcell of the secondary cell are the same as the serving cell [29] cl. 7.1.

Table 8.3.4.15 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Note that Cell 2 and cell 3 are configured as DC HSDPA Cells with Cell 2 as the Anchor Carrier and Cell 3 as the Secondary Carrier cell (definitions according to TS 25.825 section 4.2.1).

The downlink transmission power is set according to values in column "T0" in table 8.3.4.15. The UE has user plane and signalling radio bearers mapped on E-DCH/HS-DSCH in cell 1.

The SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.15. The UE transmits a MEASUREMENT REPORT message, which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity" set to 1a.

The SS trans mits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which adds a second radio link in cell 2, changes the E-DCH and HS-DSCH serving cell to cell 2 and includes Downlink Secondary Cell 3 parameters. When the UE receives this message, the UE shall configure layer 1 to begin E-DCH transmission and HS-DSCH reception using the new radio links on Anchor Carrier Cell 2 and Secondary Carrier Cell 3. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. SS checks that this RRC message is received on Anchor Carrier Cell 2.

To check that the UE has performed serving cell change to DC HSDPA Cell, the SS sends UE CAPABILITY ENQUIRY on both Anchor Carrier Cell 2 and Secondary Carrier Cell 3 using SRB2 mapped onto HS-DSCH. The UE shall respond to each message in turn with UE CAPABILITY INFORMATION message sent to Anchor Carrier Cell 2. The SS completes the procedure by transmitting a UE CAPABILITY INFORMATION CONFIRM message.

Expected sequence

Step	Direction	Message	Comment
-	UE SS		
1	÷		UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-18) according to clause 7.4.
2			SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.15.
3	→	MEASUREMENT REPORT	See specific message contents for this message (event '1a' for cell 2).
4	←	ACTIVE SET UPDATE	SS transmits this message in cell 1 on downlink DCCH using AM RLC. The RRC message instructs the UE to add dual cell HSDPA Cell 2 and 3 to the active set and perform a serving E-DCH and HS-DSCH Cell change to the DC-HSDPA.
5	SS		At the activation time DC-HSDPA is configured, Cell 2 becomes the serving E-DCH /HS-DSCH Cell and Cell 3 the secondary cell.
6	→	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link for DC HSDPA cell and active HS-DSCH reception from Cells 2 and 3.
7	+	UE CAPABILITY ENQUIRY	Use default message. SRB2 on HS-DSCH from Anchor Carrier Cell 2.
8	\rightarrow	UE CAPABILITY INFORMATION	
9	+	UE CAPABILITY INFORMATION CONFIRM	SRB2 is sent on HS-DSCH from Cell 2.
10	+	UE CAPABILITY ENQUIRY	Use default message. SS configures and transmits SRB2 on HS-DSCH from Secondary Carrier Cell 3.
11	\rightarrow	UE CAPABILITY INFORMATION	
12	+	UE CAPABILITY INFORMATION CONFIRM	SRB2 is sent on HS-DSCH from Cell 3.

MEASUREMENT REPORT (Step 3)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	Cell 1. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information - Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results Event results	Checked that this IE is absent
 Intra-frequency measurement event results Intra-frequency event identity Cell measurement event results Primary CPICH info 	1a
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1 and 2 may appear in any order.

ACTIVE SET UPDATE (Step 4)

Information Florent	Value framed	Wanalan
Information Element Activation time	Value/remark (256+CFN-(CFN MOD 8 + 8)) MOD 256	Version
New H-RNTI	(250+CFN-(CFN MOD 8 + 8)) MOD 250	
New Primary E-RNTI	'0101 0101 0101 0101 '0101 0101 0101 010	
Radio link addition information	0101 0101 0101	
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 2	
- Downlink F-DPCH info for each RL	l man, communing come or come	
- Primary CPICH usage for channel estimation	P-CPICH may be used.	
- F-DPCH frame offset	Calculated value from Cell synchronisation	
- F-DPCH slot format	information 3 if UE supports enhanced F-DPCH, otherwise Not Present	
- Secondary CPICH info	Not present	
- Secondary scrambling code	Not present	
- Code Number	F-DPCH code number as used in Cell1	
- TPC Combination Index	1	
- E-HICH Information		
- Channelisation code	4	
- Signature sequence	1	
- CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequence - RG combination index	0	
Serving HS-DSCH cell information	O	
1	Not Present	
- Δack - Δnack	Not Present	
- HARQ_preamble_mode	0	
- Primary CPICH info	O Company	
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- Downlink HS-PDSCH Information	Set to the primary seramoning seeds of sen 2	
- HS-SCCH Info		
- CHOICE mode	FDD	
- DL Scrambling Code	Not present	
- HS-SCCH Channelisation Code Information	Use 1 HS-SCCH	
- HS-SCCH Channelisation Code	7	
- Measurement Feedback Info		
- CHOICE mode	FDD	
- Pohsdsch	6 dB	
- CQI Feedback cycle, k	4 ms	
- CQI repetition factor	[]	
- ∆ _{CQI}	5 (corresponds to 0dB in relative power offset)	
- CHOICE mode	FDD (no data)	
- Downlink 64QAM configured	Not Present	
- HS-DSCH TB size table	Octet Aligned	
- HARQ Info - Number of Processes	Reference to TS 34.108 clause 6.10.2.4.5	
- Number of Processes	Parameter Set	
- CHOICE Memory Partitioning	Implicit	
- MAC-hs reset indicator	TRUE	
E-DCH reconfiguration information		
- E-DCH RL Info new serving cell		
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- E-AGCH Info		
- E-AGCH Channelisation Code	10	
- Serving Grant	Not Present	
- E-DPCCH/DPCCH power offset	Not Present	
- Reference E-TFCIs	2 E-TFCIs	
- Reference E-TFCI	11	
- Reference E-TFCI PO - Reference E-TFCI	4 83	
- Reference E-TFCI PO	16	
- Power Offset for Scheduling Info	Not Present	
- 3-Index-Step Threshold	Not Present	
- 2-Index-Step Threshold	Not Present	
- E-HICH Information		
- Channelisation Code	4	
1		

- Signature Sequence
- CHOICE E-RGCH Information
- E-RGCH Information
- Signature Sequence
- RG combination index
- E-DCH RL Info other cells Downlink secondary cell info FDD
- CHOICE Configuration info
- New HRNTI
- Downlink 64QAM configured
- HS-DSCH TB size table
- Primary CPICH info
- Primary scrambling code
- DL Scrambling Code
- HS-SCCH Channelisation Code Information
- HS-SCCH Channelisation Code
- Measurement Power Offset
- UARFCN downlink (Nd)

Not Present

New configuration '1010 1010 1010 1010'

Not Present Octet aligned

Set to the primary scrambling code of cell 3 Not Present. Mandatory default implies same scrambling code as for the primary CPICH 1 HS-SCCH code

6 dB

Reference to clause 5.1 Test frequencies. Note that for the secondary cell the UARFCN is a positive offset of 25 from the UARFCN of the test frequency of the primary cell which equates to 5MHz channel spacing

UE CAPABILITY ENQUIRY (Steps 7, 10)

Use the same message sub-type found in TS 34.108 clause 9.1.

UE CAPABILITY INFORMATION (Steps 8, 11)

Use the same message sub-type found in TS 34.108 clause 9.

UE CAPABILITY INFORMATION CONFIRM (Steps 9, 12)

Use the same message sub-type found in TS 34.108 clause 9.1.

8.3.4.15.5 Test requirements

At step 3 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At step 6 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set addition procedure, the change of serving cell to DC HSDPA.

At step 8 and step 11 the UE should transmit UE CAPA BILITY INFORMATION on SRB2.

8.3.4.15a Active set update: Dual Cell (DC) Activation by Serving Cell Change from non DC-HSDPA capable cell to DC-HSDPA capable cell with SRB mapped on E-DCH/DCH

8.3.4.15a.1 Definition and applicability

All UE categories which support Dual Cell HSDPA.

8.3.4.15a.2 Conformance requirement

The purpose of the active set update procedure is to update the active set of the connection between the UE and UTRAN. This procedure shall be used in CELL DCH state. The UE should keep on using the old RLs while configuring the new RLs. Also the UE should keep the transmitter turned on during the procedure. This procedure is only used in FDD mode.

The procedure is initiated when UTRAN orders a UE in CELL_DCH state, to make the following modifications of the active set of the connection:

a) Radio link addition;

- b) Radio link removal;
- c) Combined radio link addition and removal;
- d) Addition of a radio link to the E-DCH active set;
- e) Removal of a radio link from the E-DCH active set.

The procedure also allows the addition or removal of a radio link on a secondary serving HS-DSCH cell. Radio links on the secondary serving HS-DSCH cell are not part of the active set.

In case a) and c), UTRAN should:

1> prepare new additional radio link(s) in the UTRAN prior to the command to the UE.

In all cases, UTRAN should:

- 1> send an ACTIVE SET UPDATE message on downlink DCCH using AM or UM RLC;
- 1> create active sets that contain at least one common radio link across a DPCH or F-DPCH frame boundary as the result of one or multiple (parallel) active set update procedures.

UTRAN should include the following information:

- 1> IE "Radio Link Addition Information": Downlink DPCH information and other optional parameters relevant for the radio links to be added along with the IE "Primary CPICH info" used for the reference ID to indicate which radio link to add. This IE is needed in cases a) and c) listed above;
- 1> IE "Downlink Secondary Cell Info FDD": Downlink optional parameters relevant to reception of secondary serving HS-DSCH cell;
- 1> IE "Radio Link Removal Information": IE "Primary CPICH info" used for the reference ID to indicate which radio link to remove. This IE is needed in cases b) and c) listed above;
- 1> IE "E-DCH reconfiguration information": IE "Primary CPICH info" used for the reference ID along with the IE "E-HICH information" to indicate which radio link to add to the E-DCH active set. This IE is needed in case d) above, when the RL added to the E-DCH active set is already in the DCH active set;
- 1> IE "E-DCH reconfiguration information": IE "Primary CPICH info" used for the reference ID along with the IE "E-HICH release indicator" to indicate which radio link to remove from the E-DCH active set. This IE is needed in case e) above, when the RL removed from the E-DCH active set remains in the DCH active set.

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Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following.

The UE may:

1> maintain a list of the set of cells to which the UE has Radio Links if the IE "Cell ID" is present.

The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information";
- 1> remove the RLs indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;

. .

- 1> if "Serving HS-DSCH cell information" IE is present, act on received information elements as specified in subclause 8.6:
 - 2> if the IEs " Δ_{ACK} ", " Δ_{NACK} ", and "HARQ_preamble_mode" are present, act on the received information elements:

- 2> if the new H-RNTI and "Primary CPICH info" are included:
 - 3> consider the cell indicated in Primary CPICH as serving HS-DSCH cell and no longer consider any other radio link as serving HS-DSCH cell. If the IE "Downlink Secondary Cell Info FDD" is included for a cell associated with the serving HS-DSCH cell, consider that cell a secondary serving HS-DSCH cell.
- 2> if the IE "MAC-hs reset indicator" is included:
 - 3> reset the MAC-hs/ehs entity [15].
- 2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25.

. . . .

If the IE "RB mapping info" is included, the UE shall:

•••

For FDD the list of multiplexing options configured in the UE for each RB and SRB should comply with the following rules otherwise the UE behaviour is not specified:

- ..

- at most one multiplexing option can contain the combination "DCH" or "DCH + HS-DSCH" for the DL together with "DCH" for the UL;
- at most one multiplexing option can contain the combination "HS-DSCH" or "DCH + HS-DSCH" for the DL together with "DCH" for the UL;

- ...

Reference

3GPP TS 25.331 clause 8.3.4, 8.3.4.2, 8.3.4.3, 8.6.4.8

8.3.4.15a.3 Test purpose

To confirm that the UE performs HS-DSCH serving cell change from non DC-HSDPA capable cell to DC-HSDPA capable cell (SRB on DCH).

8.3.4.15a.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 non DC-HSDPA cell, Cell 2/3 DC HSDPA cell(s) with cell 2 (Anchor Carrier) and Cell 3 (Secondary Carrier)

UE: PS_DCCH+DTCH E-DCH/HS_DSCH (state 6-18) as specified in clause 7.4 of TS 34.108. See specific message contents for Radio Bearer Setup message.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE category supports DC HSDPA

Test Procedure

Table 8.3.4.15a

Parameter	Unit	Cell 1		Dual Cell (2 and 3)	
		T0	T1	T0	T1
UTRARF Channel Number		Mid Range Test		Mid Range Test	
		Freque	ency	Frequency (s	see Note 1)
CPICH Ec dBm/3.84		-60 -70		-70	-60
Note 1: For Secondary Carrier Cell 3 the LIARECN is a positive offset of 25 from the LIARECN of the					

Note 1: For Secondary Carrier Cell 3 the UARFCN is a positive offset of 25 from the UARFCN of the test frequency of the Anchor Carrier Cell 2 which translates to 5MHz channel frequency spacing

Table 8.3.4.15a illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Note that Cell 2 and cell 3 are configured as DC HSDPA Cells with Cell 2 as the Anchor Carrier and Cell 3 as the Secondary Carrier cell.

The downlink transmission power is set according to values in column "T0" in table 8.3.4.15a. The UE has user plane mapped on E-DCH/HS-DSCH and signalling radio bearers mapped on E-DCH/DCH in cell 1.

The SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.15a. The UE transmits a MEASUREMENT REPORT message, which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity" set to 1a.

The SS trans mits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which adds a second radio link in cell 2, changes the E-DCH and HS-DSCH serving cell to cell 2 and includes Downlink Secondary Cell 3 parameters. When the UE receives this message, the UE shall configure layer 1 to begin E-DCH transmission and HS-DSCH reception using the new radio links on Anchor Carrier Cell 2 and Secondary Carrier Cell 3. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. SS checks that this RRC message is received on Anchor Carrier Cell 2.

To check that the UE has performed serving cell change to DC HSDPA Cell , SS monitors CQI reports on HS-DPCCH received from the UE on Cell 2.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	-	-		UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-18) according to clause 7.4.
2				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.15a.
3	\rightarrow	•	MEASUREMENT REPORT	See specific message contents for this message (event '1a' for cell 2).
4	(ACTIVE SET UPDATE	SS transmits this message in cell 1 on downlink DCCH using AM RLC. The RRC message instructs the UE to add primary HSDPA Cell 2 to the active set and HSDPA cell 3 as the secondary cell And also perform a serving E-DCH and HSDSCH Cell change to the DC-HSDPA.
5	SS	6		At the activation time DC-HSDPA is configured, Cell 2 becomes the serving E-DCH /HS-DSCH Cell and Cell 3 the secondary cell.
6	-)		ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link for DC HSDPA cell and active HS-DSCH reception from Cells 2 and 3.
7				SS starts monitoring CQI reports on HS-DPCCH received from the UE on Primary Cell 2 and Secondary Cell 3.SS waits for 10 CQI reports.

Specific Mesaage Contents.

RADIO BEARER SETUP

The message to be used in this test is same as condition A25b, as specified in clause 7.4 of TS 34.108 except the following:

Information Element	Value/remark
Downlink secondary cell info FDD	NOT PRESENT

MEASUREMENT REPORT (Step 3)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	Cell 1. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information - Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results Event results	Checked that this IE is absent
 Intra-frequency measurement event results 	
 Intra-frequency event identity 	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1 and 2 may appear in any order.

ACTIVE SET UPDATE (Step 4)

Activation time (256+CFN-(CFN MOD 8 + 8)) MOD 256	Information Element	Value/remark	Version
New H-RNTI Radio link addition information - Primary CPICH Info - Primary CPICH info - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelsation code - Secondary CPICH info - DL channelsation code - Spreading factor - Secondary scrambling code - Spreading factor - Code Number - Sombling code change - FPC Combination index - E-HICH Information - E-RGCH Information - E-RGCH Information - E-RGCH Information - Signature sequence - CHOICE E-RGCH Information - FIRMAN SCANDIA CODE - Primary CPICH info - Primary Scrambling code of cell 2 - Primary Scrambling code - Primary CPICH info - Primary Scrambling code - Primary Scrambling - Primary Scrambl			
Naw Primary E-RNT Radio link addition information - Primary CPICH Info - Primary Scrambling code - Downlink DPCH Info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Spreading factor - Code Number - Code Number - Code Number - Scrambling code change - TPC Combination Index - E-RGCH Information - Signature sequence - CHOICE F-RGCH Information - Signature Sequence - CHOICE F-RGCH Information - HARO Lopreamble_mode - Downlink HS-PDSCH Information - HS-SCCH Channelisation Code - Debassurement Feedback Info - CHOICE mode - Downlink HS-PDSCH Information - HS-SCCH Channelisation Code - Downlink HS-DSCH Cell information - HS-SCCH Channelisation Code - Downlink HS-DSCH TB size abile - HARO Lopreamble - Downlink BQAM configured - HARO Lopreamble - HARO Lopreamble - Downlink BQAM configured - HARO Lopreamble - HARO Lopreamble - HARO Lopreamble - Downlink BQAM configured - HARO Lopreamble - HARO Lopreamble - Downlink BQAM configured - HARO Lopreamble - LARO Lopreamble - Downlink BQAM configured - HARO Lopreamble - LARO Laro Laro Laro Laro Laro Laro - Laro Laro Laro Laro - Laro Laro Laro - Laro Laro Laro - Laro - Laro - Laro Laro - La	New H-RNTI		
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- CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info - CHOICE mode - Pohsdsch - CQI Feedback cycle, k - CQI repetition factor - A _{CQI} - CHOICE mode - Downlink 64QAM configured - Downlink 64QAM configured - HARQ Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator - E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary Scrambling Code - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs - Reference E-TFCIs - Reference E-TFCI			
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- Measurement Feedback Info - CHOICE mode - Pohsdsch - CQI Feedback cycle, k - CQI repetition factor - Δ _{CQI} - CHOICE mode - Downlink 64QAM configured - Downlink 64QAM configured - HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation COde - Serving Grant - Reference E-TFCI -		Use 1 HS-SCCH	
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- Pohsdsch - CQI Feedback cycle, k - CQI repetition factor - △ _{CQI} - CHOICE mode - Downlink 64QAM configured - HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCI PO - Refe			
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- CHOICE mode - Downlink 64QAM configured - HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCI		[]	
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- HS-DSCH TB size table - HARQ Info - Number of Processes Reference to TS 34.108 clause 6.10.2.4.5 Parameter Set Implicit TRUE - CHOICE Memory Partitioning - MAC-hs reset indicator E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCI			
- HARQ Info - Number of Processes Reference to TS 34.108 clause 6.10.2.4.5 Parameter Set Implicit TRUE E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCI			
- Number of Processes - CHOICE Memory Partitioning - MAC-hs reset indicator E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Info - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCI		Octet Aligned	
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E-DCH reconfiguration information - E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs - Reference E-TFCI		·	
- E-DCH RL Info new serving cell - Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs - Reference E-TFCI - Reference E-TFCI 11 - Reference E-TFCI 83		IRUE	
- Primary CPICH info - Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs - Reference E-TFCI			
- Primary Scrambling Code - E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs - Reference E-TFCI			
- E-AGCH Info - E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs - Reference E-TFCI - Reference E-TFCI		Set to the primary scrambling code of cell 2	
- E-AGCH Channelisation Code - Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs - Reference E-TFCI - Reference E-TFCI ON COME OF THE COM		201. 10 primary solutioning code of cell 2	
- Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs - Reference E-TFCI PO 16		10	
- E-DPCCH/DPCCH power offset Not Present 2 E-TFCIs 2 E-TFCIs 11 - Reference E-TFCI PO 4 Reference E-TFCI 83 - Reference E-TFCI PO 16			
- Reference E-TFCIs 2 E-TFCIs - Reference E-TFCI 11 - Reference E-TFCI 4 - Reference E-TFCI 83 - Reference E-TFCI PO 16			
- Reference E-TFCI 11 - Reference E-TFCI 4 - Reference E-TFCI 83 - Reference E-TFCI 90 16			
- Reference E-TFCI PO 4 - Reference E-TFCI 83 - Reference E-TFCI PO 16			
- Reference E-TFCI 83 - Reference E-TFCI PO 16			
- Reference E-TFCI PO 16			
- Power Offset for Scheduling Info Not Present			
	- Power Offset for Scheduling Info	Not Present	

- 3-Index-Step Threshold	Not Present	
- 2-Index-Step Threshold - E-HICH Information	Not Present	
- Channelisation Code	4	
- Signature Sequence	1	
- CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequence	0	
- RG combination index	0	
- E-DCH RL Info other cells	Not Present	
Downlink secondary cell info FDD		
- CHOICE Configuration info	New configuration	
- New HRNTI	'1010 1010 1010 1010'	
- Downlink 64QAM configured	Not Present	
- HS-DSCH TB size table	Octet aligned	
- Primary CPICH info		
- Primary scrambling code	Set to the primary scrambling code of cell 3	
- DL Scrambling Code	Not Present. Mandatory default implies same	
	scrambling code as for the primary CPICH	
- HS-SCCH Channelisation Code Information	1 HS-SCCH code	
- HS-SCCH Channelisation Code	7	
- Measurement Power Offset	6 dB	
- UARFCN downlink (Nd)	Reference to clause 5.1 Test frequencies. Note	
	that for the secondary cell the UARFCN is a	
	positive offset of 25 from the UARFCN of the	
	test frequency of the primary cell which	
	equates to 5MHz channel spacing	

8.3.4.15a.5 Test requirements

At step 3 SS shall receive a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At step 6 SS shall receive an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set addition procedure, the change of serving cell to DC HSDPA.

At step 7 SS should start receiving CQI report for Cell 2 and Cell 3 on HS-DPCCH from the UE.

8.3.4.16 Active set update: Dual Cell (DC) Activation by Serving Cell Change from DC-HSDPA capable cell to non DC-HSDPA capable cell

8.3.4.16.1 Definition and applicability

All UE categories which support Dual Cell HSDPA. UE supports F-DPCH or Enhanced F-DPCH.

8.3.4.16.2 Conformance requirement

The purpose of the active set update procedure is to update the active set of the connection between the UE and UTRAN. This procedure shall be used in CELL_DCH state. The UE should keep on using the old RLs while configuring the new RLs. Also the UE should keep the transmitter turned on during the procedure. This procedure is only used in FDD mode.

. . .

The procedure is initiated when UTRAN orders a UE in CELL_DCH state, to make the following modifications of the active set of the connection:

- a) Radio link addition;
- b) Radio link removal;
- c) Combined radio link addition and removal;
- d) Addition of a radio link to the E-DCH active set;
- e) Removal of a radio link from the E-DCH active set.

The procedure also allows the addition or removal of a radio link on a secondary serving HS-DSCH cell. Radio links on the secondary serving HS-DSCH cell are not part of the active set.

In case a) and c), UTRAN should:

1> prepare new additional radio link(s) in the UTRAN prior to the command to the UE.

In all cases, UTRAN should:

- 1> send an ACTIVE SET UPDATE message on downlink DCCH using AM or UM RLC;
- 1> create active sets that contain at least one common radio link across a DPCH or F-DPCH frame boundary as the result of one or multiple (parallel) active set update procedures.

UTRAN should include the following information:

- 1> IE "Radio Link Addition Information": Downlink DPCH information and other optional parameters relevant for the radio links to be added along with the IE "Primary CPICH info" used for the reference ID to indicate which radio link to add. This IE is needed in cases a) and c) listed above;
- 1> IE "Downlink Secondary Cell Info FDD": Downlink optional parameters relevant to reception of secondary serving HS-DSCH cell;
- 1> IE "Radio Link Removal Information": IE "Primary CPICH info" used for the reference ID to indicate which radio link to remove. This IE is needed in cases b) and c) listed above;
- 1> IE "E-DCH reconfiguration information": IE "Primary CPICH info" used for the reference ID along with the IE "E-HICH information" to indicate which radio link to add to the E-DCH active set. This IE is needed in case d) above, when the RL added to the E-DCH active set is already in the DCH active set;
- 1> IE "E-DCH reconfiguration information": IE "Primary CPICH info" used for the reference ID along with the IE "E-HICH release indicator" to indicate which radio link to remove from the E-DCH active set. This IE is needed in case e) above, when the RL removed from the E-DCH active set remains in the DCH active set.

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Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following.

The UE may:

1> maintain a list of the set of cells to which the UE has Radio Links if the IE "Cell ID" is present.

The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information";
- 1> remove the RLs indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;

. . .

- 1> if "Serving HS-DSCH cell information" IE is present, act on received information elements as specified in subclause 8.6:
 - 2> if the IEs " Δ_{ACK} ", " Δ_{NACK} ", and "HARQ_preamble_mode" are present, act on the received information elements;
 - 2> if the new H-RNTI and "Primary CPICH info" are included:
 - 3> consider the cell indicated in Primary CPICH as serving HS-DSCH cell and no longer consider any other radio link as serving HS-DSCH cell. If the IE "Downlink Secondary Cell Info FDD" is included for a cell associated with the serving HS-DSCH cell, consider that cell a secondary serving HS-DSCH cell.
 - 2> if the IE "MAC-hs reset indicator" is included:

- 3> reset the MAC-hs/ehs entity [15].
- 2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25.

Reference

3GPP TS 25.331 clause 8.3.4, 8.3.4.2, 8.3.4.3

8.3.4.16.3 Test purpose

To confirm that the UE performs HS-DSCH serving cell change from DC-HSDPA capable cell to non DC-HSDPA capable cell

8.3.4.16.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 non DC-HSDPA cell, Cell 2/3 DC HSDPA cell(s) with cell 2 (Primary Carrier) and Cell 3 (Secondary Carrier)

UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-17) under condition A25, as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE category supports DC HSDPA
- UE supports F-DPCH or Enhanced F-DPCH

Test Procedure

Table 8.3.4.16

Parameter	Unit	DC HSDPA Cell (2, 3)		Cell 1	
		T0	T1	T0	T1
UTRARF Channel Number		Mid Range T	est	Mid Range Te	st
		Frequency (s	ee Note 1)	Frequency	
CPICH Ec	dBm/3.84MHz	-60	-60	-75	-60
Note 1: DC HSDPA Cell test frequencies are specified in [9] section 5.1.1 for the operating band					

under test. For the secondary Cell 3 no other common physical channel other than CPICH shall be configured [5] cl. 4.2.4. The SFN and Tcell of the secondary cell are the same as the serving cell [29] cl. 7.1

Table 8.3.4.16 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Note that Cell 2 and Cell 3 are DC HSDPA Cells with Cell 2 configured as the primary carrier and Cell 3 configured as the secondary cell (definition according to TS 25.825 section 4.2.1).

The downlink transmission power is set according to values in column "T0" in table 8.3.4.16. The UE has user plane bearers and signalling bearers mapped to the E-DCH/HS-DSCH of the DC HSDPA Cell configuration according to Radio Bearer Setup condition A25. As part of the initial condition, a check is made to verify that DC-HSDPA is configured by sending UE CAPABILITY ENQUIRY RRC message from both primary and secondary cell. The UE shall respond with UE CAPABILITY INFORMATION. SS shall then send UE CAPABILITY INFORMATION CONFIRM to complete this part of the procedure.

The SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.16. The UE transmits a MEASUREMENT REPORT message, which includes the primary scrambling code for Cell 1 according to IE "Intra-frequency event identity" set to 1a.

The SS trans mits to the UE an ACTIVE SET UPDATE message in cell 2 on DCCH using AM RLC which adds a second radio link in cell 1 and changes the E-DCH and HS-DSCH serving cell from DC-HSDPA Cell (2,3) to cell 1. When the UE receives this message, at the activation time, the UE shall configure layer 1 to begin E-DCH transmission and HS-DSCH reception using the new radio link on primary cell 1. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. SS checks that this RRC messages is received on Cell 1.

The SS trans mits UE CAPABILITY ENQUIRY from Cell 1. The UE shall respond with UE CAPABILITY INFORMATION. SS completes the procedure by transmitting a UE CAPABILITY INFORMATION CONFIRM message.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1	+		UE: PS_DCCH+DTCH
			E_DCH/HS_DSCH (state 6-18)
			according to clause 7.4.
2			SS configures its downlink
			transmission power settings
			according to columns "T1" in table
			8.3.4.16.
3	\rightarrow	MEASUREMENT REPORT	See specific message contents for
			this message (event '1a' for cell 1).
4	←	ACTIVE SET UPDATE	SS transmits this message in
			primary carrier Cell 2 on downlink
			DCCH using AM RLC. The RRC
			message instructs the UE to add
			Cell 1 to the active set and
			perform a serving E-DCH and HS-
			DSCH Cell change to Cell 1.
5	SS		At the activation time Cell 1
			becomes the serving E-DCH /HS-
	,	40TU /5 05T LIDD 4T5 00 4D1 5T5	DSCH Cell.
6	→	ACTIVE SET UPDATE COMPLETE	
		Void	
11	←	UE CAPABILITY ENQUIRY	Use default message. SRB2 on
			HS-DSCH from Cell 1.
12	→	UE CAPABILITY INFORMATION	
13	←	UE CAPABILITY INFORMATION	SRB2 is sent on HS-DSCH from
		CONFIRM	Cell 1.

MEASUREMENT REPORT (Step 3)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	l1 '
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	Cell 1. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C SFN Frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
-	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
 Intra-frequency measurement event results 	
 Intra-frequency event identity 	1a
 Cell measurement event results 	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
Note 1: Cell measured results for cells 1 and 2 may appe	ear in any order.

ACTIVE SET UPDATE (Step 4)

Information Floresut	Valua framoni	Varaian
Information Element Activation time	Value/remark (256+CFN-(CFN MOD 8 + 8)) MOD 256	Version
New H-RNTI	(230+CFN-(CFN MOD 8 + 8))MOD 230	
New Primary E-RNTI	'0101 0101 0101 0101 '0101 0101 0101 010	
Radio link addition information	0101 0101 0101	
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 1	
- Downlink F-DPCH info for each RL	l man, communing cours or community	
- Primary CPICH usage for channel estimation	P-CPICH may be used.	
- F-DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- F-DPCH slot format	3 if UE supports enhanced F-DPCH, otherwise	
	Not Present	
- Secondary CPICH info	Not present	
- Secondary scrambling code	Not present	
- Code number - TPC Combination Index	F-DPCH code number as used in Cell1	
- E-HICH Information		
- Channelisation code	4	
- Signature sequence	1	
- CHOICE E-RGCH Information	·	
- E-RGCH Information		
- Signature Sequence	0	
- RG combination index	0	
Serving HS-DSCH cell information		
- Δ _{ACK}	Not Present	
- Anack	Not Present	
- HARQ_preamble_mode	0	
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 1	
- Downlink HS-PDSCH Information - HS-SCCH Info		
- CHOICE mode	FDD	
- DL Scrambling Code	Not present	
- HS-SCCH Channelisation Code Information	Use 1 HS-SCCH	
- HS-SCCH Channelisation Code	7	
- Measurement Feedback Info		
- CHOICE mode	FDD	
- Pohsdsch	6 dB	
- CQI Feedback cycle, k	4 ms	
- CQI repetition factor	1	
- △ _{CQI}	5 (corresponds to 0dB in relative power offset)	
- CHOICE mode	FDD (no data)	
- Downlink 64QAM configured	Not Present	
- HS-DSCH TB size table	Octet Aligned	
- HARQ Info	Defended to TO 04 400 elements 0 40 0 4 5	
- Number of Processes	Reference to TS 34.108 clause 6.10.2.4.5	
- CHOICE Memory Partitioning	Parameter Set Implicit	
- MAC-hs reset indicator	TRUE	
E-DCH reconfiguration information		
- E-DCH RL Info new serving cell		
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 1	
- E-AGCH Info		
- E-AGCH Channelisation Code	10	
- Serving Grant	Not Present	
- E-DPCCH/DPCCH power offset	Not Present	
- Reference E-TFCIs	2 E-TFCIs	
- Reference E-TFCI - Reference E-TFCI PO	11 4	
- Reference E-TFCI PO - Reference E-TFCI	83	
- Reference E-TFCI PO	16	
- Power Offset for Scheduling Info	Not Present	
- 3-Index-Step Threshold	Not Present	
- 2-Index-Step Threshold	Not Present	
- E-HICH Information		
- Channelisation Code	4	
	•	•

- Signature Sequence - CHOICE E-RGCH Information	1	ĺ
- E-RGCH Information		
- Signature Sequence	0	
- RG combination index	0	
- F-DCH RL Info other cells	Not Present	

UE CAPABILITY ENQUIRY (Steps 7, 9, 11)

Use the same message sub-type found in TS 34.108 clause 9.1.

UE CAPABILITY INFORMATION (Step 12)

Use the same message sub-type found in TS 34.108 clause 9.

UE CAPABILITY INFORMATION CONFIRM (Step 13)

Use the same message sub-type found in TS 34.108 clause 9.1.

8.3.4.16.5 Test requirements

At step 3 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At step 6 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set addition procedure and the change of serving cell.

At step 12 the UE should transmit UE CAPABILITY INFORMATION on SRB2.

8.3.4.16a Active set update: Dual Cell (DC) Activation by Serving Cell Change from DC-HSDPA capable cell to non DC-HSDPA capable cell with SRB mapped on E-DCH/DCH

8.3.4.16a.1 Definition and applicability

All UE categories which support Dual Cell HSDPA.

8.3.4.16a.2 Conformance requirement

The purpose of the active set update procedure is to update the active set of the connection between the UE and UTRAN. This procedure shall be used in CELL_DCH state. The UE should keep on using the old RLs while configuring the new RLs. Also the UE should keep the transmitter turned on during the procedure. This procedure is only used in FDD mode.

. . .

The procedure is initiated when UTRAN orders a UE in CELL_DCH state, to make the following modifications of the active set of the connection:

- a) Radio link addition;
- b) Radio link removal;
- c) Combined radio link addition and removal;
- d) Addition of a radio link to the E-DCH active set;
- e) Removal of a radio link from the E-DCH active set.

The procedure also allows the addition or removal of a radio link on a secondary serving HS-DSCH cell. Radio links on the secondary serving HS-DSCH cell are not part of the active set.

In case a) and c), UTRAN should:

1> prepare new additional radio link(s) in the UTRAN prior to the command to the UE.

In all cases, UTRAN should:

- 1> send an ACTIVE SET UPDATE message on downlink DCCH using AM or UM RLC;
- 1> create active sets that contain at least one common radio link across a DPCH or F-DPCH frame boundary as the result of one or multiple (parallel) active set update procedures.

UTRAN should include the following information:

- 1> IE "Radio Link Addition Information": Downlink DPCH information and other optional parameters relevant for the radio links to be added along with the IE "Primary CPICH info" used for the reference ID to indicate which radio link to add. This IE is needed in cases a) and c) listed above;
- 1> IE "Downlink Secondary Cell Info FDD": Downlink optional parameters relevant to reception of secondary serving HS-DSCH cell;
- 1> IE "Radio Link Removal Information": IE "Primary CPICH info" used for the reference ID to indicate which radio link to remove. This IE is needed in cases b) and c) listed above;
- 1> IE "E-DCH reconfiguration information": IE "Primary CPICH info" used for the reference ID along with the IE "E-HICH information" to indicate which radio link to add to the E-DCH active set. This IE is needed in case d) above, when the RL added to the E-DCH active set is already in the DCH active set;
- 1> IE "E-DCH reconfiguration information": IE "Primary CPICH info" used for the reference ID along with the IE "E-HICH release indicator" to indicate which radio link to remove from the E-DCH active set. This IE is needed in case e) above, when the RL removed from the E-DCH active set remains in the DCH active set.

. . .

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following.

The UE may:

1> maintain a list of the set of cells to which the UE has Radio Links if the IE "Cell ID" is present.

The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information";
- 1> remove the RLs indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;

. . .

- 1> if "Serving HS-DSCH cell information" IE is present, act on received information elements as specified in subclause 8.6:
 - 2> if the IEs " Δ_{ACK} ", " Δ_{NACK} ", and "HARQ_preamble_mode" are present, act on the received information elements:
 - 2> if the new H-RNTI and "Primary CPICH info" are included:
 - 3> consider the cell indicated in Primary CPICH as serving HS-DSCH cell and no longer consider any other radio link as serving HS-DSCH cell. If the IE "Downlink Secondary Cell Info FDD" is included for a cell associated with the serving HS-DSCH cell, consider that cell a secondary serving HS-DSCH cell.
 - 2> if the IE "MAC-hs reset indicator" is included:
 - 3> reset the MAC-hs/ehs entity [15].
 - 2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25.

•••

If the IE "RB mapping info" is included, the UE shall:

•••

For FDD the list of multiplexing options configured in the UE for each RB and SRB should comply with the following rules otherwise the UE behaviour is not specified:

- ...

- at most one multiplexing option can contain the combination "DCH" or "DCH + HS-DSCH" for the DL together with "DCH" for the UL;
- at most one multiplexing option can contain the combination "HS-DSCH" or "DCH + HS-DSCH" for the DL together with "DCH" for the UL;

- ...

Reference

3GPP TS 25.331 clause 8.3.4, 8.3.4.2, 8.3.4.3, 8.6.4.8

8.3.4.16a.3 Test purpose

To confirm that the UE performs HS-DSCH serving cell change from DC-HSDPA capable cell to non DC-HSDPA capable cell with SRB on DCH

8.3.4.16a.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 non DC-HSDPA cell, Cell 2/3 DC HSDPA cell(s) with cell 2 (Primary Carrier) and Cell 3 (Secondary Carrier)

UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-18) under condition A25b, as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE category supports DC HSDPA

Test Procedure

Table 8.3.4.16a

Parameter	Unit	DC HSDPA Cell (2, 3)		Cell 1		
		T0	T1	T0	T1	
UTRARF Channel Number				Mid Range Test		
		Frequency (see Note 1)		Frequency		
CPICH Ec	dBm/3.84MHz	-60	-70	-70	-60	
Note 1: For secondary carrier cell 3 the UARFCN is a positive offset of 25 from the UARFCN of the						
primary carrier freque	ency cell 2 which	translates to	5MHz chann	el frequency si	pacing	

Table 8.3.4.16a illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Note that Cell 2 and Cell 3 are DC HSDPA Cells with Cell 2 configured as the primary carrier and Cell 3 configured as the secondary cell.

The downlink transmission power is set according to values in column "T0" in table 8.3.4.16a. The UE has user plane bearers mapped to the E-DCH/HS-DSCH of the DC HSDPA Cell and signalling bearers mapped to DCH on cell 2.

The SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.16a. The UE transmits a MEASUREMENT REPORT message, which includes the primary scrambling code for Cell 1 according to IE "Intra-frequency event identity" set to 1a.

The SS trans mits to the UE an ACTIVE SET UPDATE message in cell 2 on DCCH using AM RLC which adds a second radio link in cell 1 and changes the E-DCH and HS-DSCH serving cell from DC-HSDPA Cell (2,3) to cell 1.

When the UE receives this message, at the activation time, the UE shall configure layer 1 to begin E-DCH transmission and HS-DSCH reception using the new radio link on primary cell 1. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. SS checks that this RRC messages is received on Cell 1.

To check that the UE has performed serving HS-DSCH cell change to Cell 1, SS monitors CQI reports on HS-DPCCH received from the UE on Cell 1.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1	←		UE: PS_DCCH+DTCH
			E_DCH/HS_DSCH (state 6-18)
			according to clause 7.4.
2			SS configures its downlink
			transmission power settings
			according to columns "T1" in table
			8.3.4.16a.
3	\rightarrow	MEASUREMENT REPORT	See specific message contents for
			this message (event '1a' for cell 1).
4	+	ACTIVE SET UPDATE	SS transmits this message in
			primary carrier Cell 2 on downlink
			DCCH using AM RLC. The RRC
			message instructs the UE to add
			Cell 1 to the active set and perform
			a serving E-DCH and HS-DSCH
			Cell change to Cell 1.
5	SS		At the activation time Cell 1
			becomes the serving E-DCH /HS-
			DSCH Cell.
6	\rightarrow	ACTIVE SET UPDATE COMPLETE	
7			SS starts monitoring CQI reports
			on HS-DPCCH received from the
			UE on Cell 1. SS waits for 10 CQI
			reports.

MEASUREMENT REPORT (Step 3)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	Cell 1. See Note 1
- Cell Identity	Checked that this IE is present and includes IE COUNT-C SFN frame difference
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results Event results	Checked that this IE is absent
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1 and 2 may appear in any order.

ACTIVE SET UPDATE (Step 4)

Information Element Activation time	Value/remark	Version
New H-RNTI	(256+CFN-(CFN MOD 8 + 8)) MOD 256 '0101 0101 0101 0101'	
New Primary E-RNTI	0101 0101 0101 0101 0101 0101 0101 010	
Radio link addition information	0101 0101 0101	
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 1	
- Downlink DPCH info for each RL		
- Primary CPICH usage for channel estimation	P-CPICH may be used.	
- DPCH frame offset	Calculated value from Cell synchronisation	
Construction CDICLL info	information	
- Secondary CPICH info - DL channelisation code	Not present This IE is repeated for all existing downlink	
- DE Chameisauon code	DPCHs allocated to the UE	
- Secondary scrambling code	Not present	
-Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical	
aproduction of the second seco	radio parameter sets"	
-Code Number	For each DPCH, assign the same code number	
	in the current code given in cell 1.	
- Scrambling code change	Not Present	
- TPC Combination Index	1	
- E-HICH Information - Channelisation code	4	
- Signature sequence	1	
- CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequence	0	
- RG combination index	1	
Serving HS-DSCH cell information	–	
- AACK	Not Present	
- ANACK	Not Present	
- HARQ_preamble_mode - Primary CPICH info	0	
- Primary Scrambling Code	Set to the primary scrambling code of cell 1	
- Downlink HS-PDSCH Information	Corto and primary conditioning	
- HS-SCCH Info		
- CHOICE mode	FDD	
- DL Scrambling Code	Not present	
- HS-SCCH Channelisation Code Information	Use 1 HS-SCCH	
- HS-SCCH Channelisation Code - Measurement Feedback Info	7	
- CHOICE mode	FDD	
- Pohsdsch	6 dB	
- CQI Feedback cycle, k	4 ms	
- CQI repetition factor	1	
- ∆ _{CQI}	5 (corresponds to 0dB in relative power offset)	
- CHOICE mode	FDD (no data)	
- Downlink 64QAM configured	Not Present	
- HS-DSCH TB size table	Octet Aligned	
- HARQ Info - Number of Processes	Reference to TS 34.108 clause 6.10.2.4.5	
- Nullibel of Flocesses	Parameter Set	
- CHOICE Memory Partitioning	Implicit	
- MAC-hs reset indicator	TRUE	
E-DCH reconfiguration information		
- E-DCH RL Info new serving cell		
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 1	
- E-AGCH Info	10	
- E-AGCH Channelisation Code	10 Not Present	
- Serving Grant - E-DPCCH/DPCCH power offset	Not Present	
- Reference E-TFCIs	2 E-TFCIs	
- Reference E-TFCI	11	
- Reference E-TFCI PO	4	
- Reference E-TFCI	83	

- Reference E-TFCI PO	116	l
- Power Offset for Scheduling Info	Not Present	
- 3-Index-Step Threshold	Not Present	
- 2-Index-Step Threshold	Not Present	
- E-HICH Information		
- Channelisation Code	4	
- Signature Sequence	1	
- CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequence	0	
- RG combination index	0	
- E-DCH RL Info other cells	Not Present	

8.3.4.16a.5 Test requirements

At step 3 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At step 6 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set addition procedure and the change of serving cell.

At step 7 the UE shall start transmitting CQI report on HS-DPCCH to Cell 1.

8.3.4.17 Active Set Update in Soft Handover: Radio Link addition/removal and serving HS-DSCH / E-DCH cell change with simultaneous activation/deactivation of 64QAM and MIMO

8.3.4.17.1 Definition and applicability

UE category supports combined 64QAM and MIMO activation. UE support FDD and F-DPCH or Enhanced F-DPCH.

8.3.4.17.2 Conformance requirement

If the UE receives an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message:

- 1> if the IE "MIMO parameters" is not included:
 - 2> clear the MIMO PARAMS variable;
 - 2> trigger lower layers to stop operation in MIMO mode.
- 1> otherwise:
 - 2> for FDD, if the IE "MIMO N_cqi_typeA/M_cqi ratio" is included:
 - 3> store the value of the IE "MIMO N_cqi_typeA/M_cqi ratio" in the MIMO_PARAMS variable.
 - 2> for FDD, if the IE "MIMO pilot configuration" is included:
 - 5> store the value of the IE "MIMO pilot configuration" in the MIMO_PA RAMS variable.

[...]

If the UE receives an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message, the UE shall:

- 1> take actions related to the MIMO PARAMS variable as specified in subclause 8.5.32;
- 1> determine the value of the MIMO STATUS variable.

The MIMO_STATUS variable shall be set to TRUE only when all the following conditions are met:

- 1> The UE is in CELL_DCH state;
- 1> the variable HS_DSCH_RECEPTION is set to TRUE;
- 1> for FDD, the variable MIMO_PARAMS contains a value for the IE "MIMO N_cqi_typeA/M_cqi ratio"; and

- 1> for FDD, the variable MIMO_PARAMS contains a value for the IE "MIMO pilot configuration".
- 1> for 1.28 Mcps TDD, the variable MIMO_PARAMS contains a value for the IE "MIMO SF Mode for HS PDSCH dual stream".

If any of the above conditions is not met and the MIMO_STATUS variable is set to TRUE, the UE shall:

- 1> set the MIMO_STATUS variable to FALSE;
- 1> clear the MIMO_PARAMS variable;
 - 3> trigger lower layers to stop operation in MIMO mode.

[...]

With the exception of the provisions of subclause 6A.3, the following shall apply when the UE is configured in MIMO mode:

1) The UE derives the PCI value as defined in subclause 6A.4 and either a type A or a type B CQI value as defined in subclause 6A.2.2 depending on which type of CQI shall be reported as defined below.

[...]

>FDD				
>>Downlink 64QAM configured	OP	Enumerated (TRUE)	Absence of this IE means that the HS-SCCH does not use the 64QAM format. The presence of this IE means the UE uses the octet aligned table [15].	REL-7
>>HS-DSCH TB size table	CV- Not64QA M	Enumerated (octet aligned)	If this IE is present, octet aligned table [15] is used, else bit aligned table [15] is used.	REL-7

Condition	Explanation
Not64QAM	This IE is optionally present if 64QAM is not
	configured and MAC-ehs is configured. Otherwise it is
	not needed.

Reference

3GPP TS 25.331 clause 8.5.32, 8.5.33, 10.3.6.23a

3GPP TS 25.214 clause 6A.1.2.2

8.3.4.17.3 Test purpose

- 1. To confirm that the UE starts 64QAM and MIMO reception according to the received ACTIVE SET UPDATE message.
- To confirm that the UE maintains 64QAM and MIMO reception according to the received ACTIVE SET UPDATE message
- To confirm that the UE stops 64QAM and MIMO reception according to the received ACTIVE SET UPDATE message.

8.3.4.17.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1: non 64QAM and MIMO cell, Cell 2: 64QAM and MIMO configured, Cell 3: 64QAM and MIMO configured

UE: PS DCCH+DTCH E DCH/HS DSCH (state 6-17) under condition A17b, as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE category supports combined 64QAM and MIMO
- UE supports F-DPCH or Enhanced-F-DPCH

Test Procedure

Table 8.3.4.17-1

Cell	UTRARF Channel Number
Cell 1	Mid Range Test Frequency
Cell 2	Mid Range Test Frequency
Cell 3	Mid Range Test Frequency

Table 8.3.4.17-2

		Time					
Parameter	Unit	T0	T1	T2	T3	T4	T5
Cell 1 CPICH Ec	dBm/3.84MHz	-60	-60	-75	-75	-75	-60
Cell 2 CPICH Ec	dBm/3.84MHz	-75	-60	-60	-60	-75	-75
Cell 3 CPICH Ec	dBm/3.84MHz	-75	-75	-75	-60	-60	-60

Table 8.3.4.17 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.17-2. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" and 64QAM and MIMO configuration. At the activation time, the UE shall activate 64QAM and MIMO reception and configure SRB and user plane bearers for HS-DSCH reception (L1 configured for 64QAM and MIMO on separate antennae) using the new radio link with cell 2 as the serving cell. The UE shall respond with ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. The SS transmits a UE CAPABILITY ENQUIRY message on DL SRB2 using 64QAM and MIMO configuration. The UE shall respond with a UE CAPABILITY INFORMATION message. The SS completes this part of the procedure by transmitting a UE CAPABILITY INFORMATION CONFIRM message to the UE with SRB configured for 64QAM and MIMO.

SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.17-2. UE shall transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 1 according to IE "Intra-frequency event identity", which is set to 'lb' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS will remove the radio link from cell 1 and then SS transmits an ACTIVE SET UPDATE message using 64QAM and MIMO configuration, which includes IE "Radio Link Removal Information" and specifying the P-CPICH information of the cell to be removed. When the UE receives this message, the UE RRC entity shall request UE L1 entity to terminate transmission and reception of the radio link from cell 1. Then the UE transmits an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC on SRB2. The SS transmits a UE CAPA BILITY ENQUIRY message on DL SRB2 from Cell 2 using 64QAM and MIMO configuration and the UE shall respond with a UE CAPA BILITY INFORMATION message. The SS completes this part of the procedure by transmitting a UE CAPABILITY INFORMATION CONFIRM message to the UE with SRB configured for 64QAM and MIMO.

The SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.17-2. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 3 according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 3 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 2 on DCCH using AM RLC and 64QAM and MIMO configuration which includes the IE "Radio Link Addition Information". At the activation time, the UE shall maintain 64QAM and MIMO reception but with Cell 3 as the serving cell. The UE shall respond with ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. The SS transmits a UE CAPABILITY ENQUIRY message on DL SRB2 using 64QAM and MIMO configuration. The UE shall respond with a UE CAPABILITY INFORMATION message. The SS completes this part of the procedure by transmitting a UE CAPABILITY INFORMATION CONFIRM message to the UE with SRB configured for 64QAM and MIMO.

SS configures its downlink transmission power settings according to columns "T4" in table 8.3.4.17-2. UE shall transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to 'lb' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS will remove the radio link from cell 2 and then SS transmits an ACTIVE SET UPDATE message, which includes IE "Radio Link Removal Information" and specifying the P-CPICH information of the cell to be removed.

SS configures its downlink transmission power settings according to columns "T5" in table 8.3.4.17-2. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 1 according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 1 and then the SS transmits to the UE an ACTIVE SET UPDATE message from cell 3 on DCCH using MIMO configuration which includes the IE "Radio Link Addition Information" but with no MIMO or 64QAM parameters in RRC message. When the UE receives this message, the UE shall deactivate 64QAM and MIMO reception and use cell 1 as the serving cell. The UE shall respond with ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. The SS transmits a UE CAPABILITY ENQUIRY message on DL SRB2 on HS-DSCH using QPSK. The UE shall respond with a UE CAPA BILITY INFORMATION message.

Expected sequence

Step	Direction UE SS	Message	Comment
1	←	1	UE: PS_DCCH+DTCH
			E_DCH/HS_DSCH (state 6-18)
			according to clause 7.4.
2			SS configures its downlink
			transmission power settings according to columns "T1" in table
			8.3.4.17-2.
3	→	MEASUREMENT REPORT	See specific message contents for
			this message (event '1a' for cell 2).
4	+	ACTIVE SET UPDATE	SS transmits this message in cell 1
			on downlink DCCH using AM RLC.
			The message includes IE "Radio Link Addition Information" for cell
			2. Valid MIMO parameters and
			64QAM parameters are specified
			and Cell 2 becomes the serving
			Cell.
5	→	ACTIVE SET UPD ATE COMPLETE	A. (1. (1. (1. (1. (1. (1. (1. (1. (1. (1
6	SS		At the activation time the SS
			changes the serving E-DCH and HS-DSCH link to Cell 2 and
			applies the new configuration.
7	←	UE CAPABILITY ENQUIRY	Use default message. SRB2 is
			sent using the configured L1
			64QAM and MIMO configuration.
			i.e. parallel data stream on
			antenna 1 and antenna 2 with separate modulation patterns on
			P-CPICH.
8	\rightarrow	UE CAPABILITY INFORMATION	
9	←	UE CAPABILITY INFORMATION	SRB2 is sent on HS-DSCH using
		CONFIRM	configured L1 64QAM and MIMO
40			from Cell 2.
10			SS configures its downlink transmission power settings
			according to columns "T2" in table
			8.3.4.17-2.
11	\rightarrow	MEASUREMENT REPORT	See specific message contents for
			this message (event '1b' for cell 1).
12	←	ACTIVE SET UPD ATE	The SS transmits this message on
			SRB2 using 64QAM and MIMO configuration which includes IE
			"Radio Link Removal Information".
			Valid MIMO configuration
			parameters are specified.
13	→ 	ACTIVE SET UPDATE COMPLETE	At the continue time time time
14	SS		At the activation time the SS removes the radio link associated
			with Cell 1
15			SS configures its downlink
			transmission power settings
			according to columns "T3" in table
10		ME AOUDEMENT DESCRI	8.3.4.17-2.
16	\rightarrow	MEASUREMENT REPORT	See specific message contents for
17	←	ACTIVE SET UPDATE	this message (event '1a' for cell 3). SS transmits this message (SRB2
''	`	OHVE SET STEATE	using 64QAM and MIMO
			configuration) from cell 2. The
			message includes IE "Radio Link
			Addition Information" for cell 3. Cell
40		ACTIVE OF LIDD ATE COATDLETE	3 to become the serving Cell.
18	\rightarrow	ACTIVE SET UPDATE COMPLETE	

40			I At the constitute time of the constitute of th
19	SS		At the activation time the SS
			changes the serving E-DCH and
			HS-DSCH link to Cell 3 and
	_		applies the new configuration.
20	←	UE CAPABILITY ENQUIRY	Use default message. SRB2 is
			sent using the configured L1
			64QAM and MIMO configuration
			from Cell3.
21	\rightarrow	UE CAPABILITY INFORMATION	
22	-	UE CAPABILITY INFORMATION	SRB2 is sent on HS-DSCH using
		CONFIRM	configured L1 64QAM and MIMO.
23			SS configures its downlink
			transmission power settings
			according to columns "T4" in table
			8.3.4.17-2.
24	\rightarrow	MEASUREMENT REPORT	See specific message contents for
			this message (event '1b' for cell 2).
25	+	ACTIVE SET UPDATE	The SS transmits this message on
			SRB2 using 64QAM and MIMO
			configuration. The RRC message
			includes IE "Radio Link Removal
			Information" for Cell 2.
26	\rightarrow	ACTIVE SET UPDATE COMPLETE	
27	SS		At the activation time the SS
			removes the radio link associated
			with Cell 2
28			SS configures its downlink
			transmission power settings
			according to columns "T5" in table
			8.3.4.17-2.
29	\rightarrow	MEASUREMENT REPORT	See specific message contents for
			this message (event '1a' for cell 1).
30	←	ACTIVE SET UPDATE	The SS transmits this message on
			SRB2 using 64QAM and MIMO
			configuration. The RRC message
			includes IE "Radio Link Addition
			Information" for Cell 1 with
			64QAM and MIMO configuration
			absent. Cell 1 to become the
			active Cell.
31	\rightarrow	ACTIVE SET UPDATE COMPLETE	
32	SS		At the activation time the SS
			changes the serving E-DCH and
			HS-DSCH link to Cell 1 and
			applies the new configuration.
33		UE CAPABILITY ENQUIRY	Use default message. SRB2 sent
			on HS-DSCH from Cell 1 using
			QPSK.
34	\rightarrow	UE CAPABILITY INFORMATION	
35	←	UE CAPABILITY INFORMATION	SRB2 on HS-DSCH from Cell 1
		CONFIRM	using QPSK.

Specific Message Content

The contents of SIB11 broadcasted in cell 1 shall be in accordance with the default SIB11 as specified in section 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Intra-frequency measurement reporting criteria	
- Parameters required for each event	2 kinds
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range Constant	10 (5 dB)
- Cells forbidden to affect Reporting range	Not Present
- W	0 (0.0)
- Hysteresis	0 (0.0)
- Threshold Used Frequency	Not Present
- Reporting deactivation threshold	3
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	4
- Reporting interval	4000
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells
	on used frequency
- Maximum number of reported cells	3
- Intra-frequency event identity	1b
- Triggering condition 1	Active set cells
- Triggering condition 2	Not Present
- Reporting Range Constant	10 (5 dB)
- Cells forbidden to affect Reporting range	Not Present
- W	0 (0.0)
- Hysteresis	0 (0.0)
- Threshold Used Frequency	Not Present
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells
	on used frequency
- Maximum number of reported cells	3

The contents of SIB12 in cell 1, and SIB11 and SIB12 in cell 2, cell 3 shall be in accordance with the default SIBs as specified in TS 34.108.

MEASUREMENT REPORT (Step 3)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The
	first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 3 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	Cell 1. See Note 1
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information Primary CPICH info 	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 3. See Note 2
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)"
3,	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1 and 2 may appear in any order.

NOTE 2: Cell measured results for cells 3 may or may not be present (depends upon the capability of the UE and test uncertainties in power level). If present it can appear in any order.

ACTIVE SET UPDATE (Step 4)

Information Element	Value/remark	Version
Activation time	(256+CFN-(CFN MOD 8 + 8)) MOD 256	
New H-RNTI	` '01Ò1 0101 0101 01Ö1'	
New Primary E-RNTI	'0101 0101 0101 0101'	
MIMO Parameters		
- MIMO Operation	Start	
- CHOICE mode	FDD	
- MIMO N_cqi_typeA/M_cqi ratio	1/1	
- MIMO pilot configuration	A / A O ODIOLI	
- CHOICE Second CPICH pattern	Antenna1 S-CPICH	
- Channelisation code Radio link addition information	13	
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 2	
- Downlink F-DPCH info for each RL	I filliary scrainbling code of Cell 2	
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH may be used.	
- F-DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- F-DPCH slot format	3 if UE supports enhanced F-DPCH, otherwise	
	Not Present	
- Secondary CPICH info	Not present	
- Secondary scrambling code	Not present	
- Code number	F-DPCH code number as used in Cell1	
- TPC Combination Index	1	
- TFCI combining indicator	FALSE	
- E-HICH Information		
- Channelisation code	4	
Signature sequenceCHOICE E-RGCH Information	1	
- E-RGCH Information		
- Signature Sequence	0	
- RG combination index	0	
Serving HS-DSCH cell information		
- Δack	Not Present	
- ANACK	Not Present	
- HARQ_preamble_mode	0	
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- Downlink HS-PDSCH Information		
- HS-SCCH Info		
- CHOICE mode	FDD	
- DL Scrambling Code	Not present	
- HS-SCCH Channelisation Code Information	Use 1 HS-SCCH	
- HS-SCCH Channelisation Code		
- Measurement Feedback Info	EDD	
- CHOICE mode	FDD	
- Pohsdsch	6 dB	
 CQI Feedback cycle, k CQI repetition factor 	4 ms	
•	5 (corresponds to 0dB in relative power offset)	
- CHOICE mode	FDD (no data) TRUE	
 Downlink 64QAM configured HS-DSCH TB size table 	_	
- HARQ Info	Octet Aligned	
- Number of Processes	12	
- CHOICE Memory Partitioning	Implicit	
- MAC-hs reset indicator	TRUE	
E-DCH reconfiguration information		
- E-DCH RL Info new serving cell		
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- E-AGCH Info		
- E-AGCH Channelisation Code	10	
- Serving Grant	Not Present	
- E-DPCCH/DPCCH power offset	Not Present	
- Reference E-TFCIs	Not Present	
 Power Offset for Scheduling Info 	Not Present	

	Not Present Not Present	Ī
•	Not Present	
- CHOICE E-RGCH Information		
- E-DCH RL Info other cells	Not Present	

UE CAPABILITY ENQUIRY (Steps 7, 20, 33)

Use the same message sub-type found in TS 34.108 clause 9.1

UE CAPABILITY INFORMATION (Steps 8, 21, 34)

Use the same message sub-type found in TS 34.108 clause 9.

UE CAPABILITY INFORMATION CONFIRM (Steps 9, 22, 35)

Use the same message sub-type found in TS 34.108 clause 9.1

MEASUREMENT REPORT (Step 11)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
 Intra-frequency measured results list Cell measured results 	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- CHOICE mode	FDD
- Primary CPICH info	Cell 2. See Note 1
- Primaryscrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- CHOICE mode	FDD
- Primary CPICH info	Cell 1. see Note 1
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- CHOICE mode	FDD
- Primary CPICH info	Cell 3. see Note 1
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	Intro-fraguency magazinama at accept as a city
- CHOICE event result	Intra-frequency measurement event results
- Intra-frequency event identity	1b
- Cell measurement event results	רסס
- CHOICE mode	FDD
- Primary CPICH info	Potento clause titled "Default acttings for call No. 1 (EDD)"
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1, 2 and 3 may appear in any order. Cell measured results for cells 1 and 3 may or may not be present (depends upon the capability of the UE and test uncertainties in power level)

ACTIVE SET UPDATE (Step 12)

Information Element	Value/remark	Version
MIMO Parameters		
- MIMO Operation	Continue	
- CHOICE mode	FDD	
 MIMO N_cqi_typeA/M_cqi ratio 	1/1	
 MIMO pilot configuration 		
- CHOICE Second CPICH pattern	Antenna1 S-CPICH	
- Channelisation code	13	
Radio link removal information		
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 1	

MEASUREMENT REPORT (Step 16)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 3 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information Primary CPICH info 	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 3. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 1. See Note 2
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information Primary CPICH info 	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
CDICH Ea/NO	in clause 6.1 of TS 34.108
- CPICH Ec/N0 - CPICH RSCP	Checked that this IE is absent Checked that this IE is present
	Checked that this IE is present Checked that this IE is absent
- Pathloss Measured results on RACH	Checked that this IE is absent
Additional measured results	
Additional measured results Event results	Checked that this IE is absent
- Intra-frequency measurement event results	
Intra-frequency measurement event results Intra-frequency event identity	10
- Cell measurement event results	1a
 Primary CPICH info Primary scrambling code 	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1, 2 and 3 may appear in any order. Cell measured result for cell 1 may or may not be present (depends upon the capability of the UE and test uncertainties in power level).

ACTIVE SET UPDATE (Step 17)

Information Floward	Valuationari	Version
Information Element Activation time	Value/remark (256+CFN-(CFN MOD 8 + 8)) MOD 256	version
New H-RNTI	10101 0101 0101 0111'	
New Primary E-RNTI	0101 0101 0101 0111'	
MIMO Parameters		
- MIMO Operation	Start	
- CHOICE mode	FDD 1/1	
- MIMO N_cqi_typeA/M_cqi ratio - MIMO pilot configuration	1/1	
- CHOICE Second CPICH pattern	Antenna1 S-CPICH	
- Channelisation code	13	
Radio link addition information - Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 3	
- Downlink F-DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH may be used.	
- F-DPCH frame offset	Calculated value from Cell synchronisation	
F DDCU clatformat	information	
- F-DPCH slot format	3 if UE supports enhanced F-DPCH, otherwise Not Present	
- Secondary CPICH info	Not present	
- Secondary scrambling code	Not present	
- Code number	F-DPCH code number as used in Cell1	
- TPC Combination Index	0	
- TFCI combining indicator	FALSE	
- E-HICH Information		
- Channelisation code	4	
- Signature sequence - CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequence	0	
- RG combination index	0	
Serving HS-DSCH cell information		
- Δ ACK	Not Present	
- Anack	Not Present	
- HARQ_preamble_mode	0	
- Primary CPICH info - Primary Scrambling Code	Set to the primary scrambling code of cell 3	
- Downlink HS-PDSCH Information	Set to the primary sciambling code of cell 3	
- HS-SCCH Info		
- CHOICE mode	FDD	
- DL Scrambling Code	Not present	
- HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code	Use 1 HS-SCCH 7	
- Measurement Feedback Info		
- CHOICE mode	FDD	
- Pohsdsch	6 dB	
 CQI Feedback cycle, k CQI repetition factor 	4 ms 1	
- ∆ _{CQI}	5 (corresponds to 0dB in relative power offset)	
- CHOICE mode	FDD (no data)	
- Downlink 64QAM configured	TRUE	
- HS-DSCH TB size table	Not Present	
- HARQ Info	40	
- Number of Processes - CHOICE Memory Partitioning	12 Implicit	
- MAC-hs reset indicator	TRUE	
E-DCH reconfiguration information		
- E-DCH RL Info new serving cell		
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 3	
- E-AGCH Info		
- E-AGCH Channelisation Code	10	
- Serving Grant	Not Present	
- E-DPCCH/DPCCH power offset - Reference E-TFCIs	Not Present Not Present	
- Power Offset for Scheduling Info	Not Present	
1	1	İ

- 3-Index-Step Threshold	Not Present	
- 2-Index-Step Threshold	Not Present	
- E-HICH Information	Not Present	
- CHOICE E-RGCH Information		
- E-DCH RL Info other cells	Not Present	

MEASUREMENT REPORT (Step 24)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
 Intra-frequency measured results list 	
- Cell measured results	Cell 3. See Note 1
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information 	Checked that this IE is absent
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3(FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 1. see Note 1
- Cell Identity	Checked that this IE is absent
Cell synchronisation informationCHOICE mode	Checked that this IE is absent FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. see Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information - CHOICE mode	Checked that this IE is absent
	רטט
- Primary CPICH info - Primary scrambling code	Peter to alouge titled "Default cettings for cell No.2 (EDD)"
- Filliary Scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is absent
- Pathloss	Checked that this IE is present
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	Oncored that this in is absent
- CHOICE event result	Intra-frequency measurement event results
- Intra-frequency event identity	1b
- Cell measurement event results	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1, 2 and 3 may appear in any order. Cell measured results for cells 1 and 2 may or may not be present (depends upon the capability of the UE and test uncertainties in power level)

ACTIVE SET UPDATE (Step 25)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9.1, with the following exceptions:

Information Element	Value/remark	Version
MIMO Parameters		
- MIMO Operation	Continue	
- CHOICE mode	FDD	
 MIMO N_cqi_typeA/M_cqi ratio 	1/1	
 MIMO pilot configuration 		
- CHOICE Second CPICH pattern	Antenna1 S-CPICH	
- Channelisation code	13	
Radio link removal information		
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 2	

MEASUREMENT REPORT (Step 29)

Information Element	Value/remark
Message Type	- a.a., oman
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 3 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	Cell 3. See Note 1
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information Primary CPICH info 	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 1. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information Primary CPICH info 	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
 Intra-frequency measurement event results 	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1, 2 and 3 may appear in any order. Cell measured result for cell 2 may or may not be present (depends upon the capability of the UE and test uncertainties in power level).

ACTIVE SET UPDATE (Step 30)

Information Element	Value/remark	Version
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256	
New H-RNTI	0101 0101 0101 1101'	
New Primary E-RNTI	'0101 0101 0101 1101'	
Radio link addition information		
- Primary CPICH Info		
- Primary scrambling code	Primary scrambling code of Cell 1	
- Downlink F-DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH may be used.	
- F-DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- F-DPCH slot format	3 if UE supports enhanced F-DPCH, otherwise	
	Not Present	
- Secondary CPICH info	Not present	
- Secondary scrambling code	Not present	
- Code number	F-DPCH code number as used in Cell1	
- TPC Combination Index	1	
- TFCI combining indicator	FALSE	
- E-HICH Information		
- Channelisation code	4	
- Signature sequence - CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequence	0	
- RG combination index	0	
Serving HS-DSCH cell information	O	
- AACK	Not Present	
- Anack	Not Present	
- HARQ_preamble_mode	0	
- Primary CPICH info	ľ	
- Primary Scrambling Code	Set to the primary scrambling code of cell 1	
- Downlink HS-PDSCH Information	g course and primary conditioning course or com.	
- HS-SCCH Info		
- CHOICE mode	FDD	
- DL Scrambling Code	Not present	
- HS-SCCH Channelisation Code Information	Use 1 HS-SCCH	
- HS-SCCH Channelisation Code	7	
- Measurement Feedback Info		
- CHOICE mode	FDD	
- Pohsdsch	6 dB	
- CQI Feedback cycle, k	4 ms	
- CQI repetition factor	1	
- ∆ _{CQI}	5 (corresponds to 0dB in relative power offset)	
- CHOICE mode	FDD (no data)	
- Downlink 64QAM configured	Not Present	
- HS-DSCH TB size table	Octet Aligned	
- HARQ Info		
- Number of Processes	6	
- CHOICE Memory Partitioning	Implicit	
- MAC-hs reset indicator	TRUE	
E-DCH reconfiguration information		
- E-DCH RL Info new serving cell - Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 1	
- E-AGCH Info	Set to the primary scrambling code of cell 1	
- E-AGCH Channelisation Code	10	
- Serving Grant	Not Present	
- E-DPCCH/DPCCH power offset	Not Present	
- Reference E-TFCIs	Not Present	
- Power Offset for Scheduling Info	Not Present	
- 3-Index-Step Threshold	Not Present	
- 2-Index-Step Threshold	Not Present	
- E-HICH Information	Not Present	
- CHOICE E-RGCH Information		
- E-DCH RL Info other cells	Not Present	
	•	

8.3.4.17.5 Test requirements

At steps 3, 11, 16, 24, 29 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At steps 5, 13, 18 and 26, 31 the UE shall trans mit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the previous ACTIVE SET UPDATE and indicate readiness to accept the new configuration at activation time.

At step 8, 21, 34, the UE should transmit UE CAPABILITY INFORMATION on SRB2.

8.3.4.18 Test procedure for enhanced serving HS-DSCH cell change: serving HS-DSCH/E-DCH cell change, with discontinuous uplink transmission and downlink reception

8.3.4.18.1 Definition and applicability

All UEs which support FDD, UL DTX, DPCCH Discontinuous Transmission and Target Cell Pre-Configuration.

8.3.4.18.2 Conformance requirement

For the measurement, which triggered the MEASUREM ENT REPORT message, the UE shall:

- 1> if the measurement report is triggered by intra frequency event 1d and the table "Target cell preconfigurations" in the variable TARGET_CELL_PRECONFIGURATION includes the Radio link that triggered the event:
 - 2> if an "Activation time offset" different from 0 is configured for the target cell, include the IE "Activation time" in MEASUREMENT REPORT message. The Activation time shall be calculated by adding the Activation time offset to the current CFN:
 - 3> start continuous monitoring of target cell HS-SCCH indexed as number 1 in IE "Serving HS-DSCH cell information" in the stored configuration;
 - 3> stop monitoring target cell HS-SCCH at Activation time.
 - 2> else:
 - 3> start if not running, or restart if running, timer T324;
 - 3> start continuous monitoring of target cell HS-SCCH indexed as number 1 in IE "Serving HS-DSCH cell information" in the stored configuration until the expiry of timer T324.

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following.

The UE may:

1> maintain a list of the set of cells to which the UE has Radio Links if the IE "Cell ID" is present.

The UE shall:

1> first add the RLs indicated in the IE "Radio Link Addition Information";

..

- 1> transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the completion of the Physical Layer synchronisation B, as specified in TS 25.214;
- 1> the procedure ends on the UE side.

. . .

1> if any of the IEs "DTX-DRX timing information" or "DTX-DRX information" are stored in the UE:

2> determine the value for the DTX_DRX_STATUS variable and take the corresponding actions as described in subclause 8.5.34.

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If the UE receives RRC CONNECTION SETUP, ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message:

1> the UE shall determine the value for the DTX DRX STATUS variable.

The variable DTX DRX STATUS shall be set to TRUE only when all the following conditions are met:

- 1> the UE is in CELL_DCH state;
- 1> both variables HS_DSCH RECEPTION and E_DCH_TRANSMISSION are set to TRUE;
- 1> no DCH transport channel is configured;
- 1> the variable DTX_DRX_PARAMS is set;
- 1> the UE has received the IE "DTX-DRX timing information".

If any of the above conditions is not met and the variable DTX_DRX_STATUS is set to TRUE, the UE shall:

- 1> set the variable DTX DRX STATUS to FALSE;
- 1> clear the variable DTX_DRX_PARAMS;
- 1> stop DTX-DRX mode related activities.

If variable DTX_DRX_STATUS is set to true and the serving HS-DSCH cell was changed as a result of the received message the UE shall instruct the physical layer to consider HS-SCCH orders were never received.

Whenever the variable DTX_DRX_STATUS is set to TRUE after receiving this message and the value of IE "DTX-DRX timing information" included in this message is not "Continue", the UE shall:

- 1> if the variable DTX_DRX_STATUS was set to TRUE before receiving this message:
 - 2> re-configure the physical layer to perform discontinuous uplink DPCCH transmission and enable discontinuous downlink reception operations according to the variable DTX_DRX_PARAMS at the CFN corresponding to the frame boundary that is offset by the value of the IE "Enabling Delay" from the frame boundary where uplink transmission starts with new configuration;
 - 2> let the MAC layer continue with the current restriction on E-DCH trans mission and monitoring of absolute and relative grant channels from the frame boundary where the uplink transmission starts with the new configuration and for the duration of the IE "Enabling Delay".
- 1> else:
 - 2> perform discontinuous uplink DPCCH transmission and enable discontinuous downlink reception operations by configuring the physical layer according to the variable DTX_DRX_PARAMS at the CFN corresponding to the frame boundary that is offset by the value of the IE "Enabling Delay" from the frame boundary where uplink transmission starts with new configuration.
- 1> configure the MAC layer to start restricting E-DCH trans missions and monitor absolute and relative grant channels at the CFN corresponding to the frame boundary that is offset by the value of IE "Enabling Delay" from the frame boundary where uplink transmission starts with new configuration taking into account the IEs "UE DTX DRX Offset", "MAC DTX Cycle", "MAC Inactivity Threshold" and "Inactivity Threshold for UE Grant Monitoring".

. .

If the IE "DTX-DRX timing information" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:

1> if the CHOICE "timing" is set to "New timing":

- 2> use the newly received DTX-DRX timing configuration.
- 1> determine the value for the DTX_DRX_STATUS variable and take the corresponding actions as described in subclause 8.5.34.

. .

If the IE "DTX-DRX information" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:

- 1> store the contents of the IE in the variable DTX DRX PARAMS;
- 1> determine the value for the DTX_DRX_STATUS variable and take the corresponding actions as described in subclause 8.5.34;
- 1> if the value of the IE "UE DTX cycle 2" is not an integer multiple of the value of the IE "UE DTX cycle 1"; or
- 1> if the value of the IE "UE DTX cycle 2" is not an integer multiple or a divisor of the value of the IE "CQI Feedback cycle, k"; or
- 1> if the value of the IE "UE DPCCH burst 1" is greater than the value of the IE "UE DTX cycle 1"; or
- 1> if the value of the IE "UE DPCCH burst 2" is greater than the value of the IE "UE DTX cycle 2"; or
- 1> if the IE "UE DTX long preamble length" is set to 4 or 15 slots and the value of the IE "Inactivity Threshold for UE DTX cycle 2" is less than 4 TTIs (for 10ms E-DCH TTI) or 8 TTIs (for 2ms E-DCH TTI); or
- 1> if the IE "UE DRX cycle" is not an integer multiple or a divisor of the value of the IE "UE DTX cycle 1"; or
- 1> if the IE "DRX Information" is included in this message while the IE "DTX information" is not included in this message; or
- 1> if the value of the IE "UE DTX cycle 1" is not an integer multiple or a divisor of the value of the IE "MAC DTX cycle":
 - 2> the UE behaviour is unspecified.

Reference

3GPP TS 25.331 clause 8.4.22

3GPP TS 25.331 clause 8.2.2.3, 8.3.4, 8.5.34, 8.6.6.38, 8.6.6.39

8.3.4.18.3 Test purpose

- To confirm that the UE performs continuously monitoring on HS-SCCH when performing serving HS-DSCH
 cell change with target cell pre-configuration, with discontinuous uplink transmission and downlink reception
 according to the received ACTIVE SET UPDATE message.
- 2. To confirm that the UE performs discontinuous uplink DPCCH transmission and downlink reception according to the IE "Target cell preconfiguration information" within new cell after enhanced serving HS-DSCH cell change.

8.3.4.18.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and cell 2 are active

UE: PS DCCH+DTCH E DCH/HS DSCH (state 6-18) under condition A20, as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports DPCCH Discontinuous Transmission
- UE supports target cell preconfiguration

Test Procedure

Table 8.3.4.18

Parameter	Unit	Cell 1		Cell 2			
		T0	T1	T2	T0	T1	T2
UTRARF Channel Number			Range T requency		Mid Rar	nge Test F	requency
CPICH Ec	dBm/3.84MHz	-60	-60	-70	-70	-60	-60

Table 8.3.4.18 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The downlink transmission power is set according to values in column "T0" in table 8.3.4.18. The UE has a radio bearer mapped to the E-DCH/HS-DSCH and the signalling radio bearers mapped on E-DCH/HS-DSCH in cell 1.

The SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.18. The UE transmits a MEASUREMENT REPORT message, which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity" set to 1a.

The SS trans mits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which adds a second radio link in cell 2 with preconfiguration and DTX-DRX information for cell 1. The SS sets the IE "Activation Time offset" to 4, which indicates to UE the enhanced serving HS-DSCH cell change is a synchronized handover procedure. When the UE receives this message, the UE shall configure layer 1 to begin E-DCH transmission, with UL DPCCH discontinuous transmission. Cell 1 shall be kept as the serving HS-DSCH cell. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

The SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.18. The SS sends a MEASUREMENT CONTROL message to the UE configuring event 1D "Change of best cell", and the UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity" set to 1d. UE shall calculate "Activation Time" according to "Activation Time offset" in ACTIVE SET UPDATE message, and include the "Activation Time" in MEASUREMNT REPORT message.

The SS shall not send any HSDPA data on cell 1 after the start of T2. During time period T2 UTRAN shall send an HS-SCCH order on HS-SCCH-1 from cell 2 implying enhanced serving HS-DSCH from cell 1 to cell 2.

UE shall exit discontinuous uplink transmission and downlink reception state in cell 1, and start continuous monitoring of HS-SCCH order on HS-SCCH-1 from cell 2 until the expiry of Activation Time.

When UE has received the HS-SCCH order successfully from cell 2, the UE shall configure layer 1 to begin E-DCH transmission, with UL DPCCH discontinuous transmission, using the new radio link in cell 2. The UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS waits to allow sufficient time for DTX cycle 2 to be active, and CQI DTX Timer to expire, and then verifies that the time between 11 consecutive CQI indications is 320ms if 2ms TTI is used, or 400ms if 10ms TTI is used.

The SS shall transmit a UE CAPA BILITY ENQUIRY message to confirm that the UE can respond this message through the E-DCH in cell 1 and cell 2. The UE shall transmit a UE CAPA BILITY ENQUIRY INFORMATION message. Then SS transmits a UE CAPA BILITY INFORMATION CONFIRM message.

SS calls for generic procedure C.3 to check that the UE is in CELL_DCH state.

Expected sequence

Step	Direction UE SS	Message	Comment
1	SS		SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.18
2	→	MEASUREMENT REPORT	See specific message contents for this message (event '1a' for cell 2)
3	←	ACTIVE SET UPDATE	The SS instructs the UE to start discontinuous uplink transmission with DTX-DRX information in cell 1. The SS instructs the UE to add cell 2 in the active set, and perform a
	,	AOTIVE OFTLIPD ATE OOMDI ETE	preconfiguration to cell 2
4	→	ACTIVE SET UPD ATE COMPLETE	The UE adds the radio link cell 2 and performs a preconfiguration to cell 2. The UE performs discontinuous uplink transmission in cell 1. SS receives this message from cell 2.
5	SS		SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.18
6	+	MEASUREMENT CONTROL	Configure event 1D "Change of best cell"
7	→	MEASUREMENT REPORT	See specific message contents for this message (event '1d' for cell 2)
8	+	HS-SCCH order	SS shall send an HS-SCCH order from cell 2 implying enhanced serving HS-DSCH from cell 1 to cell 2.
9	SS		At the activation time, the SS changes the serving E-DCH and HS-DSCH radio link to cell 2.
10)	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	At the activation time, the UE performs a serving E-DCH and HS-DSCH cell change to cell 2 with discontinuous transmission. SS receives this message from cell 2.
11	SS		The SS waits to allow sufficient time for DTX cycle 2 to be active, and CQI DTX Timer to expire, and then verifies that the time between 11 consecutive CQI indications is 320ms if 2ms TTI is used, or 400ms if 10ms TTI is used (i.e. duration of 10 consecutive DTX cycle 2).
12			SS is reconfigured to listen on cell 2
13 14	←	UE CAPABILITY ENQUIRY UE CAPABILITY INFORMATION	SS receives this message from cell
15	←	UE CAPABILITY INFORMATION CONFIRM	2
16	←→	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

MEASUREMENT REPORT (Step 2)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information - Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT- C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- Intra-frequency measurement event results	
 Intra-frequency event identity 	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE message (Step 3)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element/Group name	Value/Remark
Message Type	
UE information elements	
-RRC transaction identifier	0
-Integrity check info	
-message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/leftmost bit of the bit string contains the most significant bit of the MAC-I.
-RRC message sequence number	SS provides the value of this IE, from its internal counter.
-Integrity protection mode info	Not Present
-Ciphering mode info	Not Present
-Activation time	"now".
-New U-RNTI	Not Present
CN information elements	
-CN Information info	Not Present
Phy CH information elements -DTX-DRX timing information -CHOICE timing	
- New timing	
- Enabling Delay	0 if 2ms TTI selected, otherwise 16
- UE DTX DRX Offset	1 if 2ms TTI selected, otherwise 0
-DTX-DRX Information	
-DTX information - CHOICE <i>E-DCH TTI length</i>	Unless stated otherwise, this should be set to 2ms if the UE supports 2ms TTI, or 10ms if the UE does not support 2ms TTI.
- UE DTX cycle 1	8 if 2ms TTI selected, otherwise 10
- UE DTX cycle 2	16 if 2ms TTI selected, otherwise 20
- MAC DTX cycle	8 if 2ms TTI selected, otherwise 10
- Inactivity Threshold for UE DTX cycle 2	32 if 2ms TTI selected, otherwise 8
- UE DTX long preamble length	4
- MAC Inactivity Threshold	1 if 2ms TTI selected, otherwise 8
- CQI DTX Timer	32
- UE DPCCH burst_1	1
- UE DPCCH burst_2	1
-DRX Information	9 if 2mg TTI cological otherwise 10
- UE DRX cycle - Inactivity Threshold for UE DRX cycle	8 if 2ms TTI selected, otherwise 10
- Inactivity Threshold for UE Grant	32 if 2ms TTI selected, otherwise 8
Monitoring	32 II 21113 1 11 3 clected, otherwise o
Uplink radio resources	
-Maximum allowed UL TX power	33 dBm
Downlink radio resources	00 42
-Radio link addition information	Radio link addition information required for each RL to add
-Primary CPICH info	Same as defined in cell2
-Downlink DPCH info for each RL -CHOICE <i>mode</i> -FDD	
-Primary CPICH usage for channel	Primary CPICH may be used
estimation	
-DPCH frame offset	This should be reflected by the IE" Cell synchronisation information" in received MEASUREMENT REPORT message
-Secondary CPICH info	Not Present
-DL channelisation code	
-Secondary scrambling code	Not Present
-Spreading factor	128
-Code number	96
-Scrambling code change	No code change
-TPC combination index	0 Not Droppet
-Closed loop timing adjustment mode	Not Present
-TFCI combining indicator -SCCPCH Information for FACH	FALSE Not Present
-Target cell preconfiguration information	Target cell preconfiguration information required
- Activation Time offset	4
-New H-RNTI	0101 0101 0101 0101'
IAOM II IMAII	

Information Element/Group name	Value/Remark
-New Primary E-RNTI	(0101 0101 0101 0111)
-New Secondary E-RNTI	Not Present
Serving Cell Change Parameters - Serving Cell Change MAC reset	TRUE
- Serving Cell Change Message Type	PHYSICAL CHANNEL RECONFIGURATION
- Serving Cell Change Transaction Id	0
-Serving HS-DSCH cell information	
-∆ _{ACK}	3
-ANACK	3
-HARQ_preamble_mode	0
-Primary CPICH info	0
-Downlink HS-PDSCH Information	
- HS-SCCH Info - Measurement Feedback Info	
- CHOICE mode	
FDD	
- Downlink 64QAM configured	FALSE
- HS-DSCH TB size table	FALSE
- HARQ Info	
- Number of Processes - CHOICE Memory Partitioning	6 Implicit
- MAC-hs reset indicator	FALSE
-E-DCH reconfiguration information	
- E-DCH RL Info new serving cell	
- Primary CPICH info	
- Primary Scrambling Code	Set to the primary scrambling code of cell 2
- E-AGCH Info - E-AGCH Channelisation Code	10
- Serving Grant	Not Present
- E-DPCCH/DPCCH power offset	Not Present
- Reference E-TFCIs	Not present
- Power Offset for Scheduling Info	Not Present
- 3-Index-Step Threshold - 2-Index-Step Threshold	Not Present Not Present
- E-HICH Information	Not Present
- CHOICE E-RGCH Information	Not Present
- E-DCH RL Info other cells	Not Present
-DTX-DRX timing information	
-CHOICE timing	
- New timing - Enabling Delay	0 if 2ms TTI selected, otherwise 16
- UE DTX DR X Offset	1 if 2ms TTI selected, otherwise 0
-DTX-DRX Information	,
-DTX information	
- CHOICE E-DCH TTI length	Unless stated otherwise, this should be set to 2ms if the UE
- UE DTX cycle 1	supports 2ms TTI, or 10ms if the UE does not support 2ms TTI. 8 if 2ms TTI selected, otherwise 10
- UE DTX cycle 2	16 if 2ms TTI selected, otherwise 20
- MAC DTX cycle	8 if 2ms TTI selected, otherwise 10
- Inactivity Threshold for UE DTX cycle 2	32 if 2ms TTI selected, otherwise 8
- UE DTX long preamble length	4
- MAC Inactivity Threshold - CQI DTX Timer	1 if 2ms TTI selected, otherwise 8
- UE DPCCH burst_1	32 1
- UE DPCCH burst 2	1
-DRX Information	
- UE DRX cycle	8 if 2ms TTI selected, otherwise 10
- Inactivity Threshold for UE DRX cycle	32
- Inactivity Threshold for UE Grant Monitoring	32 if 2ms TTI selected, otherwise 8
-HS-SCCH less Information	Not Present
-MIMO parameters	Not Present
- Downlink secondary cell info FDD	Not Present
Radio link removal information	Radio link removal information required for each RL to remove
-Radio link removal information	Not Present
-TX Diversity Mode	None

MEASUREMENT CONTROL (Step 6)

Use the same message as specified in 34.108 except for the following:

Information Element	Value/remark
Measurement identity	2
Measurement command	Setup
- CHOICE measurement type	Intra-frequency measurement
- Intra frequency cell info list	Not present
- Intra-frequency measurement	
quantity	
- Filter coefficient	3
- CHOICE mode	FDD
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
 Cell synchronisation information reporting 	FALSE
indicator	
 Cell Identity reporting indicator 	FALSE
 CPICH Ec/N0 reporting indicator 	TRUE
 CPICH RSCP reporting indicator 	TRUE
 Pathloss reporting indicator 	FALSE
 Reporting quantities for monitored set cells 	
 Cell synchronisation information reporting 	FALSE
indicator	
 Cell Identity reporting indicator 	FALSE
 CPICH Ec/N0 reporting indicator 	FALSE
 CPICH RSCP reporting indicator 	FALSE
 Pathloss reporting indicator 	FALSE
 Reporting quantities for detected set cells 	Not Present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
 Parameters required for each event 	
- Intra-frequency event identity	1D
- Triggering condition 2	Active set cells
- Hysteresis	8 (4 dB)
- Time to trigger	20 mSec
- Reporting cell status	
- CHOICE reported cell	Report cells within active set
 Maximum number of reported cells 	3
- Use CIO	FALSE
Measurement reporting mode	
- Measurement reporting transfer mode	Acknowledged mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
Additional measurement list	Not present
DPCH compressed mode status info	Not present

MEASUREMENT REPORT (Step 7)

Use the same message as specified in 34.108 except for the following:

Information Element	Value/remark
Activation time	Checked that this IE is present
Measurement identity	2
Measured results	
 Intra-frequency measured results 	Check to see if measurement results for 2 cells are included
 Cell measured results 	
- Cell Identity	Checked that this IE is absent
 Cell synchronisation 	Checked that this IE is absent
information	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is present
- CPICH RSCP	Checked that this IE is present
- DeltaRSCP	Not checked
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
 Cell synchronisation 	Checked that this IE is absent
information	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is present
- CPICH RSCP	Checked that this IE is present
- DeltaRSCP	Not checked
- Pathloss	Checked that this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional Measured results	Check to see if this IE is absent
Event results	Check to see if set to "Intra-frequency event results"
- Event ID	Check to see if set to "1D"
- Cell measurement event results	
- Primary scrambling code	Check to see if set to "Primary scrambling code of Cell 2"

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 10)

Use the same message sub-type found in TS 34.108 clause 9.1

UE CAPABILITY ENQUIRY (Step 13)

Use the same message sub-type found in TS 34.108 clause 9.1

UE CAPABILITY INFORMATION (Step 14)

Use the same message sub-type found in TS 34.108 clause 9.1

UE CAPABILITY INFORMATION CONFIRM (Step 15)

Use the same message sub-type found in TS 34.108 clause 9.1

8.3.4.18.5 Test requirement

After step 2 the UE shall transmit a MEASUREMENT REPORT message with event 1A.

After step 4 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message.

After step 7 the UE shall transmit a MEASUREMENT REPORT message with event 1D.

After step 10 the UE shall trans mit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

At step 11 the time between 11 consecutive CQI indications shall be 320ms if 2ms TTI is used, or 400ms if 10ms TTI is used.

8.3.4.19 Active set update: Dual Cell (DC) and MIMO Activation by Serving Cell Change from non-DC-HSDPA capable cell to DC-HSDPA capable cell

8.3.4.19.1 Definition and applicability

All UE categories which support Dual Cell HSDPA and MIMO. UE supports F-DPCH or Enhanced F-DPCH.

8.3.4.19.2 Conformance requirement

The purpose of the active set update procedure is to update the active set of the connection between the UE and UTRAN. This procedure shall be used in CELL_DCH state. The UE should keep on using the old RLs while configuring the new RLs. Also the UE should keep the transmitter turned on during the procedure. This procedure is only used in FDD mode.

[...]

The procedure is initiated when UTRAN orders a UE in CELL_DCH state, to make the following modifications of the active set of the connection:

- a) Radio link addition;
- b) Radio link removal;
- c) Combined radio link addition and removal;
- d) Addition of a radio link to the E-DCH active set;
- e) Removal of a radio link from the E-DCH active set.

The procedure also allows the addition or removal of a radio link on a secondary serving HS-DSCH cell. Radio links on the secondary serving HS-DSCH cell are not part of the active set.

In case a) and c), UTRAN should:

1> prepare new additional radio link(s) in the UTRAN prior to the command to the UE.

In all cases, UTRAN should:

- 1> send an ACTIVE SET UPDATE message on downlink DCCH using AM or UM RLC;
- 1> create active sets that contain at least one common radio link across a DPCH or F-DPCH frame boundary as the result of one or multiple (parallel) active set update procedures.

UTRAN should include the following information:

- 1> IE "Radio Link Addition Information": Downlink DPCH information and other optional parameters relevant for the radio links to be added along with the IE "Primary CPICH info" used for the reference ID to indicate which radio link to add. This IE is needed in cases a) and c) listed above;
- 1> IE "Downlink Secondary Cell Info FDD": Downlink optional parameters relevant to reception of secondary serving HS-DSCH cell;
- 1> IE "Radio Link Removal Information": IE "Primary CPICH info" used for the reference ID to indicate which radio link to remove. This IE is needed in cases b) and c) listed above;
- 1> IE "E-DCH reconfiguration information": IE "Primary CPICH info" used for the reference ID along with the IE "E-HICH information" to indicate which radio link to add to the E-DCH active set. This IE is needed in case d) above, when the RL added to the E-DCH active set is already in the DCH active set;
- 1> IE "E-DCH reconfiguration information": IE "Primary CPICH info" used for the reference ID along with the IE "E-HICH release indicator" to indicate which radio link to remove from the E-DCH active set. This IE is needed in case e) above, when the RL removed from the E-DCH active set remains in the DCH active set.

[...]

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following.

The UE may:

1> maintain a list of the set of cells to which the UE has Radio Links if the IE "Cell ID" is present.

The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information";
- 1> remove the RLs indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;

[...]

- 1> if "Serving HS-DSCH cell information" IE is present, act on received information elements as specified in subclause 8.6:
 - 2> if the IEs " Δ_{ACK} ", " Δ_{NACK} ", and "HARQ_preamble_mode" are present, act on the received information elements:
 - 2> if the new H-RNTI and "Primary CPICH info" are included:
 - 3> consider the cell indicated in Primary CPICH as serving HS-DSCH cell and no longer consider any other radio link as serving HS-DSCH cell. If the IE "Downlink Secondary Cell Info FDD" is included for a cell associated with the serving HS-DSCH cell, consider that cell a secondary serving HS-DSCH cell.
 - 2> if the IE "MAC-hs reset indicator" is included:
 - 3> reset the MAC-hs/ehs entity [15].
- 2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25.

[...]

If the UE receives an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message:

- 1> if the IE "MIMO parameters" is not included:
 - 2> clear the MIMO_PARAMS variable;
 - 2> trigger lower layers to stop operation in MIMO mode.
- 1> otherwise:
 - 2> for FDD, if the IE "MIMO N_cqi_typeA/M_cqi ratio" is included:
 - 3> store the value of the IE "MIMO N_cqi_typeA/M_cqi ratio" in the MIMO_PARAMS variable.
 - 2> for FDD, if the IE "MIMO pilot configuration" is included:
 - 3> store the value of the IE "MIMO pilot configuration" in the MIMO_PARAMS variable.

[...]

If the UE receives an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message, the UE shall:

- 1> take actions related to the MIMO_PARAMS variable as specified in subclause 8.5.32;
- 1> determine the value of the MIMO_STATUS variable.

The MIMO_STATUS variable shall be set to TRUE only when all the following conditions are met:

- 1> The UE is in CELL_DCH state;
- 1> the variable HS_DSCH_RECEPTION is set to TRUE;

- 1> for FDD, the variable MIMO_PA RAMS contains a value for the IE "MIMO N_cqi_typeA/M_cqi ratio"; and
- 1> for FDD, the variable MIMO_PARAMS contains a value for the IE "MIMO pilot configuration".
- 1> for 1.28 Mcps TDD, the variable MIMO_PARAMS contains a value for the IE "MIMO SF Mode for HS PDSCH dual stream".

If any of the above conditions is not met and the MIMO_STATUS variable is set to TRUE, the UE shall:

- 1> set the MIMO_STATUS variable to FALSE;
- 1> clear the MIMO PARAMS variable;
- 1> trigger lower layers to stop operation in MIMO mode.

[...]

With the exception of the provisions of subclause 6A.3, the following shall apply when the UE is configured in MIMO mode:

1) The UE derives the PCI value as defined in subclause 6A.4 and either a type A or a type B CQI value as defined in subclause 6A.2.2 depending on which type of CQI shall be reported as defined below.

[...]

An entry in the variable SECONDARY_CELL_HS_DSCH_RECEPTION shall be set to TRUE only when all the following conditions are met:

- 1> the UE is in CELL_DCH state;
- 1> the corresponding IE "Downlink Secondary Cell Info FDD" is included;
- 1> the variable HS_DSCH_RECEPTION is set to TRUE;

[...]

If any of the above conditions is not met for a secondary serving HS-DSCH cell, and the corresponding entry in the variable SECONDARY_CELL_HS_DSCH_RECEPTION is set to TRUE, the UE shall:

- 1> set the corresponding entry in the variable SECONDARY_CELL_HS_DSCH_RECEPTION to FALSE;
- 1> clear the corresponding entry in the variable DOWNLINK_SECONDARY_CELL_INFO;
- 1> flush the HARQ buffers of the HARQ entity associated to that secondary serving HS-DSCH cell;
- 1> release the HARQ resources associated to that secondary serving HS-DSCH cell.

If there is at least one entry in the variable SECONDARY_CELL_HS_DSCH_RECEPTION set to TRUE, the UE shall:

1> apply the i-th entry in the variables DOW NLINK_SECONDARY_CELL_INFO, SECONDARY_CELL_HS_DSCH_RECEPTION, and SECONDARY_CELL_MIMO_STATUS to the i-th secondary serving HS-DSCH cell.

[...]

For each entry in the variable SECONDARY_CELL_HS_DSCH_RECEPTION which is set to TRUE, the UE shall:

- 1> receive the HS-SCCH(s) according to the corresponding IE "Downlink Secondary Cell Info FDD" on the serving HS-DSCH radio link applying the scrambling code as received in the corresponding IE "DL Scrambling code";
- 1> perform HS-DSCH reception procedures for the corresponding secondary serving HS-DSCH cell according to the stored HS-PDSCH configuration as stated in:

[...]

Whenever any entry in the variable SECONDARY CELL HS DSCH RECEPTION is set to FALSE, the UE shall:

1> not perform HS-SCCH reception procedures on the corresponding secondary serving HS-DSCH cell;

1> determine the value for the SECONDA RY_CELL_E_DCH_TRANSMISSION and take the corresponding actions as described in subclause 8.5.58.

If any entry in the variable SECONDARY_CELL_HS_DSCH_RECEPTION is set to TRUE and the serving HS-DSCH cell was changed as a result of the received message or HS-SCCH order from the target cell, the UE shall instruct the physical layer to consider that the HS-SCCH orders from the serving cell were never received.

[...

If the UE receives an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message which includes the IE "Do wnlink secondary cell info FDD" for any of the secondary serving HS-DSCH cells, the UE shall:

- 1> if the IE "Secondary cell MIMO parameters" is not included in the IE "Downlink secondary cell info FDD":
 - 2> clear the corresponding entry in the SECONDARY_CELL_MIMO_PARAMS variable;
- 1> if the CHOICE "Configuration Info" in the IE "Secondary cell MIMO parameters" has the value "Continue":
 - 2> continue using the stored parameters in the corresponding entry in the SECONDARY_CELL_MIMO_PARAMS variable;
- 1> otherwise:
 - 2> if the IE "MIMO N_cqi_typeA/M_cqi ratio" is included:
 - 3> store the value of the IE "MIMO N_cqi_typeA/M_cqi ratio" in the corresponding entry in the SECONDARY_CELL_MIMO_PARAMS variable.
 - 2> if the IE "MIMO pilot configuration" is included:
 - 3> store the value of the IE "MIMO pilot configuration" in the corresponding entry in the SECONDARY_CELL_MIMO_PARAMS variable.
- 1> determine the value of the SECONDARY_CELL_MIMO_STATUS variable for the corresponding HS-DSCH serving cell.

The SECONDARY_CELL_MIMO_STATUS variable shall be set to TRUE for a secondary HS-DSCH serving cell only when all the following conditions are met:

- 1> The UE is in CELL DCH state;
- 1> the variable SECONDARY_CELL_HS_DSCH_RECEPTION is set to TRUE for that secondary HS-DSCH serving cell;
- 1> if the UE does not support MIMO only with single stream restriction, the corresponding entry in the variable SECONDARY_CELL_MIMO_PARAMS contains a value for the IE "MIMO N_cqi_typeA/M_cqi ratio"; and
- 1> the corresponding entry in the variable SECONDARY_CELL_MIMO_PARAMS contains a value for the IE "MIMO pilot configuration".

If any of the above conditions is not met and the SECONDARY_CELL_MIMO_STATUS variable is set to TRUE for that secondary HS-DSCH serving cell, the UE shall:

- 1> set the entry in the SECONDARY_CELL_MIMO_STATUS variable corresponding to that secondary HS-DSCH serving cell to FALSE;
- 1> clear the entry in the SECONDARY_CELL_MIMO_PARAMS variable corresponding to that secondary HS-DSCH serving cell;
- 1> trigger lower layers to stop MIMO operation on that secondary serving HS-DSCH cell.
- Whenever the entry in the variable SECONDARY_CELL_HS_DSCH_RECEPTION is set to TRUE for a secondary HS-DSCH serving cell, the UE shall:
- 1> if the UE supports MIMO only with single stream restriction (FDD only):

2> indicate to lower layers to start operation in MIMO mode restricted to single stream transmission on that secondary serving HS-DSCH cell, using the parameter values stored in the corresponding entry in the variable SECONDARY_CELL_MIMO_PARAMS.

1> else:

- 2> indicate to lower layers to start operation in MIMO mode on that secondary serving HS-DSCH cell, using the parameter values stored in the corresponding entry in the variable SECONDARY_CELL_MIMO_PARAMS.
- 1> for FDD, when MIMO only with single stream restriction is configured:
 - 2> if MAC-ehs is not configured:
- 2> the UE behaviour is undefined.

Reference

3GPP TS 25.331 clause 8.3.4.2, 8.3.4.3, 8.5.32, 8.5.33, 8.5.51, 8.5.57

8.3.4.19.3 Test purpose

To confirm that the UE performs HS-DSCH serving cell change and start MIMO reception from non DC-HSDPA and non MIMO capable cell to DC-HSDPA and MIMO capable cell.

8.3.4.19.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1: non DC-HSDPA and non MIMO cell, Cell 2/3: DC-HSDPA and MIMO configured cell(s) with cell 2 (Primary Carrier) and Cell 3 (Secondary Carrier).

UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-17) under condition A17b, as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE category supports combined DC HSDPA and MIMO
- UE supports F-DPCH or Enhanced F-DPCH

Test Procedure

Table 8.3.4.19-1

Cell	UTRA RF Channel Number
Cell 1	Mid Range Test Frequency
Cell (2,3)	Mid Range Test Frequency(see Note1)
Note 1: DC I	HSDPA Cell test frequencies are specified in [9] cl 5.1.1 for the operating
	d under test. For the secondary Cell 3 no other common physical channel
othe	r than CPICH shall be configured [5] cl. 4.2.4. The SFN and Tcell of the
seco	indary cell are the same as the serving cell [29] cl. 7.1.

Table 8.3.4.19-2

		Tir	ne
Parameter	Unit	T0	T1
Cell 1 CPICH Ec	dBm/3.84MHz	-60	-70
Cell (2,3) CPICH Ec	dBm/3.84MHz	-70	-60

Table 8.3.4.17 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution.

Note that Cell 2 and Cell 3 are combined DC HSDPA and MIMO Cells with Cell 2 configured as the primary carrier and Cell 3 configured as the secondary cell (definition according to TS 25.825 section 4.2.1).

The downlink transmission power is set according to values in column "T0" in table 8.3.4.19-2. The UE has user plane bearers and signalling bearers mapped on E-DCH/HS-DSCH in cell 1.

The SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.19-2. The UE transmits a MEASUREMENT REPORT message, which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity" set to '1a' in SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which adds a second radio link in cell 2, changes the E-DCH and HS-DSCH serving cell to cell 2 and includes Down link Secondary Cell 3 parameters and MIMO configuration. When UE receive this message, the UE shall configure layer 1 to begin reception E-DCH transmission, HS-DSCH reception and MIMO reception using the new radio links on Anchor Carrier Cell 2 and Secondary Carrier Cell 3. The UE shall respond with ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. SS checks that this RRC messages is received on Anchor Carrier Cell 2.

To check that the UE has performed serving cell change to DC HSDPA Cell, SS monitors for CQI reports on HS-DPCCH received from UE on Cell 2 and Cell 3.

Expected sequence

Step	Direction	Message	Comment
-	UE SS	1	
1	-		UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-18) according to clause 7.4.
2			SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.19-2.
3	→	MEASUREMENT REPORT	See specific message contents for this message (event '1a' for cell 2).
4	+	ACTIVE SET UPDATE	SS transmits this message in cell 1 on downlink DCCH using AM RLC. The RRC message instructs the UE to add dual HSDPA Cell 2 and 3 to the active set and perform a serving E-DCH and HS-DSCH Cell change to the DC-HSDPA. Valid MIMO parameters are specified.
5	→	ACTIVE SET UPD ATE COMPLETE	The UE shall configure a new radio link for DC HSDPA cell and active HS-DSCH and MIMO reception from Cells 2 and 3.
6	SS		At the activation time DC-HSDPA and MIMO are configured, Cell 2 becomes the serving E-DCH /HS-DSCH Cell and Cell 3 the secondary cell.
7	SS		SS starts monitoring CQI reports on HS-DPCCH received from the UE on Primary Cell 2 and Secondary Cell 3. SS waits for 10 CQI reports.

Specific Message Content

MEASUREMENT REPORT (Step 3)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	Cell 1. See Note 2
- Cell Identity	Checked that this IE is absent
Cell synchronisation information Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. See Note 2
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C- SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results Event results	Checked that this IE is absent
 Intra-frequency measurement event results 	
 Intra-frequency event identity 	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

NOTE 2: Cell measured results for cells 1 and 2 may appear in any order.

ACTIVE SET UPDATE (Step 4)

Information Element	Value/remark	Version
Activation time	(256+CFN-(CFN MOD 8 + 8)) MOD 256	
New H-RNTI	0101 0101 0101 0101	
New Primary E-RNTI	'0101 0101 0101 0101'	
MIMO Parameters		
- MIMO Operation	Start	
- CHOICE mode	FDD	
 MIMO N_cqi_typeA/M_cqi ratio 	1/1	
- MIMO pilot configuration		
- CHOICE Second CPICH pattern	Antenna1 S-CPICH	
- Channelisation code	13	

Primary scrambling code Primary scrambling code Primary Scrambling code Primary CPICH info for each RL	-	
- Primary scrambling code - Downlink F-DPCH info for each RL - CHOICE mode - Primary CPICH usage for channel estimation - F-DPCH state offset - F-DPCH state offset - F-DPCH state offset - F-DPCH state offset - F-DPCH state offset - Secondary CPICH info - Secondary scrambling code - Code number - TPC Combination Index - TPC Combination Index - TPC Combination Index - TPC Combination Index - TPC Combination Index - TPC Combination Index - TPC Combination Index - TPC Combination Index - TPC Combination Index - TPC Combination Index - TPC Combination Index - Signature sequence - CHOICE E-RGCH Information - Signature sequence - CHOICE Primary CPICH Info - Primary Scrambling Code - Downlink HS-PDSCH cell information - HS-SCCH Info - Primary Scrambling Code - Downlink HS-PDSCH Information - HS-SCCH Info - Primary Scrambling Code - Downlink HS-PDSCH Information - HS-SCCH Info - CHOICE mode - Discrambling Code - Downlink HS-PDSCH Information - HS-SCCH Info - Pheadsch - COI Feedback cycle, k - COI repetition factor - *\Coi - CHOICE mode - Downlink AGAM configured - HS-DSCH TB size table - HARQ Info - Number of Processes - CHOICE Momory Partitioning - MAC-hs reset indicator - Primary Scrambling Code - Downlink AGAM configured - Primary Scrambling Code - Downlink Scrambling Code - Downlink Scrambling Code - Downlink Scrambling Code - Downlink Scrambling Code - Downlink Scrambling Code - Downlink Scrambling Code - Downlink Scrambling Code - Downlink Scrambling Code - Downlink Scrambling Code - Primary Scrambling C	Radio link addition information	
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- Serving Grant - E-DPCCH/DPCCH power offset - Reference E-TFCIs - Reference E-TFCI - Ref		10
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- 3-Index-Step Threshold - 2-Index-Step Threshold - E-HICH Information - CHOICE mode - Channelisation Code Not Present Not Present FDD 4		
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- E-HICH Information - CHOICE mode - Channelisation Code FDD 4		Not Present
- Channelisation Code 4		
		FDD
- Signature Sequence		
	- Signature Sequence	1

- CHOICE E-RGCH Information - E-RGCH Information		
	0	
- Signature Sequence - RG combination index	0	
	Not Bus saut	
- E-DCH RL Info other cells	Not Present	
Downlink secondary cell info FDD		
- CHOICE Configuration info	New configuration	
- New HRNTI	1010 1010 1010 1010	
- Downlink 64QAM configured	Not Present	
- HS-DSCH TB size table	Octet aligned	
- Primary CPICH info		
- Primary scrambling code	Set to the primary scrambling code of cell 3	
- DL Scrambling Code	Not Present. Mandatory default implies same	
	scrambling code as for the primary CPICH	
- HS-SCCH Channelisation Code Information	1 HS-SCCH code	
- HS-SCCH Channelisation Code	7	
- Measurement Power Offset	6 dB	
- UARFCN downlink (Nd)	Reference to clause 5.1 Test frequencies. Note	
	that for the secondary cell the UARFCN is a	
	positive offset of 25 from the UARFCN of the	
	test frequency of the primary cell which	
	equates to 5MHz channel spacing	
-Secondary cell MIMO parameters		
- CHOICE Configuration info	New configuration	
- MIMO N_cqi_typeA/M_cqi ratio	1/1	
- MIMO pilot configuration		
- CHOICE Second CPICH pattern	Antenna1 S-CPICH	
- Channelisation code	13	

8.3.4.19.5 Test requirements

At step 3 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At step 5 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set addition procedure, the change of serving cell to combined DC HSDPA and MIMO.

At step 7 the UE shall on each stream on both Cell 2 and Cell 3 transmit CQI reports.

8.3.4.19a Void

8.3.4.19b Active set update: DB-DC-HSDPA and MIMO Activation by Serving Cell Change from non-DC-HSDPA capable cell to DB-DC-HSDPA capable cell

The scope and description of the present TC is the same as test case 8.3.4.19 with the following differences:

- Test case applicability limited to Rel-10 or later releases UE supporting dual band operation.
- Cells configuration: Cell 4 replaces Cell 3.
- Cell 2 and Cell 4 are configured on different bands.

8.3.4.20 Active set update in soft handover: Radio Link addition/removal on the secondary E-DCH active set

8.3.4.20.1 Definition and applicability

All UE categories which support Dual Cell HS UPA operation. UE supports F-DPCH or Enhanced F-DPCH. UE supports FDD E-DCH category 8 or 9.

8.3.4.20.2 Conformance requirement

The purpose of the active set update procedure is to update the active set of the connection between the UE and UTRAN. This procedure shall be used in CELL_DCH state. The UE should keep on using the old RLs while configuring the new RLs. Also the UE should keep the transmitter turned on during the procedure. This procedure is only used in FDD mode.

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The procedure is initiated when UTRAN orders a UE in CELL_DCH state, to make the following modifications of the active set of the connection:

- a) Radio link addition to the active set:
- b) Radio link removal from the active set:
- c) Combined radio link addition and removal on the active set;
- d) Addition of a radio link to the E-DCH active set;
- e) Removal of a radio link from the E-DCH active set.
- f) Radio link addition to the secondary E-DCH active set;
- g) Radio link removal from the secondary E-DCH active set;
- h) Combined radio link addition and removal on the secondary E-DCH active set;

The procedure also allows the addition or removal of a radio link on the downlink frequencies associated with the secondary serving HS-DSCH cells. If the UE is not operating in Dual Cell E-DCH operation, radio links on the downlink frequencies associated with the secondary serving HS-DSCH cells are not part of the active set. Otherwise, radio links on the frequency associated with the first secondary serving HS-DSCH cell, are part of the secondary E-DCH active set.

Additionally, the procedure also allows the update of Target cell preconfiguration information for existing radio link(s).

In case a), c), f) and h), UTRAN should:

1> prepare new additional radio link(s) in the UTRAN prior to the command to the UE.

In case a), b), c), d) and e), UTRAN should:

- 1> send an ACTIVE SET UPDATE message on downlink DCCH using AM or UM RLC;
- 1> create active sets that contain at least one common radio link across a DPCH or F-DPCH frame boundary as the result of one or multiple (parallel) active set update procedures.

In case f), g) and h), UTRAN should:

- 1> send an ACTIVE SET UPDATE message on downlink DCCH using AM or UM RLC;
- 1> create secondary E-DCH active sets that contain at least one common radio link across a F-DPCH frame boundary as the result of one or multiple (parallel) active set update procedures.

UTRAN should include the following information:

- 1> IE "Radio Link Addition Information": Downlink DPCH information and other optional parameters relevant for the radio links to be added along with the IE "Primary CPICH info" used for the reference ID to indicate which radio link to add. This IE is needed in cases a) and c) listed above;
- 1> IEs "Downlink Secondary Cell Info FDD": Downlink optional parameters relevant to the reception of secondary serving HS-DSCH cells;
- 1> IE "Uplink Secondary Cell Info FDD": Uplink optional parameters relevant to transmission on secondary uplink frequency;
- 1> IE "Radio Link Removal Information": IE "Primary CPICH info" used for the reference ID to indicate which radio link to remove. This IE is needed in cases b) and c) listed above;
- 1> IE "Radio link addition in formation on secondary UL frequency": Downlink F-DPCH information and other optional parameters relevant for the radio links to be added along with the IE "Primary CPICH info" used for the reference ID to indicate which radio link to add on the secondary uplink frequency. This IE is needed in cases f) and h) listed above;

- 1> IE "Radio link removal information on secondary UL frequency": IE "Primary CPICH info" used for the reference ID to indicate which radio link to remove on the secondary uplink frequency. This IE is needed in cases g) and h) listed above;
- 1> IE "E-DCH reconfiguration information": IE "Primary CPICH info" used for the reference ID along with the IE "E-HICH information" to indicate which radio link to add to the E-DCH active set. This IE is needed in case d) above, when the RL added to the E-DCH active set is already in the DCH active set;
- 1> IE "E-DCH reconfiguration information": IE "Primary CPICH info" used for the reference ID along with the IE "E-HICH release indicator" to indicate which radio link to remove from the E-DCH active set. This IE is needed in case e) above, when the RL removed from the E-DCH active set remains in the DCH active set.

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Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following.

The UE may:

1> maintain a list of the set of cells to which the UE has Radio Links if the IE "Cell ID" is present.

The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information" which are not yet contained in the UEs active set:
- 1> remove the RLs indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;
- 1> perform the physical layer synchronisation procedure B as specified in [29] for the radio links which are not yet contained in the UEs active set;
- 1> if the IE "E-HICH information" is included:
 - 2> store this E-HICH configuration for the concerning radio link.
- 1> if the IE "E-HICH information" is included:
 - 2> store this E-RGCH configuration for the concerning radio link, if included.
- 1> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28;
- 1> stop and reset timer T324 if running;
- 1> stop monitoring target cell HS-SCCH;
- 1> if the IE "MAC-es/e reset indicator" is included in the IE "UL 16QAM configuration":
 - 2> reset the MAC-es/e / MAC-is/i entity [15].
- NOTE 1: If the IE "MAC-es/e reset indicator" is not included in the IE "UL 16QAM configuration" and 16QAM operations starts or stops, the UE behaviour is unspecified.
- 1> if the IE "UL 16QAM settings" is not included in the IE "16QAM configuration":
 - 2> indicate to lower layers to stop any operation in 16QAM mode.
- NOTE 2: If the IE "UL 16QAM configuration" is not included and 16QAM mode operation is currently ongoing, the UE behaviour is unspecified.
- 1> if the IEs "E-TFCI Boost Info" and/or "E-DPDCH power interpolation" are present, act on the received information elements;
- 1> if the IEs "E-DPCCH/DPCCH power offset" and/or "Reference E-TFCI PO" are included in the IE "E-DCH reconfiguration information same serving cell", act on the received information elements;

- NOTE 3: If E-TFCI boost is signalled to the UE and a reference E-TFCI <= E-TFCI Boost is signalled to the UE with a Reference E-TFCI PO of value 30 or 31, the UE behaviour is unspecified.
- 1> if the radio link currently considered to be the serving HS-DSCH radio link is indicated in the IE "Radio Link Removal Information":
 - 2> no longer consider any radio link as the serving HS-DSCH radio link;
 - 2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25.
- 1> for each radio link in the IE "Radio Link Addition Information":
 - 2> take the actions related to TARGET_CELL_PRECONFIGURATION variable as described in subclause 8.5.52.
- 1> if the radio link in the IE "Radio Link Addition Information" is already contained in the UE active set and the IE "Radio Link Addition Information" attempts to reconfigure parameters other than "Target cell preconfiguration information" IE for the radio link:
 - 2> the UE behaviour is unspecified.
- NOTE 4: To configure or reconfigure the "Target cell preconfiguration information" IE for the radio link already contained in the UE active set, UTRAN should provide the same value of the mandatory IEs in the IE "Radio Link Addition Information" as the one previously configured. Otherwise the UE behaviour is unspecified.
- 1> if the table "Target cell preconfigurations" in the variable TARGET_CELL_PRECONFIGURATION included the RL indicated in IE "Radio Link Removal Information":
 - 2> clear the entry from the variable TARGET_CELL_PRECONFIGURATION.
- 1> if the "E-DCH RL Info other cells" in the table "Target cell preconfiguration information" in the variable TARGET_CELL_PRECONFIGURATION included the RL indicated in the IE "Radio Link Removal Information":
 - 2> clear all "E-DCH RL Info other cells" entries in the variable TARGET_CELL_PRECONFIGURATION for the removed RL(s).
- 1> if the radio link currently considered to be the serving E-DCH radio link is indicated in the IE "Radio Link Removal Information":
 - 2> no longer consider any radio link as the serving E-DCH radio link.
- 1> if the IE "Uplink Secondary Cell Info FDD" is included; or
- 1> if the IE "E-DCH reconfiguration information on secondary uplink frequency" is included; or
- 1> if the IE "Radio link addition information on secondary UL frequency" is included; or
- 1> if the IE "Radio link removal information on secondary UL frequency" is included:
 - 2> act as specified in 8.3.4.3a.
- 1> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE COMPLETE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the completion of the Physical Layer synchronisation B, as specified in [29];
- 1> the procedure ends on the UE side.

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The UE shall:

- 1> if the IE "Uplink Secondary Cell Info FDD" is included:
 - 2> act as specified in subclause 8.6.6.49.
 - 2> determine the value for the SECONDARY_CELL_E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.58.
- 1> if the IE "Radio link addition information on secondary UL frequency" or the IE "Radio link removal information on secondary UL frequency" is included:
 - 2> first add the RLs indicated in the IE "Rad io link addition information on secondary UL frequency";
 - 2> remove the RLs indicated in the IE "Radio link removal information on secondary UL frequency". If the UE secondary E-DCH active set is full or becomes full, an RL, which is included in the IE "Radio link removal information on secondary UL frequency" for removal, shall be removed before adding RL, which is included in the IE "Radio link addition information on secondary UL frequency" for addition;
 - 2> store this E-HICH configuration for the concerning radio link to be added, if included;
 - 2> store this E-RGCH configuration for the concerning radio link to be added, if included;
 - 2> if the secondary uplink frequency is an activated uplink frequency after the active set update procedure:
 - 3> perform the physical layer synchronisation procedure B as specified in [29] for the concerning radio link to be added if included.
- 1> if the IE "E-DCH reconfiguration information on secondary UL frequency" is included:
 - 2> if the IE "E-DCH RL In fo for other cells" is present:
 - 3> if the IE "E-HICH Information" is present:
 - 4> store the E-HICH and E-RGCH information (if present), contained therein, for the indicated radio link
 - 3> if the IE "E-RGCH release indicator" is present:
 - 4> delete the stored E-RGCH configuration for the indicated radio link.
 - 2> if the IE "E-DCH RL In fo for new secondary serving E-DCH cell" is present:
 - 3> consider the radio link identified by the IE "Primary CPICH info" in the first IE "Downlink secondary cell info FDD" as the secondary serving E-DCH radio link, and no longer consider any other radio link as secondary serving E-DCH radio link.
 - 3> store the E-HICH and E-RGCH information (if present), contained therein, for the new secondary serving E-DCH radio link;
 - 3> if the IE "E-RGCH release indicator" is present:
 - 4> delete the stored E-RGCH configuration for the new secondary serving E-DCH radio link.
 - 3> store the newly received E-A GCH configuration for the new secondary serving E-DCH radio link;
 - 3> if the old secondary serving E-DCH cell remains in the secondary E-DCH active set after the active set update, or if the new secondary serving E-DCH cell was already in the secondary E-DCH active set prior to the active set update:
 - 4> keep the current activation status of the secondary uplink frequency and take the corresponding actions as described in subclause 8.5.58.
 - 3> otherwise:

4> consider the secondary uplink frequency as not activated and take the corresponding actions as described in subclause 8.5.58.

Reference

3GPP TS 25.331 clause 8.3.4, 8.3.4.2, 8.3.4.3, 8.3.4.3a

8.3.4.20.3 Test purpose

- 1. To confirm that the UE adds radio link to the secondary E-DCH set after receiving ACTIVE SET UPDATE message, which includes IE "Radio link addition information on secondary UL frequency " and specifying the P-CPICH information of the cell to be added.
- 2. To confirm that the UE removes radio link from the secondary E-DCH set after receiving ACTIVE SET UPDATE message, which includes IE "Radio link removal information on secondary UL frequency" and specifying the P-CPICH information of the cell to be removed.

8.3.4.20.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1, Cell 2/3 DC HSUPA cell(s) with Cell 2 (Serving HS.DSCH cell/Primary uplink frequency) and Cell 3 (Secondary serving HS.DSCH cell/Secondary uplink frequency)

UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-18) under condition A25c, as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE category supports DC HSUPA
- UE supports F-DPCH or Enhanced F-DPCH
- UE category supports FDD E-DCH category 8 or 9

Test Procedure

Table 8.3.4.20-1

Cell	UTRA RF Channel Number
Cell 1	Mid Range Test Frequency
Cell (2,3)	Mid Range Test Frequency(see Note1)
	HSUPA Cell test frequencies are specified in [9] cl. [FFS] for the operating
band	d under test. The SFN and Tcell of the secondary cell are the same as the
servi	ing cell [29] cl. 7.1.

Table 8.3.4.20-2

			Tin	ne	
Parameter	Unit	T0	T1	T2	T3
Cell 1 CPICH Ec	dBm/3.84MHz	-75	-60	OFF	-60
Cell (2,3) CPICH Ec	dBm/3.84MHz	-60	-60	-60	-60

Table 8.3.4.20-1 and Table 8.3.4.20-2 illustrate the downlink power to be applied for the 3 cells at various time instants of the test execution. Note that Cell 2 and Cell 3 are DC HS UPA Cells with Cell 2 configured as the primary uplink cell and Cell 3 configured as the secondary uplink cell.

The downlink transmission power is set according to values in column "T0" in table 8.3.4.20-2. The UE has user plane bearers and signalling bearers mapped to the E-DCH/HS-DSCH of the DC HSUPA Cell configuration according to Radio Bearer Setup condition [FFS]. The SS transmits to the UE an MEASUREMENT CONTROL message in cell 2 on DCCH using AM RLC, which configures event '1a' and event '1b' for the secondary frequency measurement.

The SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.20-2. The UE transmits a MEASUREMENT REPORT message, which includes the primary scrambling code for Cell 1 according to IE "Intra-frequency event identity", which is set to 1a in IE "Intra-frequency measurement reporting criteria on secondary UL frequency" in MEASUREMENT CONTROL message.

The SS trans mits to the UE an ACTIVE SET UPDATE message in cell 2 on DCCH using AM RLC, which includes IE "Radio link addition information on secondary UL frequency" and specifying the P-CPICH information of the cell to be added. When the UE receives this message, at the activation time, the UE shall configure layer 1 to begin E-DCH transmission using the new radio link on cell 1. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

The SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.20-2. The UE shall transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 1 according to IE "Intra-frequency event identity", which is set to 1b in IE "Intra-frequency measurement reporting criteria on secondary UL frequency" in MEASUREMENT CONTROL message. The SS receives this message to confirm that the UE has added the radio link on cell 1 to the secondary E-DCH set.

After the MEASUREMENT REPORT message is received, the SS removes the radio link on cell 1 from the secondary E-DCH active set and then SS transmits an ACTIVE SET UPDATE message, which includes IE "Radio link removal information on secondary UL frequency" and specifying the P-CPICH information of the cell to be removed.

When the UE receives this message, the UE RRC entity shall request UE L1 entity to terminate transmission and reception of the radio link on cell 1. Then the UE transmits an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

The SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.20-2. The UE shall transmit a MEASUREMENT REPORT message, which includes the primary scrambling code for Cell 1 according to IE "Intra-frequency event identity", which is set to 1a in IE "Intra-frequency measurement reporting criteria on secondary UL frequency" in MEASUREMENT CONTROL message. The SS receives this message to confirm that the UE has deleted the radio link on cell 1 from the secondary E-DCH set.

Expected sequence

Step	Direction	Message	Comment
	UE SS		LIE DO DOOL DTOU
1	←		UE: PS_DCCH+DTCH
			E_DCH/HS_DSCH (state 6-18) according to clause 7.4.
2	←	MEASUREMENT CONTROL	See specific message contents for
		INEASUREINI CONTROL	this message (event '1a' and event
			'1b' configured).
3			SS configures its downlink
			transmission power settings
			according to columns "T1" in table
			8.3.4.20-2.
4	\rightarrow	MEASUREMENT REPORT	See specific message contents for
			this message (event '1a' for cell 1).
5	←	ACTIVE SET UPD ATE	SS transmits this message in
			primary carrier Cell 2 on downlink
			DCCH using AM RLC. The RRC
			message instructs the UE to add
			Cell 1 to the secondary E-DCH
6	SS		active set. At the activation time, Cell 1is in
6	33		the secondary E-DCH active set.
7	\rightarrow	ACTIVE SET UPDATE COMPLETE	the secondary E-DOIT active set.
8	/	ACTIVE SET OF DATE CONFILETE	SS configures its downlink
			transmission power settings
			according to columns "T2" in table
			8.3.4.20-2.
9	\rightarrow	MEASUREMENT REPORT	See specific message contents for
			this message (event '1b' for cell 1).
			The SS receives this message to
			confirm that the UE has added the
			radio link on cell 1 to the
10	←	ACTIVE SET UPDATE	secondary E-DCH set.
10	_	ACTIVE SET UPDATE	SS transmits this message in primary carrier Cell 2 on downlink
			DCCH using AM RLC. The RRC
			message instructs the UE to delete
			Cell 1 from the secondary E-DCH
			active set.
11	SS		At the activation time, Cell 1 is not
			in the secondary E-DCH active set.
12	\rightarrow	ACTIVE SET UPDATE COMPLETE	
13			SS configures its downlink
1.4		MEASUDEMENT DEPORT	
14	7	INICASUNEINI KEPUKI	
			the radio link on cell 1 from the
12		ACTIVE SET UPD ATE COMPLETE MEASUREMENT REPORT	in the secondary E-DCH active s SS configures its downlink transmission power settings according to columns "T3" in tabl 8.3.4.20-2. See specific message contents for this message (event '1a' for cell 'The SS receives this message to confirm that the UE has deleted

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects an unused integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and
	writes to this IE. The first/ leftmost bit of the bit string

- Frequency info - CHOICE mode - UARFCN uplink(Nu) - UARFCN downlink(Nd) - CHOICE intra-frequency cell removal - New intra-frequency cells - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE mode - Primary CPICH TX power - TX Diversity indicator - Cell Selection and Re-selection info - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Primary CPICH TX power - TX Diversity indicator - Cell Selection and Re-selection info - Intra-frequency cell id - Cell info - Cell info - Cell info - Cell info - Cell selection and Re-selection info - Intra-frequency measurement reporting criteria - Primary Scrambling code - Primary Scrambling code - Primary CPICH TX power - TX Diversity indicator - CHOICE mode - Primary Scrambling code - Primary CPICH TX power - TX Diversity indicator - CHOICE mode - Primary Scrambling code - Primary Scrambling code - Primary Scrambling code - Primary Scrambling code - Primary CPICH TX power - TX Diversity indicator - CHOICE mode - Primary Scrambling code - Primary Scrambling	- RRC message sequence number Measurement Identity Measurement Command Measurement Reporting Mode - Measurement Report Transfer Mode - Periodical Reporting/Event Trigger Reporting Mode Additional measurement list CHOICE Measurement type - Intra-frequency measurement - Intra-frequency cell info list - Intra-frequency cell info list on secondary UL frequency - Frequency info - CHOICE mode - UARFCN uplink(Nu) contains SS provio	the most significant bit of the MAC-I. des the value of this IE, from its internal counter. edged mode RLC gger Reporting ent quency measurement ent of this IE is equivalent to apply the default duplex defined for the operating frequency according to 5 25.101 [11] be to table 6.1.2 for Cell 3
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- Primary CPICH TX power - TX Diversity indicator - Cell Selection and Re-selection info - Cells for measurement - CHOICE report criteria - Intra-frequency measurement reporting criteria - Parameters required for each event - Intra-frequency measurement reporting criteria on secondary UL frequency - Frequency info - CHOICE mode - UARFCN uplink(Nu) - Parameters required for each event - Intra-frequency measurement reporting criteria FDD Not present Not present Not present Not present Not present Intra-frequency measurement reporting criteria Not present Not present Not present Intra-frequency measurement reporting criteria Not present Not present Not present Not present Not present Not present 1 Reference to table 6.1.2 for Cell 3		clause titled "Default settings for cell No. 1 (EDD)" in
- Primary CPICH TX power - TX Diversity indicator - Cell Selection and Re-selection info - Cells for measurement - CHOICE report criteria - Intra-frequency measurement reporting criteria - Parameters required for each event - Intra-frequency measurement reporting criteria on secondary UL frequency - Frequency info - CHOICE mode - UARFCN uplink(Nu) - UARFCN downlink(Nd) - Parameters required for each event - Intra-frequency event identity Not Present FALSE Not present Not Present Not Present FALSE Not present Not Present FALSE Not present Not Present Intra-frequency measurement reporting criteria Not present Not present Intra-frequency measurement reporting criteria		
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- Intra-frequency measurement reporting criteria on secondary UL frequency - Frequency info - CHOICE mode - UARFCN uplink(Nu) - UARFCN downlink(Nd) - Parameters required for each event - Intra-frequency event identity - Intra-frequency measurement reporting criteria FDD Not present Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to 3GPP TS 25.101 [11] Reference to table 6.1.2 for Cell 3		ont
on secondary UL frequency - Frequency info - CHOICE mode - UARFCN uplink(Nu) - UARFCN downlink(Nd) - Parameters required for each event - Intra-frequency event identity FDD Not present Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to 3GPP TS 25.101 [11] Reference to table 6.1.2 for Cell 3	· · · · · · · · · · · · · · · · · · ·	3111
- Frequency info - CHOICE mode - UARFCN uplink(Nu) - UARFCN downlink(Nd) - Parameters required for each event - Intra-frequency event identity - CHOICE mode - UARFCN uplink(Nu) Not present - Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to 3GPP TS 25.101 [11] Reference to table 6.1.2 for Cell 3		
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- UARFCN downlink(Nd) - Parameters required for each event - Intra-frequency event identity 3GPP TS 25.101 [11] Reference to table 6.1.2 for Cell 3		
- UARFCN downlink(Nd) - Parameters required for each event - Intra-frequency event identity Reference to table 6.1.2 for Cell 3 1a		
- Parameters required for each event - Intra-frequency event identity 1a		to table 6.1.2 for Cell 3
- Intra-frequency event identity 1a		
- Triggering condition 1 Not Present	- Intra-frequency event identity 1a	
Triggoring condition 1	- Triggering condition 1 Not Pres	
- Triggering condition 2 Monitored set cells		
- Reporting Range Constant 10 (5dB)	- Reporting Range Constant [10 (5dB)	d set cells

Information Element	Value/remark	
- Cells forbidden to affect Reporting range on	Not Present	
secondary UL frequency		
- W	10(1.0): 34.121 test cases	
- Hysteresis	0 (0.0)	
- Threshold Used Frequency	Not Present	
- Reporting deactivation threshold	2	
 Replacement activation threshold 	Not Present	
- Time to trigger	640	
- Amount of reporting	4	
- Reporting interval	4 000	
- Reporting cell status		
- CHOICE reported cell	Report cell within active set and/or monitored set cells on	
·	secondary UL frequency	
- Maximum number of reported cells	3	
- Intra-frequency event identity	1b	
- Triggering condition 1	Active set cells	
- Triggering condition 2	Not Present	
- Reporting Range Constant	10 (5dB)	
 Cells forbidden to affect Reporting range on 	Not Present	
secondary UL frequency		
- W	10(1.0): 34.121 test cases	
- Hysteresis	0 (0.0)	
- Threshold Used Frequency	Not Present	
 Reporting deactivation threshold 	Not Present	
 Replacement activation threshold 	Not Present	
- Time to trigger	640	
- Amount of reporting	Not Present	
- Reporting interval	Not Present	
- Reporting cell status		
- CHOICE reported cell	Report cell within active set and/or monitored set cells on	
	secondary UL frequency	
- Maximum number of reported cells	3	

MEASUREMENT REPORT (Step 4)

Information Element	Value/remark	
Message Type		
Integrity check info		
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.	
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.	
Measurement identity	1	
Measured Results	Checked that this IE is absent	
Measured Results on secondary UL frequency		
- Cell measured results	Cell 1. See Note 1	
- Cell Identity	Checked that this IE is absent	
 Cell synchronisation information 	Checked that this IE is absent	
- Primary CPICH info		
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"	
	in clause 6.1 of TS 34.108	
- CPICH Ec/N0	Checked that this IE is absent	
- CPICH RSCP	Checked that this IE is present	
- Pathloss	Checked that this IE is absent	
- Cell measured results	Cell 3. See Note 1	
- Cell Identity	Checked that this IE is absent	
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference	
- Primary CPICH info		
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108	
- CPICH Ec/N0	Checked that this IE is absent	
- CPICH RSCP	Checked that this IE is present	
Measured results on RACH	Checked that this IE is absent	
Additional measured results	Checked that this IE is absent	
Event results		
- Intra-frequency measurement event results		
- Intra-frequency event identity	1a	
- Cell measurement event results		
- Primary CPICH info		
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108	
Note 1: Cell measured results for cells 1 and 3 may appear in any order.		

ACTIVE SET UPDATE (Step 5)

Information Element	Value/remark	
Activation time	(256+CFN-(CFN MOD 8 + 8)) MOD 256	
Radio link addition information on secondary UL		
frequency		
- Primary CPICH Info		
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.1	
	(FDD)" in clause 6.1 of TS 34.108	
- Downlink F-DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH can be used.	
- F-DPCH frame offset	Calculated value from Cell synchronisation information	
- F-DPCH slot format	3 if UE supports enhanced F-DPCH, otherwise Not	
	Present	
- Secondary CPICH info	Not Present	
- Secondary scrambling code	Not Present	
- Code number	12	
- TPC Combination Index	1	
- E-HICH Information		
- Channelisation code	4	
- Signature sequence	1	
- CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequence	0	
- STTD indication	FALSE	

MEASUREMENT REPORT (Step 9)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	Checked that this IE is absent
Measured Results on secondary UL frequency	
- Cell measured results	Cell 1. See Note 1
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information Primary CPICH info 	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 3. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- Intra-frequency measurement event results	
- Intra-frequency event identity	1b
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 10)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9.1, with the following exceptions:

Information Element	Value/remark
Radio link removal information on secondary UL	1 radio link to be removed
frequency - Primary CPICH info	
- Primary scrambling code	Set to the same P-CPICH scrambling code assigned for cell 1.

MEASUREMENT REPORT (Step 14)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	Checked that this IE is absent
Measured Results on secondary UL frequency	
- Cell measured results	Cell 1. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
-	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 3. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
 Intra-frequency measurement event results 	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
Note 1: Cell measured results for cells 1 and 3 may app	ear in any order.

8.3.4.20.5 Test requirements

At step 4, 9, 14 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC to request adding/deleting radio link on the secondary E-DCH set.

At step 7, 12 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set addition/deletion procedure.

8.3.4.21 Active Set Update: MIMO Activation by serving cell changes with and without PCI Restrictions and S-CPICH Power Offsets (16QAM + MIMO)

8.3.4.21.1 Definition and applicability

All UE categories which support MIMO and F-DPCH or Enhanced F-DPCH.

8.3.4.21.2 Conformance requirement

If the UE receives an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message:

- 1> if the IE "MIMO parameters" is not included:
 - 2> clear the MIMO_PARAMS variable;
 - 2> trigger lower layers to stop operation in MIMO mode.
- 1> otherwise:

- 2> for FDD, if the IE "MIMO N_cqi_typeA/M_cqi ratio" is included:
 - 3> store the value of the IE "MIMO N_cqi_typeA/M_cqi ratio" in the MIMO_PARAMS variable.
- 2> for FDD, if the IE "MIMO pilot configuration" is included:
 - 4> store the value of the IE "MIMO pilot configuration" in the MIMO PARAMS variable.

[...]

If the UE receives an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message, the UE shall:

- 1> take actions related to the MIMO_PARAMS variable as specified in subclause 8.5.32;
- 1> determine the value of the MIMO_STATUS variable.

The MIMO_STATUS variable shall be set to TRUE only when all the following conditions are met:

- 1> The UE is in CELL_DCH state;
- 1> the variable HS_DSCH_RECEPTION is set to TRUE;
- 1> for FDD, the variable MIMO_PARAMS contains a value for the IE "MIMO N_cqi_typeA/M_cqi ratio"; and
- 1> for FDD, the variable MIMO_PARAMS contains a value for the IE "MIMO pilot configuration".
- 1> for 1.28 Mcps TDD, the variable MIMO_PARAMS contains a value for the IE "MIMO SF Mode for HS PDSCH dual stream".

If any of the above conditions is not met and the MIMO_STATUS variable is set to TRUE, the UE shall:

- 1> set the MIMO_STATUS variable to FALSE;
- 1> clear the MIMO_PARAMS variable;
- 2> trigger lower layers to stop operation in MIMO mode.

[...]

With the exception of the provisions of subclause 6A.3, the following shall apply when the UE is configured in MIMO mode:

1) The UE derives the PCI value as defined in subclause 6A.4 and either a type A or a type B CQI value as defined in subclause 6A.2.2 depending on which type of CQI shall be reported as defined below.

[...]

If the UE is not configured with precoding weight set restriction by the higher layers, the optimum precoding weight w_s^{pref} for antenna 2 is taken from the set:

$$w_2^{\text{pref}} \in \left\{ \frac{1+j}{2} \quad \frac{1-j}{2} \quad \frac{-1+j}{2} \quad \frac{-1-j}{2} \right\}$$

If the UE is configured with precoding weight set restriction by the higher layers, the optimum precoding vector weight w_s^{pref} for antenna 2 is taken from the set as defined in table 7J0.

Table 7J0: Selection of the precoding weight set when the precoding weight set restriction is configured by higher layers

Number of Transport Blocks preferred in the composite PCI/CQI report	Precoding weight set from which the optimum precoding weight $_{W_2^{\mathrm{pref}}}$ for antenna 2 is taken.	
(always the case when single-stream restriction is configured to the UE)	$w_2^{\text{pref}} \in \left\{ \frac{1+j}{2} \frac{-1-j}{2} \right\}$	
2	$w_2^{\text{pref}} \in \left\{ \frac{1+j}{2} \frac{1-j}{2} \frac{-1+j}{2} \frac{-1-j}{2} \right\}$	

The precoding weight w_2^{pref} is mapped to PCI values as defined in table 7J.

Table 7J: Mapping of preferred precoding weight w_2^{pref} to PCI values

$W_2^{ m pref}$	PCI value
$\frac{1+j}{2}$	0
$\frac{1-j}{2}$	1
$\frac{-1+j}{2}$	2
$\frac{-1-j}{2}$	3

Reference

3GPP TS 25.331 clause 8.5.32, 8.5.33

3GPP TS 25.214 clause 6A.1.2.2, 6A.4

8.3.4.21.3 Test purpose

To confirm that the UE performs serving cell change and start MIMO reception from non MIMO capable cell to MIMO capable cell with and without PCI restriction and S-CPICH power offset.

8.3.4.21.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 non MIMO cell, Cell 2 MIMO configured

UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-17) under condition A17b, as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE category supports MIMO
- UE fully supports F-DPCH or Enhanced F-DPCH

Test Procedure

Table 8.3.4.21-1

Cell	UTRARF Channel Number
Cell 1	Mid Range Test Frequency
Cell 2	Mid Range Test Frequency

Table 8.3.4.21-2

Parameter	Unit	T0	T1
Cell 1 CPICH Ec	dBm/3.84MHz	-60	-60
Cell 2 CPICH Ec	dBm/3.84MHz	-75	-60

Table 8.3.4.21-2 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.X-2. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" and MIMO configuration. When the UE receives this message, the UE shall activate MIMO reception and configure SRB and user plane bearers for HS-DSCH reception (L1 configured for MIMO on separate antennae with PCI restriction and S-CPICH Power Offset) using the new radio link with cell 2 as the serving cell. The UE shall respond with ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. UE sends combined CQI/PCI reports of type A/B continuously every 2 ms. The PCI values reported shall be restricted to 0 or 3 for type A CQIs where one transport block is preferred. For type A CQIs where two transport blocks are preferred, restriction shall not apply.

The SS trans mits a PHYSICAL CHANNEL RECONFIGURATION message, using MIMO configuration, to the UE to reconfigure MIMO parameters (without PCI restriction and S-CPICH offset). When the UE receives this message, the UE shall reconfigure L1 (without PCI restriction and S-CPICH offset) and respond with PHYSICAL CHANNEL RECONFIGURATION COMPLETE.UE sends combined CQI/PCI reports of type A/B continuously every 2 ms .

Expected sequence

Step	Direction	Message	Comment
	UE SS		

1	⊢		UE: PS_DCCH+DTCH
	`		E_DCH/HS_DSCH (state 6-18)
			according to clause 7.4.
2			SS configures its downlink
			transmission power settings
			according to columns "T1" in table
			8.3.4.x-2.
3	\rightarrow	MEASUREMENT REPORT	See specific message contents for
			this message (event '1a' for cell 2).
4	←	ACTIVE SET UPDATE	SS transmits this message in cell 1
			on downlink DCCH using AM RLC.
			The message includes IE "Radio
			Link Addition Information" for cell
			2. Valid MIMO parameters (with
			PCI restriction and S-CPICH
			Power Offset) are specified and
	_		Cell 2 becomes the serving Cell.
5	\rightarrow	ACTIVE SET UPDATE COMPLETE	
6			At the activation time the SS
			changes the serving E-DCH and
			HS-DSCH link to Cell 2 and
			applies the new configuration.
7			UE shall transmit composite
			CQI/PCI reports of type A or type B. The SS shall check that for 500
			consecutive CQI reports, 250 are
			type A and 250 of type B.
			PCI values of 0 or 3 shall be used
			by the UE for type A CQIs where
			one transport block is preferred.
			For type A CQIs where two
			transport blocks are preferred, the
			restriction does not apply.
			The UE shall configure the lower
			layers with signalled S-CPICH
			Power offset.
8	←	PHYSICAL CHANNEL	SS transmits this message in cell 2
		RECONFIGURATION	on downlink DCCH using AM RLC.
			MIMO parameter reconfigured.
9	\rightarrow	PHYSICAL CHANNEL	UE shall reconfigure L1 without
		RECONFIGURATION COMPLETE	PCI restriction and S-CPICH offset
10			UE sends combined CQI/PCI
			reports of type A/B continuously
			every 2 ms.

Specific Message Contents

The contents of SIB11 broadcasted in cell 1 shall be in accordance with the default SIB11 as specified in section 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Intra-frequency measurement reporting criteria	
 Parameters required for each event 	2 kinds
 Intra-frequency event identity 	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range Constant	10 (5 dB)
 Cells forbidden to affect Reporting range 	Not Present
- W	0 (0.0)
- Hysteresis	0 (0.0)
- Threshold Used Frequency	Not Present
- Reporting deactivation threshold	3
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	4
- Reporting interval	4000
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells
	on used frequency
 Maximum number of reported cells 	2
 Intra-frequency event identity 	1b
- Triggering condition 1	Active set cells
- Triggering condition 2	Not Present
- Reporting Range Constant	10 (5 dB)
 Cells forbidden to affect Reporting range 	Not Present
- W	0 (0.0)
- Hysteresis	0 (0.0)
- Threshold Used Frequency	Not Present
 Reporting deactivation threshold 	Not Present
 Replacement activation threshold 	Not Present
- Time to trigger	640
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells
	on used frequency
- Maximum number of reported cells	2

The contents of SIB12 in cell 1, and SIB11 and SIB12 in cell 2 shall be in accordance with the default SIBs as specified in TS 34.108.

MEASUREMENT REPORT (Step 3)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	Cell 1. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information - Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C- SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results Event results	Checked that this IE is absent
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1 and 2 may appear in any order.

ACTIVE SET UPDATE (Step 4)

Information Element	Value/remark	Version
Activation time	(256+CFN-(CFN MOD 8 + 8)) MOD 256	
New H-RNTI	0101 0101 0101 0101'	
New Primary E-RNTI	0101 0101 0101 0101	
MIMO Parameters	Stort	
- MIMO Operation -	Start	
- MIMO N_cqi_typeA/M_cqi ratio	1/1	
- MIMO pilot configuration	Antonnot C CDICLI	
 CHOICE Second CPICH pattern Channelisation code 	Antenna1 S-CPICH	
Radio link addition information		
- Primary CPICH Info	D: 1 (0 H)	
 Primary scrambling code Downlink F-DPCH info for each RL 	Primary scrambling code of Cell 2	
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH may be used.	
- F-DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- F-DPCH slot format	3 if UE supports enhanced F-DPCH, otherwise	
Consendant CDICUL in fo	Not Present	
- Secondary CPICH info	Not present	
 Secondary s crambling code Code number 	Not present F-DPCH code number as used in Cell1	
- TPC Combination Index	1	
- TFCI combining indicator - E-HICH Information	FALSE	
- Channelisation code	4	
- Signature sequence	1	
- CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequence	0	
- RG combination index	0	
Serving HS-DSCH cell information		
- Δ ACK	Not Present	
- Anack	Not Present	
- HARQ_preamble_mode - Primary CPICH info	0	
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- Downlink HS-PDSCH Information	Cot to the primary columning code of con 2	
- HS-SCCH Info		
- CHOICE mode	FDD	
- DL Scrambling Code	Not present	
- HS-SCCH Channelisation Code Information	Use 1 HS-SCCH	
- HS-SCCH Channelisation Code - Measurement Feedback Info	<i>'</i>	
- CHOICE mode	FDD	
- Measurement Power Offset	12 (6 dB)	
- CQI Feedback cycle, k	4 ms	
- CQI repetition factor	1	
- △ _{CQI}	5 (corresponds to 0dB in relative power offset)	
- CHOICE mode	FDD (no data)	
- Downlink 64QAM configured	Not Present	
- HS-DSCH TB size table	Octet Aligned	
- HARQ Info	40	
- Number of Processes	12	
- CHOICE <i>Memory Partitioning</i> - MAC-hs reset indicator	Implicit TRUE	
MIMO-PilotConfiguration-v7f0ext		
- s-cpich-PowerOffset-Mimo	-3	
MIMO-Parameters-v7g0ext		
-precodingWeightSetRestriction	TRUE	
E-DCH reconfiguration information		
- E-DCH RL Info new serving cell		
- Primary CPICH info		
- Primary Scrambling Code - E-AGCH Info	Set to the primary scrambling code of cell 2	
- E-AGCH Inio - E-AGCH Channelisation Code	10	
L AGOIT GHAIHEIGAIIOH GOUE	110	

- Serving Grant	Not Present
- E-DPCCH/DPCCH power offset	Not Present
- Reference E-TFCIs	Not Present
- Power Offset for Scheduling Info	Not Present
- 3-Index-Step Threshold	Not Present
- 2-Index-Step Threshold	Not Present
- E-HICH Information	Not Present
- CHOICE E-RGCH Information	
- E-DCH RL Info other cells	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 8)

Use the same message as specified for "Packet to CELL_DCH from CELL_DCH in PS" in 34.108 except for the following:

Information Element	Value/remark	
HARQ Info		
- Number of processes	6	
- CHOICE Memory Partitioning		
- Impliait		
Frequency info	Not present	
MIMO Parameters		
- MIMO Operation	Start	
-		
 MIMO N_cqi_typeA/M_cqi ratio 	1/1	
 MIMO pilot configuration 		
- CHOICE Second CPICH pattern	Antenna1 S-CPICH	
- Channelisation code	13	
Maximum allowed UL TX power	Not present	
Uplink DPCH info	Not present	
Downlink HS-PDSCH Information		
- HS-SCCH Info		
- CHOICE mode	FDD	
- DL Scrambling Code	Not present	
- HS-SCCH Channelisation Code Information		
- HS-SCCH Channelisation Code	7	
- Measurement Feedback Info		
- CHOICE mode	FDD	
- Measurement Power Offset	12 (6 dB)	
- CQI Feedback cycle, k	8 ms	
- CQI repetition factor	1	
- Δcqi	5 (corresponds to 0dB in relative power offset)	
- CHOICE mode	FDD (no data)	
- Downlink 64QAM configured	Not Present	
- HS-DSCH TB size table	Octet Aligned	
MIMO-PilotConfiguration-v7f0ext		
- s-cpich-PowerOffset-Mimo	0	
MIMO-Parameters-v7g0ext		
-precodingWeightSetRestriction	FALSE	
Downlink information common for all radio links	Not Present	
Downlink information for each radio link list	Not Present	
- Primary CPICH info	1.50	
- Primary scrambling code	150	

8.3.4.21.5 Test requirements

At steps 3, UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At steps 5 UE shall trans mit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the previous ACTIVE SET UPDATE and indicate readiness to accept the new configuration at activation time.

At step 7, UE shall transmit composite CQI/PCI reports of type A or type B. The SS shall check that for 500 consecutive CQI reports, 250 are type A and 250 of type B. PCI values of 0 or 3 shall be used by the UE for type A CQIs where one transport block is preferred. For type A CQIs where two transport blocks are preferred, the restriction does not apply.

At step 9, UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC to acknowledge the previous PHYSICAL CHANNEL RECONFIGURATION and indicate readiness to accept the new configuration.

At step 10, UE shall transmit combined CQI/PCI reports of type A/B continuously every 2 ms.

8.3.4.22 Active set update: Dual Cell (DC) Activation by Serving Cell Change from non DC-HSDPA capable cell to DC-HSDPA capable cell with discontinuous uplink transmission and downlink reception

8.3.4.22.1 Definition and applicability

All UEs which support FDD, UL DTX, DL DRX and Dual Cell HSDPA.

8.3.4.22.2 Conformance requirement

The purpose of the active set update procedure is to update the active set of the connection between the UE and UTRAN. This procedure shall be used in CELL_DCH state. The UE should keep on using the old RLs while configuring the new RLs. Also the UE should keep the transmitter turned on during the procedure. This procedure is only used in FDD mode.

. . .

The procedure is initiated when UTRAN orders a UE in CELL_DCH state, to make the following modifications of the active set of the connection:

- a) Radio link addition;
- b) Radio link removal;
- c) Combined radio link addition and removal;
- d) Addition of a radio link to the E-DCH active set;
- e) Removal of a radio link from the E-DCH active set.

The procedure also allows the addition or removal of a radio link on a secondary serving HS-DSCH cell. Radio links on the secondary serving HS-DSCH cell are not part of the active set.

In case a) and c), UTRAN should:

1> prepare new additional radio link(s) in the UTRAN prior to the command to the UE.

In all cases, UTRAN should:

- 1> send an ACTIVE SET UPDATE message on downlink DCCH using AM or UM RLC;
- 1> create active sets that contain at least one common radio link across a DPCH or F-DPCH frame boundary as the result of one or multiple (parallel) active set update procedures.

UTRAN should include the following information:

- 1> IE "Radio Link Addition Information": Downlink DPCH information and other optional parameters relevant for the radio links to be added along with the IE "Primary CPICH info" used for the reference ID to indicate which radio link to add. This IE is needed in cases a) and c) listed above;
- 1> IE "Downlink Secondary Cell Info FDD": Downlink optional parameters relevant to reception of secondary serving HS-DSCH cell;
- 1> IE "Radio Link Removal Information": IE "Primary CPICH info" used for the reference ID to indicate which radio link to remove. This IE is needed in cases b) and c) listed above;
- 1> IE "E-DCH reconfiguration information": IE "Primary CPICH info" used for the reference ID along with the IE "E-HICH information" to indicate which radio link to add to the E-DCH active set. This IE is needed in case d) above, when the RL added to the E-DCH active set is already in the DCH active set;

1> IE "E-DCH reconfiguration information": IE "Primary CPICH info" used for the reference ID along with the IE "E-HICH release indicator" to indicate which radio link to remove from the E-DCH active set. This IE is needed in case e) above, when the RL removed from the E-DCH active set remains in the DCH active set.

. . .

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following.

The UE may:

1> maintain a list of the set of cells to which the UE has Radio Links if the IE "Cell ID" is present.

The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information";
- 1> remove the RLs indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;

. . .

- 1> if "Serving HS-DSCH cell information" IE is present, act on received information elements as specified in subclause 8.6:
 - 2> if the IEs " Δ_{ACK} ", " Δ_{NACK} ", and "HARQ_preamble_mode" are present, act on the received information elements:
 - 2> if the new H-RNTI and "Primary CPICH info" are included:
 - 3> consider the cell indicated in Primary CPICH as serving HS-DSCH cell and no longer consider any other radio link as serving HS-DSCH cell. If the IE "Downlink Secondary Cell Info FDD" is included for a cell associated with the serving HS-DSCH cell, consider that cell a secondary serving HS-DSCH cell.
 - 2> if the IE "MAC-hs reset indicator" is included:
 - 3> reset the MAC-hs/ehs entity [15].
 - 2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25.

. . . .

If the IE "RB mapping info" is included, the UE shall:

•••

For FDD the list of multiplexing options configured in the UE for each RB and SRB should comply with the following rules otherwise the UE behaviour is not specified:

- ...

- at most one multiplexing option can contain the combination "DCH" or "DCH + HS-DSCH" for the DL together with "DCH" for the UL;
- at most one multiplexing option can contain the combination "HS-DSCH" or "DCH + HS-DSCH" for the DL together with "DCH" for the UL;

- .

. . .

- 1> if any of the IEs "DTX-DRX timing information" or "DTX-DRX information" are stored in the UE:
 - 2> determine the value for the DTX_DRX_STATUS variable and take the corresponding actions as described in subclause 8.5.34.

..

If the UE receives RRC CONNECTION SETUP, ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message:

1> the UE shall determine the value for the DTX_DRX_STATUS variable.

The variable DTX_DRX_STATUS shall be set to TRUE only when all the following conditions are met:

- 1> the UE is in CELL_DCH state;
- 1> both variables HS_DSCH RECEPTION and E_DCH_TRANSMISSION are set to TRUE;
- 1> no DCH transport channel is configured;
- 1> the variable DTX_DRX_PARAMS is set;
- 1> the UE has received the IE "DTX-DRX timing information".

If any of the above conditions is not met and the variable DTX_DRX_STATUS is set to TRUE, the UE shall:

- 1> set the variable DTX_DRX_STATUS to FALSE;
- 1> clear the variable DTX DRX PARAMS;
- 1> stop DTX-DRX mode related activities.

If variable DTX_DRX_STATUS is set to true and the serving HS-DSCH cell was changed as a result of the received message the UE shall instruct the physical layer to consider HS-SCCH orders were never received.

Whenever the variable DTX_DRX_STATUS is set to TRUE after receiving this message and the value of IE "DTX-DRX timing information" included in this message is not "Continue", the UE shall:

- 1> if the variable DTX_DRX_STATUS was set to TRUE before receiving this message:
 - 2> re-configure the physical layer to perform discontinuous uplink DPCCH transmission and enable discontinuous downlink reception operations according to the variable DTX_DRX_PARAMS at the CFN corresponding to the frame boundary that is offset by the value of the IE "Enabling Delay" from the frame boundary where uplink transmission starts with new configuration;
 - 2> let the MAC layer continue with the current restriction on E-DCH trans mission and monitoring of absolute and relative grant channels from the frame boundary where the uplink transmission starts with the new configuration and for the duration of the IE "Enabling Delay".
- 1> else:
 - 2> perform discontinuous uplink DPCCH transmission and enable discontinuous downlink reception operations by configuring the physical layer according to the variable DTX_DRX_PARAMS at the CFN corresponding to the frame boundary that is offset by the value of the IE "Enabling Delay" from the frame boundary where uplink transmission starts with new configuration.
- 1> configure the MAC layer to start restricting E-DCH trans missions and monitor absolute and relative grant channels at the CFN corresponding to the frame boundary that is offset by the value of IE "Enabling Delay" from the frame boundary where uplink transmission starts with new configuration taking into account the IEs "UE DTX DRX Offset", "MAC DTX Cycle", "MAC Inactivity Threshold" and "Inactivity Threshold for UE Grant Monitoring".

. .

If the IE "DTX-DRX timing information" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:

- 1> if the CHOICE "timing" is set to "New timing":
 - 2> use the newly received DTX-DRX timing configuration.

1> determine the value for the DTX_DRX_STATUS variable and take the corresponding actions as described in subclause 8.5.34.

. . .

If the IE "DTX-DRX information" is included and the UE will be in CELL_DCH state after completion of this procedure, the UE shall:

- 1> store the contents of the IE in the variable DTX DRX PARAMS;
- 1> determine the value for the DTX_DRX_STATUS variable and take the corresponding actions as described in subclause 8.5.34:
- 1> if the value of the IE "UE DTX cycle 2" is not an integer multiple of the value of the IE "UE DTX cycle 1"; or
- 1> if the value of the IE "UE DTX cycle 2" is not an integer multiple or a divisor of the value of the IE "CQI Feedback cycle, k"; or
- 1> if the value of the IE "UE DPCCH burst 1" is greater than the value of the IE "UE DTX cycle 1"; or
- 1> if the value of the IE "UE DPCCH burst 2" is greater than the value of the IE "UE DTX cycle 2"; or
- 1> if the IE "UE DTX long preamble length" is set to 4 or 15 slots and the value of the IE "Inactivity Threshold for UE DTX cycle 2" is less than 4 TTIs (for 10ms E-DCH TTI) or 8 TTIs (for 2ms E-DCH TTI); or
- 1> if the IE "UE DRX cycle" is not an integer multiple or a divisor of the value of the IE "UE DTX cycle 1"; or
- 1> if the IE "DRX Information" is included in this message while the IE "DTX information" is not included in this message; or
- 1> if the value of the IE "UE DTX cycle 1" is not an integer multiple or a divisor of the value of the IE "MAC DTX cycle":
 - 2> the UE behaviour is unspecified.

Reference

3GPP TS 25.331 clause 8.2.2.3, 8.3.4, 8.3.4.2, 8.3.4.3, 8.5.34, 8.6.4.8, 8.6.6.38, 8.6.6.39

8.3.4.22.3 Test purpose

To confirm that the UE performs HS-DSCH serving cell change from non DC-HSDPA capable cell to DC-HSDPA capable cell with discontinuous downlink reception and uplink transmission.

8.3.4.22.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 non DC-HSDPA cell, Cell 2/3 DC HSDPA cell(s) with cell 2 (Anchor Carrier) and cell 3 (Secondary Carrier)

UE: PS_DCCH+DTCH E-DCH/HS_DSCH (state 6-18) under the condition A25 as specified in clause 7.4 of TS 34.108. See specific message contents for Radio Bearer Setup message.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE category supports DC HSDPA
- UE supports DPCCH Discontinuous Transmission
- UE supports HS-DSCH DRX operation

Test Procedure

Table 8.3.4.22

Unit	Cell 1		Dual Cell (2 and 3)	
	T0	T1	T0	T1
	Mid Range Test		Mid Range Test	
	Frequency		Frequency (s	see Note 1)
dBm/3.84MHz	-60	-70	-70	-60
		T0 Mid Rang Freque	T0 T1 Mid Range Test Frequency	T0 T1 T0 Mid Range Test Mid Range Frequency Frequency Frequency

Note 1: For Secondary Carrier Cell 3 the UARFCN is a positive offset of 25 from the UARFCN of the test frequency of the Anchor Carrier Cell 2 which translates to 5MHz channel frequency spacing

Table 8.3.4.22 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Note that cell 2 and cell 3 are configured as DC HSDPA Cells with cell 2 as the Anchor Carrier and cell 3 as the Secondary Carrier cell.

The downlink transmission power is set according to values in column "T0" in table 8.3.4.22. The UE has user plane mapped on E-DCH/HS-DSCH and signalling radio bearers mapped on E-DCH/HS-DSCH in cell 1.

The SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.22. The UE transmits a MEASUREMENT REPORT message, which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity" set to 1a.

The SS trans mits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which adds a second radio link in cell 2, changes the E-DCH and HS-DSCH serving cell to cell 2, and includes Downlink Secondary Cell 3 parameters, discontinuous E-DCH trans mission and discontinuous HS-DSCH reception parameters. When the UE receives this message, the UE shall configure layer 1 to begin E-DCH transmission, discontinuous HS-DSCH reception, with UL DPCCH discontinuous transmission, using the new radio link on Anchor Carrier Cell 2 and Secondary Carrier Cell 3. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. SS checks that this RRC message is received on Anchor Carrier cell 2.

The SS waits to allow sufficient time for DTX cycle 2 to be active, and CQI DTX Timer to expire, and then verifies that the time between 11 consecutive CQI indications (received from the UE on cell 2 and cell 3) is 320ms if 2ms TTI is used, or 400ms if 10ms TTI is used.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	+	-		UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-18) according to clause 7.4.
2				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.22.
3	-2	>	MEASUREMENT REPORT	See specific message contents for this message (event '1a' for cell 2).
4	*		ACTIVE SET UPD ATE	SS transmits this message in cell 1 on downlink DCCH using AM RLC. The RRC message instructs the UE to add primary HSDPA Cell 2 to the active set and HSDPA cell 3 as the secondary cell And also perform a serving E-DCH and HSDSCH Cell change to the DC-HSDPA and start discontinuous EDCH transmission and discontinuous HSDSCH reception.
5	S	S		At the activation time DC-HSDPA is configured, Cell 2 becomes the serving E-DCH /HS-DSCH Cell and Cell 3 the secondary cell.
6	-	>	ACTIVE SET UPD ATE COMPLETE	The UE shall configure a new radio link for DC HSDPA cell and active HS-DSCH reception from Cells 2 and 3.
7				The SS waits to allow sufficient time for DTX cycle 2 to be active, and CQI DTX Timer to expire, and then verifies that the time between 11 consecutive CQI indications is 320ms if 2ms TTI is used, or 400ms if 10ms TTI is used (i.e. duration of 10 consecutive DTX cycle 2).

Specific Message Contents

RADIO BEARER SETUP (Initial Condition)

The message to be used in this test is same as condition A25, as specified in clause 7.4 of TS 34.108 except the following:

Information Element	Value/remark
Downlink secondary cell info FDD	NOT PRESENT

MEASUREMENT REPORT (Step 3)

Information Element	Value/remark
Message Type	
Integrity check info	
 Message authentication code RRC Message sequence number 	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I. This IE is checked to see if it is present. The value is used
	by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	Cell 1. See Note 1
- Cell Identity	Checked that this IE is absent
 Cell synchronisation information Primary CPICH info 	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
 Cell measured results 	Cell 2. See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results Event results	Checked that this IE is absent
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

NOTE 1: Cell measured results for cells 1 and 2 may appear in any order.

ACTIVE SET UPDATE (Step 4)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9.1, with the following exceptions:

Activation time Activation time Activation	Information Element	Value/remark	Version
New H-RNTI ON information elements CN information info Phy CH information info Phy CH information elements O-TX-DRX information O-TX-DRX information O-TX-DRX information O-TX-DRX information O-TX-DRX information O-TX-MIN information O-TX-MI			V G1 31011
New Primary E-RNT CN Information elements -ON Information elements -OTX-DRX timing information -CHOICE timing - New timing			
CN information elements -CN Information info Phy CH information elements -DTX-DRX iming information -CHOICE timing - Enabling Delay - UE DTX DRX Offiset - UE DTX DRX (offiset - UE DTX DRX (offiset) - UE DTX DRX (offiset) - UE DTX DRX (offiset) - UE DTX CRY (offiset) - UE DTX (of			
Phy CH information elements O-TX-DRX timing - Enabling Delay - UE DTX DRX Offset - DTX-DRX Information - CHOICE E-DCH TTI length - CHOICE E-DCH TTI length - CHOICE E-DCH TTI length - UE DTX cycle 1 - UE DTX cycle 1 - UE DTX cycle 2 - Inactivity Threshold for UE DTX cycle 2 - UE DTX long preamble length - MAC INTX cycle - Inactivity Threshold for UE DRX cycle - Inactivity Threshold for UE Grant Monitoring Radio link addition information - Primary CPICH usage for channel estimation - DPCH framer offset - Primary CPICH usage for channel estimation - DPCH framer offset - Code Number - Secondary CPICH info - DL Channelisation code - Spreading factor - Code Number - Scrambling code change - TPC Combination Index - E-HICH Information - E-RGCH Information - CHOICE E-DCH TTI length - Free chory of the wise o			
DTX-DRX timing information CHOICE timing • New timing • New timing • Chabling Delay • UE DTX DRX Offset DTX-DRX Information -DTX-Information -DTX-Information -DTX-Information -CHOICE E-DCH TTI length Unless stated otherwise 16 1 if 2ms TTI selected, otherwise 0 DTX-DRX Information -CHOICE E-DCH TTI length Unless stated otherwise 2ms TTI, or 10ms if the UE supports 2ms TTI, or 10ms if the UE decens not support 2ms TTI. UE DTX cycle 1 8i f2ms TTI selected, otherwise 20 8i f2ms TTI selected, otherwise 20 8i f2ms TTI selected, otherwise 20 8i f2ms TTI selected, otherwise 20 8i f2ms TTI selected, otherwise 8 21 f2ms TTI selected, otherwise 8 22 f2ms TTI selected, otherwise 8 23 f2ms TTI selected, otherwise 8 24 f2ms TTI selected, otherwise 8 25 f2ms TTI selected, otherwise 8 26 f2ms TTI selected, otherwise 8 27 f2ms TTI selected, otherwise 8 28 f2ms TTI selected, otherwise 8 29 f2ms TTI selected, otherwise 8 20 f2ms TTI selected, otherwise 8 20 f2ms TTI selected, otherwise 8 21 f2ms TTI selected, otherwise 8 21 f2ms TTI selected, otherwise 9 22 f2ms TTI selected, otherwise 10 23 f2ms TTI selected, otherwise 10 24 f2ms TTI selected, otherwise 10 25 f2ms TTI selected, otherwise 10 25 f2ms TTI selected, otherwise 10 25 f2ms	-CN Information info	Not Present	
- CHOICE stiming - New timing - Enabling Delay - UE DTX DRX Offset - DTX.Normation - DTX.Information - CHOICE E-DCH TTI length - UE DTX cycle 1 - UE DTX cycle 2 - UE DTX long preamble length - MAC DTX cycle - Inactivity Threshold for UE DTX cycle 2 - Inactivity Threshold for UE DTX cycle 2 - Inactivity Threshold for UE DTX cycle 2 - Inactivity Threshold for UE DTX cycle 2 - Inactivity Threshold for UE DTX cycle 2 - Inactivity Threshold for UE DTX cycle 2 - Inactivity Threshold for UE DTX cycle 2 - Inactivity Threshold for UE DTX cycle 3 - Inactivity Threshold for UE DT			
- New timing - Enabling Delay - UE DTX DRX Offset - DTX-DRX Information - CHOICE E-DCH TTI length - UE DTX cycle 1 - UE DTX cycle 2 - MAC DTX cycle 2 - MAC DTX cycle 2 - MAC DTX cycle 3 - MAC Inactivity Threshold for UE DTX cycle 2 - UE DTX long preamble length - COI DTX Timer - UE DPCCH burst 1 - UE DPCCH burst 2 - DRX Information - Primary CPICH info - Primary CPICH info - Du-channelisation code - Secondary crambling code - Spreading factor - Code Number - Code Number - Combination index - E-HICH Information - CHOICE E-BCCH Information - E-RGCH Information - CHOICE E-BCCH Information - Maxck - HARQ preamble_mode - Primary Scrambling Code - Downlink RHS-PDSCH Information - HS-SCCH Channelisation Code - Primary CPICH info - Primary Scrambling Code - Demminate Sequence - RG combination index - HARQ preamble_mode - Primary Scrambling Code - Downlink RHS-PDSCH Information - HS-SCCH Channelisation Code - Measurement Feedback Info			
- Enabling Delay - UE DTX DTX DTX Offset - DTX.NDTAX Information - CHOICE E-DCH TTI length - UE DTX cycle 1 - UE DTX cycle 2 - UE DTX cycle 2 - Inactivity Threshold for UE DTX cycle 2 - UE DPX Cycle process of the cycle of th	1		
- UE DTX DRX Offset - DTX-DRX Information - CHOICE E-DCH TTI length - UE DTX cycle 1 - UE DTX cycle 2 - MAC DTX cycle 2 - MAC DTX cycle 2 - MAC DTX cycle 2 - MAC DTX cycle 3 - UE DTX long preamble length - COI DTX Threshold for UE DTX cycle 2 - UE DTX long preamble length - COI DTX Threshold for UE DTX cycle 2 - UE DTX long preamble length - COI DTX Timer - UE DPCCH burst 1 - UE DPCCH burst 1 - UE DPCCH burst 1 - DRX Information - Primary CPICH lind - Primary Scrambling code - Downlink DPCH info roce and RL - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Secondary scrambl		0 if One - TTI - all after the marine - 40	
DTX.Information - CHOICE E-DCH TTI length - UE DTX cycle 1 - UE DTX cycle 2 - UE DTX cycle 2 - Inactivity Threshold for UE DTX cycle 2 - Inactivity Threshold for UE DTX cycle 2 - UE DTX long preamble length - MAC DTX tymer - UE DPCCH burst 1 - UE DPCCH burst 1 - UE DPCCH burst 2 - DPX Information - UE DPX cycle - Inactivity Threshold for UE DTX cycle 2 - UE DTX long preamble length - MAC Inactivity Threshold - UE DPCCH burst 1 - UE DPCCH burst 1 - UE DPCCH burst 1 - UE DPCCH burst 2 - DPX Information - UE DPX cycle - Inactivity Threshold for UE DTX cycle - Inactivity Threshold for UE Grant Monitoring Radio (ink addien) information - Primary CPICH lind - De Channelisation code - Dewnlink DPCH info - DL channelisation code - Secondary scrambling code - Spreading factor - Code Number - Code Number - Code Number - Combination index - E-HICH Information - Primary Scrambling code change - TPC Combination index - E-HICH Information - Channelisation code - Signature sequence - R G combination index - E-RGCH Information - E-RGCH Information - Primary Scramble_mode - Primary Scrambling Code - Dewnlink BPCH information - E-RGCH Information - Primary Scrambling code - Signature sequence - R G combination index - E-HCH C Brook Hold Information - Primary Scrambling Code - Primary Scrambling Code - Primary Scrambling Code - Primary Scrambling Code - Primary Scrambling Code - Downlink BPCH information - HS-SCCH Channelisation Code - Measurement Feedback Info			
- CHOICE E-DCH TTI length - LIE DTX cycle 1 - UE DTX cycle 2 - UE DTX long preamble length - MAC Inactivity Threshold for UE DTX cycle 2 - Inactivity Threshold for UE DTX cycle 2 - Inactivity Threshold for UE DTX cycle 2 - Inactivity Threshold for UE DTX cycle 2 - Inactivity Threshold for UE DTX cycle 3 - Inactivity Threshold for UE DTX cycle 4 - Inactivity Threshold for UE DTX cycle 5 - Inactivity Threshold for UE DTX cycle 6 - Inactivity Threshold for UE DTX cycle 8 - Inactivity Threshold for UE DTX cycle 9 - Inactivity Thres		1 II 21115 1 11 Selected, Otherwise 0	
- CHOICE E-DCH TTI length - UE DTX cycle 1 - UE DTX cycle 2 - MAC DTX cycle 2 - MAC DTX cycle 2 - MAC DTX cycle 2 - MAC DTX cycle 2 - MAC DTX cycle 3 - MAC Inactivity Threshold for UE DTX cycle 2 - UE DTX long preamble length - MAC lnactivity Threshold 1 - CQ IDTX Timer - UE DPCCH burst_1 - UE DPCCH burst_1 - UE DPCCH burst_2 - DRX Information - UE DRX cycle - Inactivity Threshold for UE DRX cycle - Inactivity Threshold for UE DRX cycle - Inactivity Threshold for UE DRX cycle - Inactivity Threshold for UE DRX cycle - Inactivity Threshold for UE DRX cycle - Inactivity Threshold for UE Grant Monitoring Radio link addition information - UE DRX cycle - Inactivity Threshold for UE DRX cycle - Inactivity Threshold for UE DRX cycle - Inactivity Threshold for UE Grant Monitoring Radio link addition information - Primary CPICH Info - Primary CPICH Info - Primary CPICH Info - Primary CPICH Info - DL channelisation code - Downlink DPCH info for each RL - Primary CPICH Info - DL channelisation code - Secondary CPICH Info - DL channelisation code - Scrambling code change - TPC Combination Index - E-HICH Information - Chancel Radio Information - Signature sequence - CHOICE E-RGCH Information - Signature sequence - CHOICE E-RGCH Information - Signature sequence - CHOICE E-RGCH Information - HS-SCCH Channelisation Code - Downlink B-PDSCH cell information - HS-SCCH Channelisation Code - Downlink B-PDSCH cell information - HS-SCCH Channelisation Code - Downlink B-PDSCH cell information - HS-SCCH Channelisation Code - HS-SCCH Channelisation Code - HS-SCCH Channelisation Code - HS-SCCH Channelisation Code - HS-SCCH Channelisation Code - Measurement Feedback Info			
- UE DTX cycle 1 - UE DTX cycle 2 - MAC DTX cycle 2 - MAC DTX cycle 2 - MAC DTX cycle 3 - Mac DTX cycle 4 - Mac DTX cycle 5 - Mac Inactivity Threshold for UE DTX cycle 2 - UE DTX long preamble length 4 - MAC lactivity Threshold 7 - MAC Inactivity Threshold 6 - MAC Inactivity Threshold 7 - MAC Inactivity Threshold 7 - UE DPCCH burst 1 - UE DPCCH burst 2 - DRX Information - UE DTX cycle 8 - Inactivity Threshold for UE DTX cycle 9 - Inactivity Threshold for UE DTX cycle 1 - Inactivity Threshold for UE DTX cycle 8 - Inactivity Threshold for UE Grant Monitoring Radio link addition information 9 - Primary CPICH Info 1 - Primary Scrambling code 1 - Downlink DPCH info for each RL 9 - Primary CPICH Info 1 - DL channelisation code 1 - Secondary scrambling code - Spreading factor 1 - Secondary scrambling code - Spreading factor 1 - Scrambling code chang - TPC Combination Index 1 - FIRCH Information - Channelisation code 2 - Signature sequence 1 - RG combination Index 2 - RAACK 1 - HARQ preamble mode 1 - Primary CPICH Info 1 - Primary Scrambling code - Downlink HS-PDSCH Info 1 - Primary Scrambling code - Downlink HS-PDSCH Info 1 - Primary Scrambling code - Downlink HS-PDSCH Info 1 - Primary Scrambling code - Downlink HS-PDSCH Info 1 - Primary Scrambling code - Downlink HS-PDSCH Info 1 - Primary Scrambling code - Primary Scrambling cod		Unless stated otherwise this should be set to	
UE DTX cycle 1 - UE DTX cycle 2 - MAC DTX cycle 2 - MAC DTX cycle 2 - Inactivity Threshold for UE DTX cycle 2 - UE DTX long preamble length - MAC Inactivity Threshold - CQI DTX Timer - UE DPCH burst_1 - UE DPCCH burst_1 - UE DPCCH burst_2 - DRX Information - Primary Scrambling code - Downlink DPCH Info - DL channelsation code - Secondary CPICH Info - DL channelsation code - Sreading factor - Code Number - Scrambling code change - TPC Combination index - CHOICE E-RGCH Information - ChOICE E-RGCH Information - Rig combination index - MACK - Auck - Mack - Macsuck - Downlink P-DSCH coll - Primary CPICH Info - Primary CPICH Information - Duchannelsation code - Secondary Scrambling code - Spreading factor - Code Number - Combination index - CHOICE E-RGCH Information - C-RG Combination index - Rignature sequence - Rignature sequence - Rignature sequence - CHOICE E-RGCH Information - HS-SCCH Channelisation Code - Downlink P-DSCH coll - Primary Scrambling code - Primary Scrambling code - Serving HS-DSCH cell information - HS-SCCH Channelisation Code	Official E Borr Fritings		
- UE DTX cycle 1 - UE DTX cycle 2 - MAC DTX cycle - MacN DTX cycle 1 - MacN DTX cycle 2 - UE DTX long preamble length 4 - MAC Inactivity Threshold for UE DTX cycle 2 - UE DTX long preamble length 4 - MAC Inactivity Threshold or UE DTX cycle 2 - UE DPCCH burst_1 1 - UE DPCCH burst_2 1 - DRX Information - UE DRX cycle - Inactivity Threshold for UE DRX cycle - Inactivity Threshold for UE Grant Monitoring Radio link addition information - Primary CPICH Info - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset			
- MAC DTX cycle - Inactivity Threshold for UE DTX cycle 2 - UE DTX long preamble length - MAC Inactivity Threshold - CQI DTX Timer - UE DPCCH burst_1 - UE DPCCH burst_2 - DRX Information - UE DRX cycle - Inactivity Threshold for UE DRX cycle - Inactivity Threshold for UE DRX cycle - Inactivity Threshold for UE Grant Monitoring Radio link addition information - Primary CPICH Info - Primary CPICH unid - Primary CPICH info - Decendary Scrambling code - Downlink DPCH info for each RL - Primary CPICH unid - DL channelisation code - Secondary Scrambling code - Secondary Scrambling code - Spreading factor - Code Number - Scrambling code change - TPC Combination index - E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - AACK - AAKCK - AAKCK - AAKCK - AAKCK - AMACK - Pimary Scrambling Code - Dis Scrambling Code - Dis Scrambling Code - Dis Scrambling Code - Primary Scrambling Code - Dis Scrambling Code - Dis Scrambling Code - Dis Scrambling Code - Dis Scrambling Code - Dis Scrambling Code - Dis Scrambling Code - HS-SCCH Channelisation Code - HS-SCCH Channelisation Code - Measurement Feedback Info - Macurement Feedback Info - Macureme			
Inactivity Threshold for UE DTX cycle 2 UE DTX long preamble length MAC Inactivity Threshold 1 if 2ms TTI selected, otherwise 8 32 2ms TTI selected, otherwise 8 32 2ms TTI selected, otherwise 8 32 2ms TTI selected, otherwise 8 32 2ms TTI selected, otherwise 8 32 32 32 32 32 32 32			
- UE DPCCH burst_1 - UE DPCCH burst_2 - UE DPCCH burst_2 - DRX Information - UE DRX cycle - Inactivity Threshold for UE DRX cycle - Inactivity Threshold for UE Grant Monitoring Radio link addition information - Primary CPICH Info - Primary Scrambling code - Downlink DPCH info for each RL - Primary CPICH and or object of the secondary CPICH info - DL channelisation code - Secondary Scrambling code - Scendary Scrambling code - Scondary CPICH info - DL channelisation code - Scrambling code change - TPC Combination Index - E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RSCH Information - FR Gombination index - E-HICH Information - CHANCK - ANACK - ANACK - ANACK - TIME SCCH Channelisation Code - Downlink HS-PDSCH Information - HS-SCCH Channelisation Code - Measurement Feedback Info - Mace IMP Scotch Channelisation Code - Measurement Feedback Info - ME If Z ms TTI selected, otherwise 8 32 1 f 2ms TTI selected, otherwise 10 32 32 if 2ms TTI selected, otherwise 10 32 if 2		· ·	
MAC Inactivity Threshold 1 if 2ms TTI selected, otherwise 8 2 2 1 UE DPCCH burst 2 1 1 UE DPCCH burst 2 1 1 1 2ms TTI selected, otherwise 8 3 2 2 3 2 2 3 2 3 2 3 3		32 if 2ms TTI selected, otherwise 8	
- COLIDTX Timer - UE DPCCH burst_1 - UE DPCCH burst_2 -DRX Information - UE DRX cycle - Inactivity Threshold for UE DRX cycle - Inactivity Threshold for UE Grant Monitoring Radio link addition information - Primary CPICH Info - Primary CPICH Info - Primary CPICH Info - Dech Irame offset - Secondary CPICH info - DL channelisation code - Secondary Scrambling Code - Secondary Scrambling Code - Secondary Scrambling Code - Secondary Scrambling Code -		4	
- UE DPCCH burst_2 -DRX Information - UE DRX cycle - Inactivity Threshold for UE GRX cycle - Inactivity Threshold for UE Grant Monitoring Radio link addition information - Primary CPICH Info - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info -DL channelisation code - Secondary Scrambling code - Spreading factor - Scending factor - Scambling code change - TPC Combination Index - E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - E-RGCH Information - L-RACK - AMACK - AMACK - AMACK - AMACK - TRACK - AMACK -			
- UE DPCCH burst 2 - DRX Information - UE DRX cycle - Inactivity Threshold for UE DRX cycle - Inactivity Threshold for UE Grant Monitoring Radio link addition information - Primary CPICH Info - Primary Scrambling code - Downlink DPCH Info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - December 2 - Secondary CPICH info - DL channelisation code - Secondary Scrambling code - Serandling code change - Serandling code change - TPC Combination Index - E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - Serving HS-DSCH cell information - Primary Scrambling code - DL Scrambling Code - DW Scrambling Code - DS Serandling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info Mont Present 1 1 - Serandling Code - DS Serandling Code - DS Serandling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info		32	
- UE DR X cycle - Inactivity Threshold for UE DRX cycle - Inactivity Threshold for UE Grant Monitoring Radio link addition information - Primary CPICH Info - Primary CPICH Info - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code - Spreading factor - Code Number - Scrambling code change - TPC Combination Index - E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - Sering HS-DSCH cell information - FRG Combination index - HARQ preamble mode - DL Scrambling Code - Downlink HS-PDSCH Information - Channelisation Code - Downlink HS-PDSCH Information - HS-SCCH Information - HS-SCCH Channelisation Code - Measurement Feedback Info - Masurement Feedback Info - Mintervals Radiotic Administration S2 (1 HS-SCCH) - Mintervals Radiotic Administration S2 (1 HS-SCCH) - Mintervals Radiotic Administration S2 (1 HS-SCCH) - Mintervals Radiotic Administration S2 (1 HS-SCCH) - Mintervals Radiotic Administration S2 (1 HS-SCCH) - Mintervals Radiotic Administration S2 (1 HS-SCCH) - Mintervals Radiotic Administration S2 (1 HS-SCCH) - Mintervals Radiotic Administration S2 (1 HS-SCCH) - Mintervals Radiotic Administration S2 (1 HS-SCCH) - Mintervals Radiotic Administration S2 (1 HS-SCCH) - Mintervals Radiotic Administration S2 (1 HS-SCCH) - Mintervals Radiotic Administration S2 (1 HS-SCCH) - Mintervals Radiotic Administration S2 (1 HS-SCCH) - Mintervals Radiotic Administration S2 (1 HS-SCCH) - Mintervals Radiot	<u> </u>	1	
- UE DRX cycle - Inactivity Threshold for UE DRX cycle - Inactivity Threshold for UE Grant Monitoring Radio link addition information - Primary CPICH Info - Primary Scrambling code - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Serandling code change - Scrambling code change - TPC Combination Index - E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - Signature Sequence - CHOICE F-RGCH Information - AANCK - AMACK - HARQ preamble _ mode - DL Scrambling Code - DS CSCH Info - CHOICE F-RGCH Information - HS-SCCH Channelisation Code - Index present - Scrambling code - HS-SCCH Channelisation Code - Measurement Feedback Info - Massurement Feedback Info - Massurement Feedback Info - Massurement Feedback Info			
- Inactivity Threshold for UE DRX cycle - Inactivity Threshold for UE Grant Monitoring Radio link addition information - Primary CPICH Info - Primary scrambling code - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Spreading factor - Code Number - Scrambling code change - TPC Combination Index - E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - Signature Sequence - RG combination index - E-RGCH Information - Signature Sequence - CHOICE E-RGCH Information - Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH Infommation - HS-SCCH Information - HS-SCCH Channelisation Code - Measurement Feedback Info Masurement Feedback Info		8 if 2ms TTI selected, otherwise 10	
- Inactivity Threshold for UE Grant Monitoring Radio link addition information - Primary CPICH Info - Primary scrambling code - Downlink DPCH into for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - Decomposed of Cell 2 - P-CPICH may be used Calculated value from Cell synchronisation information Not present - Secondary scrambling code - Secondary scrambling code - Secondary scrambling code - Serambling code change - Code Number - Code Number - Scrambling code change - TPC Combination Index - E-HICH Information - Channelisation code - E-RGCH Information - Signature sequence - CHOICE E-RGCH Information - Signature Sequence - CHOICE E-RGCH Information - Signature Sequence - CHOICE Info - Primary Scrambling Code - Downlink DPCHs allocated to the UE Not present - To S4.108 clause 6.10.2.4 "Typical radio parameter sets" - For each DPCH, assign the same code number in the current code given in cell 1. Not Present - Serving HS-DSCH cell information - Signature sequence - CHOICE E-RGCH Information - Signature Sequence - RG combination index - Serving HS-DSCH cell information - HS-SCCH Info - Primary Scrambling Code - DL Scrambling Code - DL Scrambling Code - DS Serving Scrambling Code - DS Serving Scrambling Code - DS Serving Scrambling Code - DS Scrambling Code - DS Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info			
- Primary CPICH Info - Primary scrambling code - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Spreading factor - Code Number - Code Number - Scrambling code change - TPC Combination Index - E-HICH Information - Channelisation code - RG combination index - E-RGCH Information - Signature sequence - CHOICE E-RGCH Information - Signature Sequence - Primary Scrambling Code - Primary Scrambling Code - Downlink MDPCHs allocated to the UE Not present - Not Present		32 if 2ms TTI selected, otherwise 8	
- Primary scrambling code - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Spreading factor - Spreading factor - Code Number - Code Number - Scrambling code change - TPC Combination Index - E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - Signature Sequence - Serving HS-DSCH cell information - Signature Sequence - CHOICE H-RGCH Information - CHANCK - MANCK - HARQ preamble mode - Downlink HS-PDSCH Information - HS-SCCH Channelisation Code - Measurement Feedback Info - Measurement Feedback Info - Measurement Feedback Info - Measurement Feedback Info - Measurement Feedback Info - Measurement Feedback Info - Measurement Feedback Info - Measurement Feedback Info			
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Spreading factor - Code Number - Code Number - Scrambling code change - TPC Combination Index - E-HICH Information - Channelisation code - Re Gombination index - E-RGCH Information - Signature sequence - RG combination index - Frace Serving HS-DSCH cell information - AACK - ANACK - HARQ_preamble_mode - Primary CPICH info - Primary Scrambling Code - Downlink MB-PDSCH Information - HS-SCCH Channelisation Code - Measurement Feedback Info			
Primary CPICH usage for channel estimation DPCH frame offset DPCH frame offset Secondary CPICH info DL channelisation code This IE is repeated for all existing downlink DPCHs allocated to the UE Not present Por each DPCH, assign the same code number in the current code given in cell 1. Not Present Scrambling code change TPC Combination Index E-HICH Information Channelisation code Signature sequence CHOICE E-RGCH Information Serving HS-DSCH cell information AACK ANACK ANACK HARQ_preamble_mode Downlink HS-PDSCH Information - FR-SCCH Channelisation Code DOSCH CHOICE mode DL Scrambling Code - Downlink HS-PDSCH Information - HS-SCCH Channelisation Code - Measurement Feedback Info		Primary scrambling code of Cell 2	
- DPCH frame offset - Secondary CPICH info -DL channelisation code - Secondary scrambling code - Secondary scrambling code - Spreading factor - Code Number - Code Number - Scrambling code change - TPC Combination Index - E-HICH Information - Channelisation code - Signature sequence - RG combination index - E-RGCH Information - Signature Sequence - RG combination index - AAKC - HARQ_preamble_mode - Primary Scrambling Code - Downlink HS-PDSCH Information - HS-SCCH Channelisation Code - Measurement Feedback Info - Measurement Feedback Info		D OBIOLI	
- Secondary CPICH info -DL channelisation code -DL channelisation code -Secondary scrambling code -Spreading factor -Code Number -Scrambling code change -TPC Combination Index -E-HICH Information -Channelisation code - Signature sequence - CHOICE E-RGCH Information - Signature Sequence - RG combination index - RG combination index - AACK - ANACK - HARQ_preamble_mode - Primary CPICH info - CHOICE mode - DL Scrambling Code - DL Scrambling Code - DL Scrambling Code - DL Scrambling Code - Not Present - CHOICE mode - DL Scrambling Code - DL Scrambling Code - Measurement Feedback Info - Measurement Feedback Info Information Not present Refer to TS 34.108 clause 6.10.2.4 "Typical radio parameter sets" For each DPCH, assign the same code number in the current code given in cell 1. Not Present 1 4 5 Crambling code (1) 4 5 Crambling code (1) 5 Crambling Code - Primary Scrambling Code (1) 5 Crambling Code - DL Scrambling Code - DL Scrambling Code - Measurement Feedback Info			
- Secondary CPICH info -DL channelisation code -DL channelisation code - Secondary scrambling code - Spreading factor - Code Number - Code Number - Scrambling code change - TPC Combination Index - E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - Signature Sequence - RG combination index - AACK - AACK - AACK - ANACK - HARQ_preamble_mode - Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH Information - HS-SCCH Information - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info	- DPCH frame offset		
-DL channélisation code - Secondary scrambling code -Spreading factor -Code Number -Code Number -Scrambling code change -TPC Combination Index -E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - Serving HS-DSCH cell info - Primary CPICH info - Primary CPICH info - CHOICE E-RGCH Information - HS-SCCH Channelisation Code - Du Scrambling Code - Du Scrambling Code - Du Scrambling Code - Du Scrambling Code - Measurement Feedback Info - Measurement Feedback Info	- Secondary CPICH info		
- Secondary scrambling code - Spreading factor - Code Number - Code Number - Scrambling code change - TPC Combination Index - E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RSCH Information - Signature Sequence - RG combination index - RG combination index - RG combination index - RG combination index - Not Present			
- Secondary scrambling code - Spreading factor - Code Number - Code Number - Scrambling code change - TPC Combination Index - E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - Signature Sequence - RG combination index Serving HS-DSCH cell information - ΔACK - ΔACK - ΔACK - CANACK - Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH Information - HS-SCCH Channelisation Code - DL Scrambling Code - DL Scrambling Code - Measurement Feedback Info			
-Code Number -Code Number -Code Number -Scrambling code change -TPC Combination Index -E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - F-RGCH Information - Signature sequence - RG combination index Serving HS-DSCH cell information - AACK - ANACK - ANACK - HARQ_preamble_mode - Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH Information - HS-SCCH Information - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info	- Secondary scrambling code		
-Code Number - Scrambling code change - TPC Combination Index - E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - E-RGCH Information - Signature Sequence - RG combination index Serving HS-DSCH cell infomation - \(\Delta_{AKC} \) - HARQ_preamble_mode - Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH Infomation - HS-SCCH Info - CHOICE mode - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info			
- Scrambling code change - TPC Combination Index - E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - E-RGCH Information - Signature Sequence - RG combination index Serving HS-DSCH cell infomation - Δ _{ACK} - Δ _{NACK} - Δ _{NACK} - HARQ_preamble_mode - Primary CPICH info - Primary Scrambling Code - DL Scrambling Code - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info			
- Scrambling code change - TPC Combination Index - E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - E-RGCH Information - Signature Sequence - RG combination index Serving HS-DSCH cell information - \(\Delta_{ACK} \) - \(\Delta_{ANACK} \) - HARQ_preamble_mode - Primary CPICH info - Primary Scrambling Code - Pownlink HS-PDSCH Information - HS-SCCH Info - CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info	-Code Number		
- TPC Combination Index - E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - E-RGCH Information - Signature Sequence - RG combination index Serving HS-DSCH cell information - Δ _{ACK} - Δ _{ACK} - Δ _{ACK} - Δ _{ACK} - HARQ_preamble_mode - Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH Information - HS-SCCH Info - CHOICE mode - DL Scrambling Code - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info		<u> </u>	
- E-HICH Information - Channelisation code - Signature sequence - CHOICE E-RGCH Information - E-RGCH Information - Signature Sequence - RG combination index Serving HS-DSCH cell information - \(\Delta \text{ACK} \) - \(\Delta \text{ACK} \) - \(\Delta \text{ACK} \) - HARQ_preamble_mode - Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH Infomation - HS-SCCH Info - CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info		Not Present	
- Channelisation code - Signature sequence - CHOICE E-RGCH Information - E-RGCH Information - Signature Sequence - RG combination index Serving HS-DSCH cell information - ∆ACK - ∆ACK - AACK - HARQ_preamble_mode - Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH Infomation - HS-SCCH Info - CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code - Measurement Feedback Info 4 1 1 1 1 1 1 1 1 1 1 1 1			
- Signature sequence - CHOICE E-RGCH Information - E-RGCH Information - Signature Sequence - RG combination index Serving HS-DSCH cell information - △ACK - △NACK - △NACK - HARQ_preamble_mode - Primary CPICH info - Primary Scrambling Code - Pownlink HS-PDSCH Information - HS-SCCH Info - CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info		4	
- CHÖICE E-RGCH Information - E-RGCH Information - Signature Sequence - RG combination index Serving HS-DSCH cell information - △ACK - △NACK - △NACK - HARQ_preamble_mode - Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH Infomation - HS-SCCH Info - CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info		1	
- E-RGCH Information - Signature Sequence - RG combination index Serving HS-DSCH cell information - \(\Delta_{ACK} \) - \(\Delta_{ACK} \) - HARQ_preamble_mode - Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH Information - HS-SCCH Info - CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info		<u> </u>	
- Signature Sequence - RG combination index Serving HS-DSCH cell information - Δ _{ACK} - Δ _{NACK} - HARQ_preamble_mode - Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH Infomation - HS-SCCH Info - CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info			
Serving HS-DSCH cell information - \(\Delta_{ACK} \) - \(\Delta_{NACK} \) - HARQ_preamble_mode - Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH Information - HS-SCCH Info - CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info	- Signature Sequence	0	
- AACK - ANACK - HARQ_preamble_mode - Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH Information - HS-SCCH Info - CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info		1	
- ANACK - HARQ_preamble_mode - Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH Information - HS-SCCH Info - CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info	· ·		
- HARQ_preamble_mode - Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH Information - HS-SCCH Info - CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info			
- Primary CPICH info - Primary Scrambling Code - Downlink HS-PDSCH Information - HS-SCCH Info - CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info			
- Primary Scrambling Code - Downlink HS-PDSCH Information - HS-SCCH Info - CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info		U	
- Downlink HS-PDSCH Information - HS-SCCH Info - CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info		Set to the primary scrambling code of coll 2	
- HS-SCCH Info - CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info		Joet to the primary sciambing code of cell 2	
- CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info			
- DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info		FDD	
- HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info			
- HS-SCCH Channelisation Code 7 - Measurement Feedback Info			
		7	
- CHOICE mode FDD			
	- CHOICE mode	FDD	

- Pohsdsch

6 dB

- Polisascii	0 UD	
- CQI Feedback cycle, k	4 ms	
- CQI repetition factor	1	
- Δ _{CQI}	5 (corresponds to 0dB in relative power offset)	
- CHOICE mode		
	FDD (no data)	
- Downlink 64QAM configured	Not Present	
- HS-DSCH TB size table	Octet Aligned	
- HARQ Info		
- Number of Processes	Reference to TS 34.108 clause 6.10.2.4.5	
	Parameter Set	
- CHOICE Memory Partitioning	Implicit	
- MAC-hs reset indicator	TRUE	
E-DCH reconfiguration information	THOE	
- E-DCH RL Info new serving cell		
- Primary CPICH info		
- Primary Scrambling Code	Set to the primary scrambling code of cell 2	
- E-AGCH Info		
- E-AGCH Channelisation Code	10	
- Serving Grant	Not Present	
- E-DPCCH/DPCCH power offset	Not Present	
- Reference E-TFCIs	2 E-TFCIs	
- Reference E-TFCI	11	
- Reference E-TFCI PO	4	
- Reference E-TFCI	83	
	16	
- Reference E-TFCI PO		
- Power Offset for Scheduling Info	Not Present	
- 3-Index-Step Threshold	Not Present	
- 2-Index-Step Threshold	Not Present	
- E-HICH Information		
- Channelisation Code	4	
- Signature Sequence	1	
- CHOICE E-RGCH Information		
- E-RGCH Information		
- Signature Sequence	0	
- RG combination index		
- E-DCH RL Info other cells	Not Present	
	Notificaciit	
Downlink secondary cell info FDD	Now configuration	
- CHOICE Configuration info	New configuration	
- New HRNTI	'1010 1010 1010 1010'	
- Downlink 64QAM configured	Not Present	
- HS-DSCH TB size table	Octet aligned	
- Primary CPICH info		
- Primary scrambling code	Set to the primary scrambling code of cell 3	
- DL Scrambling Code	Not Present. Mandatory default implies same	
	scrambling code as for the primary CPICH	
- HS-SCCH Channelisation Code Information	1 HS-SCCH code	
- HS-SCCH Channelisation Code	7	
- Measurement Power Offset	6 dB	
- UARFCN downlink (Nd)	Reference to clause 5.1 Test frequencies. Note	
- OAKI ON GOWIIIIIK (NG)	that for the secondary cell the UARFCN is a	
	positive offset of 25 from the UARFCN of the	
	test frequency of the primary cell which	
	equates to 5MHz channel spacing	
	equates to 5MHz channel spacing	

8.3.4.22.5 Test requirements

 $At step \ 3 \ SS \ shall \ receive \ a \ MEASUREMENT \ REPORT \ message \ on \ the \ uplink \ DCCH \ using \ AM \ RLC.$

At step 6 SS shall receive an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set addition procedure, the change of serving cell to DC HSDPA.

At step 7 SS should start receiving CQI report for Cell 2 and Cell 3 on HS-DPCCH from the UE and the time between 11 consecutive CQI indications (received from the UE on Cell 2 and Cell3) is 320ms if 2ms TTI is used, or 400ms if 10ms TTI is used.

8.3.4.23 Active set update in soft handover: Radio Link addition/deletion in multiple radio link environment with 3C-HSDPA or 4C-HSDPA remaining active

NOTE: The active set update soft handover test cases for 4C-HSDPA have been split in to Single band/nonMIMO, Single band/MIMO, Dual band/non-MIMO and Dual band/MIMO test cases. As soft handover for 4C-HSDPA is limited to adding and deleting radio links to the serving HS-DSCH cell then it has been not considered necessary to test the soft handover scenario for all of the supported 4C-HSDPA carrier combinations. Instead the test cases have been designed to cover 4C-HSDPA carrier combinations that will enable testing of all UEs supporting FDD HS-DSCH physical layer categories 29, 30, 31 or 32.

8.3.4.23.1 Active set update in soft handover: Radio Link addition/deletion in multiple radio link environment with 3C-HSDPA remaining active / Single band

8.3.4.23.1.1 Definition and applicability

All UEs which support FDD, 4C-HSDPA Single band operation with 3 carriers.

8.3.4.23.1.2 Conformance requirement

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following.

. . .

The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information" which are not yet contained in the UEs active set:
- 1> remove the RLs indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;
- 1> perform the physical layer synchronisation procedure B as specified in [29] for the radio links which are not yet contained in the UEs active set;

. . . .

- 1> if the radio link currently considered to be the serving HS-DSCH radio link is indicated in the IE "Radio Link Removal Information":
 - 2> no longer consider any radio link as the serving HS-DSCH radio link;
 - 2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25.
- 1> for each radio link in the IE "Radio Link Addition Information":
 - 2> take the actions related to TARGET_CELL_PRECONFIGURATION variable as described in subclause 8.5.52.

. . . .

- 1> transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the completion of the Physical Layer synchronisation B, as specified in TS 25.211;
- 1> the procedure ends on the UE side.

Reference

3GPP TS 25.331 subclause 8.3.4.3

8.3.4.23.1.3 Test purpose

To confirm that the UE operation remains intact when Single band 3C HSDPA is configured and UE performs a radio link addition/removal according to the received ACTIVE SET UPDATE message.

8.3.4.23.1.4 Method of test

Initial Condition

System Simulator: 4 cells Cell 1 (f1), Cell 2 (f1), Cell 4 (f2) and Cell 7 (f3) where f1, f2, and f3 are adjacent frequencies.

UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-18) under condition A36, as specified in clause 7.4 of TS 34.108 using Single band carrier combination with 3 carriers.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports Multi-Cell (UE HS-DSCH categories 29, 30, 31 or 32) and Single band carrier combination with 3 carriers

Test Procedure

Table 8.3.4.23.1.4-1

Parameter	Unit	Cell 1,4,7			Cell 2		
		T0	T1	T2	T0	T1	T2
UTRARF Channel Number		Mid Range Test Frequency		Mid Rang	ge Test Fred	quency	
CPICH Ec	dBm/3.84MHz	-60	-60	-60	-70	-60	-70

Table 8.3.4.23.1.4-1 illustrates the downlink power to be applied for the 4 cells at various time instants of the test execution.

At the start of the test, the UE is in CELL_DCH state and has a radio bearer mapped on serving HS-DSCH on Cell 1 and secondary HS-DSCH on Cell 4 and Cell 7.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.23.1.4-1. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID).

When the UE receives this message, the UE shall configure layer 1 without affecting the current uplink and downlink activities of existing radio links. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

SS checks that UE trans mits CQI reports on HS-DPCCH on Cell 1, Cell 4 and Cell 7 to verify that the uplink and downlink activities of existing radio links are intact,

SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.23.1.4-1. UE shall transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2. After the MEASUREMENT REPORT message is received, the SS remove the radio link from cell 2 and then SS transmits an ACTIVE SET UPDATE message, which includes IE "Radio Link Removal Information" and specifying the P-CPICH information of the cell to be removed.

When the UE receives this message, the UE RRC entity shall request UE L1 entity to terminate transmission and reception of the radio link from cell 2. Then the UE transmits an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

SS checks that UE trans mits CQI reports on HS-DPCCH on Cell 1, Cell 4 and Cell 7 to verify that the uplink and downlink activities of existing radio links are intact,

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction	on	Message	Comment
	UE	SS	1	
1	•			SS configures its downlink
				transmission power settings
				according to columns "T1" in table
				8.3.4.23.1.4-1
2	\rightarrow		MEASUREMENT REPORT	See specific message contents for
				this message (event '1a' for cell 2).
3	+		ACTIVE SET UPDATE	SS transmits this message in cell 1
				on downlink DCCH using AM RLC.
				The RRC message instructs the
			AOTIVE OF THE OUT OF THE	UE to add Cell 2 to the active set.
4	\rightarrow		ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio
				link to cell 2, without interfering
				with existing connections on the
				radio link in Cell 1, Cell 4 and Cell
5				7. SS checks that UE transmits CQI
5				
				reports on HS-DPCCH on Cell 1, Cell 4 and Cell 7. SS waits for 10
				CQI reports from the Anchor Cell
				11.
6				SS configures its downlink
				transmission power settings
				according to columns "T2" in table
				8.3.4.23.1.4-1
7	\rightarrow		MEASUREMENT REPORT	See specific message contents for
				this message (event '1b' for cell 1)
8	+		ACTIVE SET UPDATE	The SS transmits this message on
				downlink DCCH using AM RLC
				which includes IE "Radio Link
				Removal Information". Cell 2 will
				be removed from the Active Set.
9	\rightarrow		ACTIVE SET UPDATE COMPLETE	The UE shall remove the radio link
				associated with cell 2.
10				SS checks that UE transmits CQI
				reports on HS-DPCCH on Cell 1,
				Cell 4 and Cell 7. SS waits for 10
				CQI reports from the Anchor Cell
				1.

Specific Message Content

MEASUREMENT REPORT (Step 2)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C- SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
 Intra-frequency measurement event results 	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark	Version
Radio link addition information		
- Primary CPICH Info		
- Primary Scrambling Code	Refer to clause titled "Default settings for cell	
	No.2 (FDD)" in clause 6.1 of TS 34.108	
- Cell ID	Not present	Rel-4
- CHOICE DPCH info	Downlink DPCH info for each RL	
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	P-CPICH can be used.	
- DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- Secondary CPICH info	Not Present	
- DL channelisation code	This IE is repeated for all existing downlink	
	DPCHs allocated to the UE	
- Secondary scrambling code	1	
- Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical	
	radio parameter sets"	
- Code Number	For each DPCH, assign the same code	
	number in the current code given in cell 1.	
- Scrambling code change	Not Present	
- TPC Combination Index	0	
- Power offset Ptpc-dpdch	Not present	Rel-5
- Close loop timing adjustment mode	Not Present	
- E-HICH Information	Not present	Rel-6
- E-RGCH Information	Not present	Rel-6
- Target cell preconfiguration information	Not present	Rel-8

MEASUREMENT REPORT (Step 7)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information - Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- Intra-frequency measurement event results	
- Intra-frequency event identity	1b
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 8)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9.1, with the following exceptions:

Information Element	Value/remark
Radio link removal information	1 radio link to be removed
- Primary CPICH info	
- Primary scrambling code	Set to the same P-CPICH scrambling code assigned for
	cell 2

8.3.4.23.1.5 Test requirement

At step 2 SS shall receive a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At step 4 SS shall receive an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set update procedure adding Cell 2 to the active set.

At step 5 SS shall receive CQI report for Cell 1, Cell 4 and Cell 7 on HS-DPCCH.

At step 7 SS shall receive a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At step 9 SS shall receive an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of updated procedure removing Cell 2 from the active set.

At step 10 SS shall receive CQI report for Cell 1, Cell 4 and Cell 7 on HS-DPCCH.

8.3.4.23.2 Active set update in soft handover: Radio Link addition/deletion in multiple radio link environment with 3C-HSDPA remaining active / Single band / MIMO

8.3.4.23.2.1 Definition and applicability

All UEs which support FDD, 4C-HSDPA Single band operation with 3 carriers and MIMO.

8.3.4.23.2.2 Conformance requirement

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following.

. . .

The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information" which are not yet contained in the UEs active set;
- 1> remove the RLs indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;
- 1> perform the physical layer synchronisation procedure B as specified in [29] for the radio links which are not yet contained in the UEs active set;

. . . .

- 1> if the radio link currently considered to be the serving HS-DSCH radio link is indicated in the IE "Radio Link Removal Information":
 - 2> no longer consider any radio link as the serving HS-DSCH radio link;
 - 2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25.
- 1> for each radio link in the IE "Radio Link Addition Information":
 - 2> take the actions related to TARGET_CELL_PRECONFIGURATION variable as described in subclause 8.5.52.

. . .

- 1> transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the completion of the Physical Layer synchronisation B, as specified in TS 25.211;
- 1> the procedure ends on the UE side.

[....]

If the UE receives an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message:

- 1> if the IE "MIMO parameters" is not included:
 - 2> clear the MIMO_PARAMS variable;
 - 2> trigger lower layers to stop operation in MIMO mode.
- 1> otherwise:
 - 2> for FDD, if the IE "MIMO N_cqi_typeA/M_cqi ratio" is included:

- 3> store the value of the IE "MIMO N_cqi_typeA/M_cqi ratio" in the MIMO_PARAMS variable.
- 2> for FDD, if the IE "MIMO pilot configuration" is included:
 - 3> store the value of the IE "MIMO pilot configuration" in the MIMO_PA RAMS variable.
- 2> for 1.28 Mcps TDD, if the IE "MIMO SF Mode for HS-PDSCH dual stream" is included:
 - 3> store the value of the IE "MIMO SF Mode for HS-PDSCH dual stream" in the MIMO_PARAMS variable.
- 2> if the IE "MIMO operation" is set to "start":
 - 3> for FDD, if the IE "Precoding weight set restriction" is included:
 - 4> store the value of the IE "Precoding weight set restriction" in the MIMO_PARAMS variable. In addition, it shall be indicated to lower layers that precoding weight set restriction is configured.
 - 3> else:
 - 4> clear the value of the IE "Precoding weight set restriction" in the MIMO_PARAMS variable. In addition, it shall be indicated to lower layers that precoding weight set restriction is not configured.
- 2> else if the IE "MIMO operation" is set to "continue":
 - 3> if the IE "Precoding weight set restriction" is included:
 - 4> if the IE "Precoding weight set restriction" is already stored in the variable MIMO_PARAMS before receiving this message:
 - 5> continue using "Precoding weight set restriction" for MIMO operation.
 - 4> else:
 - 5> UE behaviour is undefined.
 - 3> else:
 - 4> if the IE "Precoding weight set restriction" is already stored in the variable MIMO_PARAMS before receiving this message:
 - 5> continue using "Precoding weight set restriction" for MIMO operation.
 - 4> else:
 - 5> continue MIMO operation without using "Precoding weight set restriction".

NOTE: This subclause applies to FDD and 1.28 Mcps TDD only.

[....]

If the UE receives an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message, the UE shall:

- 1> take actions related to the MIMO_PARAMS variable as specified in subclause 8.5.32;
- 1> determine the value of the MIMO_STATUS variable.

The MIMO STATUS variable shall be set to TRUE only when all the following conditions are met:

- 1> The UE is in CELL_DCH state;
- 1> the variable HS_DSCH_RECEPTION is set to TRUE;
- 1> for FDD, if the UE does not support MIMO only with single stream restriction, or if UE that signalled an HS-DSCH physical layer category of 17 or 18 supports MIMO only with single stream restriction but 64QAM is not configured for downlink, the variable MIMO_PARAMS contains a value for the IE "MIMO N_cqi_typeA/M_cqi ratio"; and

- 1> for FDD, the variable MIMO_PARAMS contains a value for the IE "MIMO pilot configuration".
- 1> for 1.28 Mcps TDD, the variable MIMO_PARAMS contains a value for the IE "MIMO SF Mode for HS-PDSCH dual stream".

If any of the above conditions is not met and the MIMO STATUS variable is set to TRUE, the UE shall:

- 1> set the MIMO STATUS variable to FALSE;
- 1> clear the MIMO_PARAMS variable;
- 1> trigger lower layers to stop operation in MIMO mode on the serving HS-DSCH cell.

If the MIMO_STATUS variable is set to FALSE:

- 1> if prior to receiving an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message, the MIMO_STATUS variable was set to TRUE:
 - 2> if the IE "HARQ info" is not included in the received message:
 - 3> the UE behaviour is unspecified.

If the MIMO_STATUS variable is set to TRUE:

- 1> if prior to receiving an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message, the MIMO STATUS variable was set to FALSE:
 - 2> if the IE "HARQ info" is not included in the received message:
 - 3> the UE behaviour is unspecified.

NOTE: This subclause applies to FDD and 1.28 Mcps TDD only.

[....]

If the UE receives an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message which includes the IE "Do wnlink secondary cell info FDD" for any of the secondary serving HS-DSCH cells, the UE shall:

- 1> if the IE "Secondary cell MIMO parameters" is not included in the IE "Downlink secondary cell info FDD":
 - 2> clear the corresponding entry in the SECONDARY_CELL_MIMO_PARAMS variable;
- 1> if the CHOICE "Configuration Info" in the IE "Secondary cell MIMO parameters" has the value "Continue":
 - 2> continue using the stored parameters in the corresponding entry in the SECONDARY_CELL_MIMO_PARAMS variable;
- 1> otherwise:
 - 2> if the IE "MIMO N_cqi_typeA/M_cqi ratio" is included:
 - 3> store the value of the IE "MIMO N_cqi_typeA/M_cqi ratio" in the corresponding entry in the SECONDARY_CELL_MIMO_PARAMS variable.
 - 2> if the IE "MIMO pilot configuration" is included:
 - 3> store the value of the IE "MIMO pilot configuration" in the corresponding entry in the SECONDARY_CELL_MIMO_PARAMS variable.
 - 2> if the IE "Precoding weight set restriction" is included in the IE "Secondary cell MIMO parameters":
 - 3> store the value of the IE "Precoding weight set restriction" in the corresponding entry in the SECONDARY_CELL_MIMO_PARAMS variable;
 - 2> else if the IE "Precoding weight set restriction" is not included in the IE "Secondary cell MIMO parameters":
 - 3> if the IE "MIMO operation" is included in the IE "MIMO parameters" and it is set to "start":

- 4> if the IE "Precoding weight set restriction" is included in the IE "MIMO parameters":
 - 5> store the value of the IE "Precoding weight set restriction" in the corresponding entry in the SECONDARY_CELL_MIMO_PARAMS variable;
- 4> else if the IE "Precoding weight set restriction" is not included in the IE "MIMO parameters":
 - 5> clear the value of the IE "Precoding weight set restriction" in the corresponding entry in the SECONDARY_CELL_MIMO_PARAMS variable;
- 3> else if the IE "MIMO operation" is included in the IE "MIMO parameters" and it is set to "continue" and if the IE "Precoding weight set restriction "is present in the variable MIMO_PARAMS:
 - 4> copy the value of the IE "Precoding weight set restriction" in the variable MIMO_PARAMS and store it in the IE "Precoding weight set restriction" in the corresponding entry in the SECONDARY_CELL_MIMO_PARAMS variable;
- 3> else:
 - 4> clear the value of the IE "Precoding weight set restriction" in the corresponding entry in the SECONDARY_CELL_MIMO_PARAMS variable.
- 2> RRC shall indicate to lower layers whether precoding weight set restriction is configured based on the value of the IE "Precoding weight set restriction" in the variable SECONDARY_CELL_MIMO_PARAMS.
- 1> determine the value of the SECONDARY_CELL_MIMO_STATUS variable for the corresponding secondary serving HS-DSCH cell.

The SECONDARY_CELL_MIMO_STATUS variable shall be set to TRUE for a secondary serving HS-DSCH cell only when all the following conditions are met:

- 1> The UE is in CELL_DCH state;
- 1> the variable SECONDARY_CELL_HS_DSCH_RECEPTION is set to TRUE for that secondary serving HS-DSCH cell;
- 1> if the UE does not support MIMO only with single stream restriction, the corresponding entry in the variable SECONDARY_CELL_MIMO_PARAMS contains a value for the IE "MIMO N_cqi_typeA/M_cqi ratio"; and
- 1> the corresponding entry in the variable SECONDARY_CELL_MIMO_PARAMS contains a value for the IE "MIMO pilot configuration".

If any of the above conditions is not met and the SECONDARY_CELL_MIMO_STATUS variable is set to TRUE for that secondary serving HS-DSCH cell, the UE shall:

- 1> set the entry in the SECONDARY_CELL_MIMO_STATUS variable corresponding to that secondary serving HS-DSCH cell to FALSE;
- 1> clear the entry in the SECONDARY_CELL_MIMO_PARAMS variable corresponding to that secondary serving HS-DSCH cell;
- 1> trigger lower layers to stop MIMO operation on that secondary serving HS-DSCH cell.

Whenever the entry in the variable SECONDARY_CELL_HS_DSCH_RECEPTION is set to TRUE for a secondary serving HS-DSCH cell, the UE shall:

- 1> if the UE supports MIMO only with single stream restriction (FDD only):
 - 2> indicate to lower layers to start operation in MIMO mode restricted to single stream transmission on that secondary serving HS-DSCH cell, using the parameter values stored in the corresponding entry in the variable SECONDARY_CELL_MIMO_PARAMS.
- 1> else:
 - 2> indicate to lower layers to start operation in MIMO mode on that secondary serving HS-DSCH cell, using the parameter values stored in the corresponding entry in the variable SECONDARY_CELL_MIMO_PARAMS.

1> for FDD, when MIMO only with single stream restriction is configured:

2> if MAC-ehs is not configured:

3> the UE behaviour is undefined.

NOTE: This subclause applies to FDD only.

Reference

3GPP TS 25.331 subclause 8.3.4.3, 8.5.32, 8.5.33, 8.5.57

8.3.4.23.2.3 Test purpose

To confirm that the UE operation remains intact when Single band 3C HSDPA with MIMO is configured and UE performs a radio link addition/removal according to the received ACTIVE SET UPDATE message.

8.3.4.23.2.4 Method of test

Initial Condition

System Simulator: 4 cells Cell 1 (f1), Cell 2 (f1), Cell 4 (f2) and Cell 7 (f3) where f1, f2, and f3 are adjacent frequencies.

UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-18) under condition A34, as specified in clause 7.4 of TS 34.108 using Single band carrier combination with 3 carriers.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports Multi-Cell with MIMO (UE HS-DSCH categories 30 or 32)

Test Procedure

Table 8.3.4.23.2.4-1

T1 T2 Test Frequency	T0	T1	T2
est Frequency	Mid Door		
est i requericy	IVIIU Kang	ge Test Fre	quency
-60 -60	-70	-60	-70
	-60 -60	-60 -60 -70	-60 -60 -70 -60

Table 8.3.4.23.2.4-1 illustrates the downlink power to be applied for the 4 cells at various time instants of the test execution.

At the start of the test, the UE is in CELL_DCH state and has a radio bearer mapped on serving HS-DSCH on Cell 1 and secondary HS-DSCH on Cell 4 and Cell 7.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.23.2.4-1. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to 'la' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" (e.g. Do wnlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID).

When the UE receives this message, the UE shall configure layer 1 without affecting the current uplink and downlink activities of existing radio links. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

SS checks that UE transmits composite CQI/PCI reports on each stream for Cell 1, Cell 4 and Cell 7 to verify that the uplink and downlink activities of existing radio links are intact,

SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.23.2.4-1. UE shall transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2. After the MEASUREMENT REPORT message is received, the SS remove the radio link from cell 2 and then SS transmits an ACTIVE SET UPDATE message, which includes IE "Radio Link Removal Information" and specifying the P-CPICH information of the cell to be removed.

When the UE receives this message, the UE RRC entity shall request UE L1 entity to terminate transmission and reception of the radio link from cell 2. Then the UE transmits an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

SS checks that UE transmits composite CQI/PCI reports on each stream for Cell 1, Cell 4 and Cell 7 to verify that the uplink and downlink activities of existing radio links are intact,

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direc	tion	Message	Comment
	UE	SS		
1				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.23.2.4-1
2)		MEASUREMENT REPORT	See specific message contents for this message (event '1a' for cell 2).
3	(-	ACTIVE SET UPD ATE	SS transmits this message in cell 1 on downlink DCCH using AM RLC. The RRC message instructs the UE to add Cell 2 to the active set.
4)	•	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link to cell 2, without interfering with existing connections on the radio link in Cell 1, Cell 4 and Cell 7.
5				SS starts monitoring CQI reports on HS-DPCCH received from the UE on the Anchor Cell 1 and the Secondary cells Cell 4 and Cell 7. SS waits for 10 CQI reports from the Anchor Cell 1.
6				SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.23.2.4-1
7)	>	MEASUREMENT REPORT	See specific message contents for this message (event '1b' for cell 1)
8	+	-	ACTIVE SET UPDATE	The SS transmits this message on downlink DCCH using AM RLC which includes IE "Radio Link Removal Information". Cell 2 will be removed from the Active Set.
9)	•	ACTIVE SET UPD ATE COMPLETE	The UE shall remove the radio link associated with cell 2.
10				SS starts monitoring CQI reports on HS-DPCCH received from the UE on the Anchor Cell 1 and the Secondary cells Cell 4 and Cell 7. SS waits for 10 CQI reports from the Anchor Cell 1.

Specific Message Content

MEASUREMENT REPORT (Step 2)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results Event results	Checked that this IE is absent
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark	Version
Radio link addition information		
- Primary CPICH Info		
- Primary Scrambling Code	Refer to clause titled "Default settings for cell	
	No.2 (FDD)" in clause 6.1 of TS 34.108	
- Cell ID	Not present	Rel-4
- CHOICE DPCH info	Downlink DPCH info for each RL	
- CHOICE mode	FDD	
 Primary CPICH usage for channel estimation 	P-CPICH can be used.	
- DPCH frame offset	Calculated value from Cell synchronisation	
	information	
- Secondary CPICH info	Not Present	
- DL channelisation code	This IE is repeated for all existing downlink	
	DPCHs allocated to the UE	

- Secondary scrambling code	1	
- Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical	
	radio parameter sets"	
- Code Number	For each DPCH, assign the same code	
	number in the current code given in cell 1.	
- Scrambling code change	Not Present	
- TPC Combination Index	0	
- Power offset Ртрс-дрдсн	Not present	Rel-5
- Close loop timing adjustment mode	Not Present	
- E-HICH Information	Not present	Rel-6
- E-RGCH Information	Not present	Rel-6
- Target cell preconfiguration information	Not present	Rel-8

MEASUREMENT REPORT (Step 7)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)"
	in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- Intra-frequency measurement event results	
- Intra-frequency event identity	1b
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 8)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9.1, with the following exceptions:

Information Element	Value/remark
Radio link removal information	1 radio link to be removed
- Primary CPICH info	
- Primary scrambling code	Set to the same P-CPICH scrambling code assigned for
-	cell 2

8.3.4.23.2.5 Test requirement

At step 2 SS shall receive a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At step 4 SS shall receive an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set update procedure adding Cell 2 to the active set.

At step 5 SS shall receive composite CQI/PCI reports for Cell 1, Cell 4 and Cell 7 on HS-DPCCH.

At step 7 SS shall receive a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

At step 9 SS shall receive an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of updated procedure removing Cell 2 from the active set.

At step 10 SS shall receive composite CQI/PCI reports for Cell 1, Cell 4 and Cell 7 on HS-DPCCH.

8.3.4.23.3 Active set update in soft handover: Radio Link addition/deletion in multiple radio link environment with 3C-HSDPA remaining active / Dual band

8.3.4.23.3.1 Definition and applicability

All UEs which support FDD, 4C-HSDPA Dual band operation and carrier combination (1,2) or (2,1).

8.3.4.23.3.2 Conformance requirement

Same as subclause 8.3.4.23.1.2.

8.3.4.23.3.3 Test purpose

To confirm that the UE operation remains intact when Dual band 3C HSDPA is configured and UE performs a radio link addition/removal according to the received ACTIVE SET UPDATE message.

8.3.4.23.3.4 Method of test

Initial Condition

System Simulator: 4 cells Cell 1 (f1), Cell 2 (f1), Cell 4 (f2) and Cell 7 (f3). For Dual band carrier combination (1,2) case then f2 and f3 are adjacent frequencies on band B. For Dual band carrier combination (2,1) case then f2 is adjacent frequency to f1 on the band A.

NOTE: Band A and band B refer to valid bands for Dual band combinations according to TS 25.101 Table 5.0a C under test.

UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-18) under condition A36, as specified in clause 7.4 of TS 34.108 using the Dual band carrier combination (1,2) if supported by the UE else Dual band carrier combination (2,1).

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports Multi-Cell (UE HS-DSCH categories 29, 30, 31 or 32) and Dual band carrier combination (1,2) or (2,1).

Test Procedure

Same as the test procedure in subclause 8.3.4.23.1.4.

8.3.4.23.3.5 Test requirement

Same as subclause 8.3.4.23.1.5.

8.3.4.23.4 Active set update in soft handover: Radio Link addition/deletion in multiple radio link environment with 3C-HSDPA remaining active / Dual band / MIMO

8.3.4.23.4.1 Definition and applicability

All UEs which support FDD, 4C-HSDPA Dual band operation, carrier combinations (1,2) or (2,1) and MIMO.

8.3.4.23.4.2 Conformance requirement

Same as subclause 8.3.4.23.2.2.

8.3.4.23.4.3 Test purpose

To confirm that the UE operation remains intact when Single band 3C HSDPA with MIMO is configured and UE performs a radio link addition/removal according to the received ACTIVE SET UPDATE message.

8.3.4.23.4.4 Method of test

Initial Condition

System Simulator: 4 cells Cell 1 (f1), Cell 2 (f1), Cell 4 (f2) and Cell 7 (f3). For Dual band carrier combination (1,2) case then f2 and f3 are adjacent frequencies on band B. For Dual band carrier combination (2,1) case then f2 is adjacent frequency to f1 on the band A.

NOTE: Band A and band B refer to valid bands for Dual band combinations according to TS 25.101 Table 5.0a C under test.

UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-18) under condition A34, as specified in clause 7.4 of TS 34.108 using the Dual band carrier combination (1,2) if supported by the UE else Dual band carrier combination (2,1).

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports Multi-Cell with MIMO (UE HS-DSCH categories 30 or 32) and Dual band carrier combination (1,2) or (2,1)

Test Procedure

Same as the test procedure in subclause 8.3.4.23.2.4.

8.3.4.23.4.5 Test requirement

Same as subclause 8.3.4.23.2.5.

8.3.5 Hard Handover

[Editor's note: This test is included in the "Physical channel reconfiguration", "Radio bearer establishment", "Radio bearer reconfiguration", "Radio bearer release" and "Transport channel reconfiguration".]

8.3.6 Inter-system hard handover from GSM to UTRAN

The content of this clause has been moved to 3GPP TS 51.010-1, clause 60.

8.3.7 Inter-system hard handover from UTRAN to GSM

Clauses 8.3.7 contains test procedures to be used for executing Inter-system Handover from UTRAN to GSM tests. Table 8.3.7-1 contains a summary of the different combinations of parameters being tested, together with a reference to the appropriate generic test procedure. If a test uses a parameter which the UE under test does not support, the test shall be skipped. Test cases in this clause are applicable only to the UE supporting both UTRAN and GSM. The test TEST USIM shall support service 27 to carry out these test cases.

Table 8.3.7-1

From	То	State of call	Ref.	Exec	Remark
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB +	GSM AMR	U10	8.3.7.1	1	call active state
uplink:3.4 DL3.4 kbps SRBS) UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB +	GSM EFR	U10	8.3.7.1	2	call active state
uplink:3.4 DL3.4 kbps SRBS) UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB +	GSM FR	U10	8.3.7.1	3	call active state
uplink:3.4 DL3.4 kbps SRBS) UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB	GSM HR	U10	8.3.7.1	4	call active state
uplink:3.4 DL3.4 kbps SRBS) UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM AMR	U10	8.3.7.1a	1	call active state; A5/3 applied in GSM
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM EFR	U10	8.3.7.1a	2	call active state; A5/3 applied in GSM
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB +	GSM FR	U10	8.3.7.1a	3	call active state; A5/3 applied in GSM
uplink:3.4 DL3.4 kbps SRBS) UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM HR	U10	8.3.7.1a	4	call active state; A5/3 applied in GSM
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM AMR	U10	8.3.7.1b	1	call active state; UEA2/UIA2 applied in UTRAN, A5/3 in GSM
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM EFR	U10	8.3.7.1b	2	call active state; UEA2/UIA2 applied in UTRAN, A5/3 in GSM
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM FR	U10	8.3.7.1b	3	call active state; UEA2/UIA2 applied in UTRAN, A5/3 in GSM
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM HR	U10	8.3.7.1b	4	call active state; UEA2/UIA2 applied in UTRAN, A5/3 in GSM

From	То	State	Ref.	Exec	Remark
		of call	clause	counter	
UTRAN (Streaming/unknown/ uplink:14.4 DL:14.4 kbps/CS RAB +	GSM 14.4 kbps CS data	U10	8.3.7.2	1	Same data rate
uplink:3.4 DL:3.4 kbps SRBS) UTRAN (Streaming/unknown/	GSM 14.4 kbps HSCSD	U10	8.3.7.2a	1	Same data rate
uplink:14.4 DL:14.4 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBS) UTRAN	GSM	U10	8.3.7.2a	2	Same data
(Streaming/unknown/ uplink:28.8 DL:28.8 kbps/CS RAB +	28.8 kbps CS data				rate
uplink:3.4 DL:3.4 kbps SRBS) UTRAN	GSM	U10	8.3.7.2a	3	Same data
(Streaming/unknown/ uplink:57.6 DL:57.6 kbps/CS RAB +	57.6 kbps CS data	010	0.5.7 .Za		rate
uplink:3.4 DL:3.4 kbps SRBS)	COM	1140	0.07.0	4	Data sata
UTRAN (Streaming/unknown/ uplink:28.8 DL:28.8 kbps/CS RAB +	GSM 14.4 kbps CS data	U10	8.3.7.3	1	Data rate down grading
uplink:3.4 DL:3.4 kbps SRBS)	0014	1140	0.070		
UTRAN (Streaming/unknown/ uplink:57.6 DL:57.6 kbps/CS RAB +	GSM 14.4 kbps CS data	U10	8.3.7.3	2	Data rate down grading
uplink:3.4 DL:3.4 kbps SRBS) UTRAN	GSM	U10	8.3.7.3a	4	Data rate
(Streaming/unknown/ uplink:28.8 DL:28.8 kbps/CS RAB +	14.4 kbps HSCSD	010	6.3.7.3a	1	down grading
uplink:3.4 DL:3.4 kbps SRBS) UTRAN	GSM	U10	8.3.7.3a	2	Data rate
(Streaming/unknown/ uplink:57.6 DL:57.6 kbps/CS RAB +	14.4 kbps HSCSD	010	6.3.7.3a	2	down grading
uplink:3.4 DL:3.4 kbps SRBS)	COM	1140	0.07.0-	0	Data sata
UTRAN (Streaming/unknown/ uplink:57.6 DL:57.6 kbps/CS RAB +	GSM 28.8 kbps HSCSD or E- TCH/F28.8	U10	8.3.7.3a	3	Data rate down grading
uplink:3.4 DL:3.4 kbps SRBS) UTRAN AMR	GSM FR	U1	8.3.7.4	1	During call
(conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB +	GSWIFK		0.3.7.4		During call establishment
uplink:3.4 DL3.4 kbps SRBS) UTRAN AMR	GSM FR	U10	8.3.7.5	1	failure case
(conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB +					
uplink:3.4 DL3.4 kbps SRBS)	001450	1140	0.0 = 5	1	
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB +	GSM FR	U10	8.3.7.6	1	failure case
uplink:3.4 DL3.4 kbps SRBS)	COMED	1140	0.077		failure
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB +	GSM FR	U10	8.3.7.7	1	failure case
uplink:3.4 DL3.4 kbps SRBS)					

From	То	State	Ref.	Exec	Remark
Trom		of call	clause	counter	Kemark
UTRAN AMR	GSM FR	U10	8.3.7.8	1	failure case
(conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB	COMTI	010	0.5.7.0		landre dase
uplink:3.4 DL3.4 kbps SRBS)					
UTRAN AMR	GSM FR	U10	8.3.7.9	1	failure case
(conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB +					
uplink:3.4 DL3.4 kbps SRBS)					
UTRAN AMR	GSM FR	U10	8.3.7.10	1	failure case
(conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB +					
uplink:3.4 DL3.4 kbps SRBS)					
UTRAN AMR	GSM FR	U10	8.3.7.11	1	failure case
(conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)					
UTRAN AMR	GSM FR	U10	8.3.7.12	1	failure case
(conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB +	GOWIFK	010	0.3.7.12	'	laliule case
uplink:3.4 DL3.4 kbps SRBS)					
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB +	GSM FR	U1	8.3.7.13	1	call under establishment
uplink:3.4 DL3.4 kbps SRBS)					
UTRAN AMR	GSM AMR	U10	8.3.7.14	1	Call active
(conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + interactive/ background UL: 32kbps, DL :(max bit rate depending on UE category) PS RAB + uplink:3.4 DL3.4 kbps SRBs)					state
UTRAN AMR	GSM AMR	U10	8.3.7.15	1	Failure case
(conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + interactive/ background UL: 32kbps, DL :(max bit rate depending on UE category) PS RAB + uplink:3.4 DL3.4 kbps SRBs)					
UTRAN AMR (conversational/speech/	GSM FR	U10	8.3.7.16	1	Call active
uplink:12.2 DL:12.2 kbps/CS RAB + interactive/ background UL: 64kbps, DL:64kbps PS RAB + uplink:3.4 DL3.4 kbps SRBs)					state
UTRAN AMR	DTM	U10	8.3.7.17	1	Call active
(conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + interactive/ background UL: 64kbps, DL:64kbps PS RAB + uplink:3.4 DL3.4 kbps SRBs)	J IIVI	0.10	0.3.7.17		state

8.3.7.1 Inter system handover from UTRAN/To GSM/Speech/Success

8.3.7.1.1 Definition

8.3.7.1.2 Conformance requirement

The UE shall be able to receive a HANDOVER FROM UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target cell.

The UE shall:

1> establish the connection to the target radio access technology, by using the contents of the IE "Inter-RAT message". This IE contains a message specified in another standard, as indicated by the IE "System type", and carries information about the candidate/ target cell identifier(s) and radio parameters relevant for the target radio access technology. The correspondence between the value of the IE "System type", the standard to apply and the message contained within IE "Inter RAT message" is shown in the following:

Value of the IE "System type"	Standard to apply	Inter RAT Message
GSM	GSM TS 04.18, version 8.5.0 or later	HANDOVER COMMAND
	TIA/EIA/IS-2000 or later, TIA/EIA/IS-833 or later, TIA/EIQ/IS-834 or later	

- 1> if the IE "System type" has the value "GSM":
 - 2> if the IE "Frequency band" has the value "GSM /DCS 1800 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1800 band".
 - 2> if the IE "Frequency band" has the value " GSM /PCS 1900 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1900 band".
- 1> apply the "Inter RAT Message" according to the "standard to apply" in the table above.
- 1> if the IE "RAB information List" is included in the HANDOVER FROM UTRAN COMMAND message:
 - 2> if the IE "RAB information List" includes one IE "RAB Info" with the IE "CN domain Identity" set to "CS domain":
 - 3> connect upper layer entities corresponding to the indicated CS domain RAB to the radio resources indicated in the inter-RAT message.
- NOTE: In this version of the specification the maximum number of CS domain RABs which may be included in the IE "RAB information List" is limited to 1.
- NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification.

Upon successfully completing the handover, the UE shall:

- 1> if there are any NAS messages with the IE "CN domain identity" set to "CS domain" for which the successful delivery of the INITIAL DIRECT TRANSFER message or UPLINK DIRECT TRANSFER message on signalling radio bearer RB3 or signalling radio bearer RB4 that have not yet been confirmed by RLC:
 - 2> retransmit those NAS messages to the network on the newly established radio connection to the target radio access technology.
- 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.
- NOTE: The release of the UMTS radio resources is initiated from the target RAT.

Reference(s)

TS 25.331 clause 8.3.7.3, 8.3.7.4.

8.3.7.1.3 Test purpose

To test that the UE supporting both GSM and UTRAN hands over from a UTRAN serving cell to the indicated channel of GSM target cell when the UE is in the speech call active state and receives an HANDOVER FROM UTRAN COMMAND.

8.3.7.1.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 9 is GSM. GSM 51.010 clause 40 shall be referenced for the default parameters, and clause 26.6.5.1 shall be referenced for cell allocation of cell 9.

Parameter	Unit	Cell 9 (GSM)
Qsearch_I (TDD)	dBm	15 (never)

UE: Idle state (state 2 or state 7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Related ICS/IXIT statement(s)

- UE supports both GSM and UTRAN Radio Access Technologies,
- UE supports GSM AMR,
- UE supports GSM EFR,
- UE supports GSM FR,
- UE supports GSM HR,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS, GSM-850, GSM-710, GSM 750, T GSM-810.

Foreseen final state of the UE

The UE is in CC state U10 on cell 9.

Test Procedure

The SS brings the UE into call active state (CC state U10) with AMR. The SS configures the appropriate traffic channel on the GSM cell, then sends HANDOVER FROM UTRAN COMMAND indicating the traffic channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel on the target GSM cell. The SS checks whether the handover is performed by checking that the UE transmits the HANDOVER COMPLETE message to the SS through GSM cell.

Depending on the PIXIT parameters the above procedure is executed maximum four times, each time with a different target channel in the GSM cell.

For UEs where the PIXIT indicates support for the GSM/DCS 1800 and/ or GSM/PCS 1900 band, the whole test should be repeated to cover these frequencies in order to verify the correct handling of the IE "Frequency band".

Inter RAT handover is normally preceded by the configuration and activation of compressed mode (depending on UE capabilities/ PIXIT) and the configuration of inter- RAT measurements. The inter RAT handover is normally initiated by the SS upon receiving an event triggered measurement report. The verification of this functionality is covered by other subclauses.

Expected sequence

This sequence is performed for a maximum execution counter M = 1, 2, 3, 4, depending on the PIXIT parameters.

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS bring the UE into UTRAN U10 state in cell 1
2	SS		The SS configures a traffic channel on cell 9 (GSM cell):
			for GSM AMR (M = 1); or
			for $GSMEFR (M = 2)$; or
			for $GSMFR$ (M = 3); or
			for $GSMHR$ (M = 4).
3	←	HANDOVER FROMUTRAN	Send on cell 1 (UTRAN cell) and the message indicates:
		COMMAND-GSM	the target channel for GSM AMR (M = 1); or
			the target channel for $GSMEFR$ (M = 2); or
			the target channel for GSM FR $(M = 3)$; or
			the target channel for $GSMHR$ (M = 4).
4	UE		The UE accepts the handover command and switches to
			the GSM traffic channel specified in the HANDOVER
			FROM UTRAN COMMAND-GSM
5	\rightarrow	HANDOVER ACCESS	The SS receives this burst on the traffic channel of cell 9
			(GSM cell) It implies that the UE has switched to GSM
	,		cell.
6	\rightarrow	HANDOVER ACCESS	
7	→	HANDOVER ACCESS	
8	\rightarrow	HANDOVER ACCESS	
9	←	PHYSIC AL INFOR MATION	
10	\rightarrow	SABM	
11	+	UA	
12	→	HANDOVER COMPLETE	The SS receives the message on the traffic channel of GSM cell.
			The SS performs a 'postamble' and restores both UE and
			SS to their initial state so that the test can be repeated
			from step 1 for executions 2,3 and 4 (if required).

Specific message contents

HANDOVER FROM UTRAN COMMAND-GSM

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	now
RAB Info	
- R AB identity	0000 0001B
·	The first/ leftmost bit of the bit string contains the most
	significant bit of the RAB identity.
- CN domain identity	CS domain
- NAS Synchronization Indicator	Not present
- Re-establishment timer	Use T314
Inter-system message	
- CHOICE System type	GSM
- Frequency Band	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this
, ,	test. Otherwise set to "GSM/DCS 1800 Band"
- CHOICE GSM message	Single GSM message
- Message	GSM HANDOVER COMMAND formatted and coded
	according to GSM specifications as Variable Length BIT
	STRING without Length Indicator. The first/ I eftmost/ most significant bit of the bit string contains bit 8 of the first octet
	of the GSM message. The contents of the HANDOVER COMMAND see next table.

For execution 1:

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = speech full rate or half rate version 3

For execution 2:

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = speech full rate or half rate version 2

For execution 3:

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = speech full rate or half rate version 1

For execution 4:

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 4 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = speech full rate or half rate version 1

8.3.7.1.5 Test requirement

At step 5 the SS receives a handover access burst on the traffic channel of the GSM cell indicating that the UE has switched to the GSM cell.

At step 12 the SS receives a HANDOVER COMPLETE message indicating a successful handover to the GSM cell.

8.3.7.1a Inter system handover from UTRAN/To GSM/Speech/Success with A5/3 ciphering

8.3.7.1a.1 Definition

This test case is specified for the UE in the interRAT speech handover from UTRAN to GERAN. The A5/3 ciphering algorithm is applied in the GERAN cell. UIA1/UEA1 are applied in the UTRAN cell.

Note: The support of A5/3 is mandatory for the UE in Rel-6 or later, and is optional for the UE in earlier Releases.

8.3.7.1a.2 Conformance requirement

Identical to 8.3.7.1.2

8.3.7.1a.3 Test purpose

Identical to 8.3.7.1.3 but in GSM cell A5/3 is applied

8.3.7.1a.4 Method of test

Identical to 8.3.7.1.4 with exception of:

Related ICS/IXIT statement(s)

- UE supports A5/3,

Specific message contents

Similar to the specific message contents in 8.3.7.1.4 and the UE capability to support A5/3 is checked additionally.

The HANDOVER FROM UTRAN COMMAND indicates in the Cipher Mode Setting information element that A5/3 ciphering algorithm is applied in the GSM cell.

8.3.7.1b Inter system handover from UTRAN/To GSM/Speech/Success with UEA2/UIA2 and A5/3 ciphering

8.3.7.1b.1 Definition

This test case is specified for the Rel-7 (or later) UE in the interRAT speech handover from UTRAN to GERAN. UIA2/UEA2 are applied in the UTRAN cell. The A 5/3 ciphering algorithm is applied in the GERAN cell.

8.3.7.1b.2 Conformance requirement

Identical to 8.3.7.1.2

8.3.7.1b.3 Test purpose

Identical to 8.3.7.1.3 but in UTRAN cell UIA2/UEA2 are applied and in GSM cell A5/3 is applied

8.3.7.1b.4 Method of test

Identical to 8.3.7.1.4

Specific message contents

Similar to the specific message contents in 8.3.7.1.4 but instead, the Rel-7 IEs are used, also the UE capability to support UEA2/UIA2 and A5/3 is checked.

The HANDOVER FROM UTRAN COMMAND indicates in the Cipher Mode Setting information element that A5/3 ciphering algorithm is applied in the GSM cell.

8.3.7.2 Inter system handover from UTRAN/To GSM/Data/Same data rate/Success

8.3.7.2.1 Definition

8.3.7.2.2 Conformance requirement

The UE shall be able to receive a HANDOVER FROM UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target cell.

The UE shall:

1> establish the connection to the target radio access technology, by using the contents of the IE "Inter-RAT message". This IE contains a message specified in another standard, as indicated by the IE "System type", and carries information about the candidate/ target cell identifier(s) and radio parameters relevant for the target radio access technology. The correspondence between the value of the IE "System type", the standard to apply and the message contained within IE "Inter RAT message" is shown in the following:

Value of the IE "System type"	Standard to apply	Inter RAT Message
GSM	GSM TS 04.18, version 8.5.0 or later	HANDOVER COMMAND
cdma2000	TIA/EIA/IS-2000 or later, TIA/EIA/IS-833	
	or later, TIA/EIQ/IS-834 or later	

- 1> if the IE "System type" has the value "GSM":
 - 2> if the IE "Frequency band" has the value "GSM /DCS 1800 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1800 band".
 - 2> if the IE "Frequency band" has the value " GSM /PCS 1900 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1900 band".
- 1> apply the "Inter RAT Message" according to the "standard to apply" in the table above.

- 1> if the IE "RAB information List" is included in the HANDOVER FROM UTRAN COMMAND message:
 - 2> if the IE "RAB information List" includes one IE "RAB Info" with the IE "CN domain Identity" set to "CS domain":
 - 3> connect upper layer entities corresponding to the indicated CS domain RAB to the radio resources indicated in the inter-RAT message.
- NOTE: In this version of the specification the maximum number of CS domain RABs which may be included in the IE "RAB information List" is limited to 1.
- NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification.

Upon successfully completing the handover, the UE shall:

- 1> if there are any NAS messages with the IE "CN domain identity" set to "CS domain" for which the successful delivery of the INITIAL DIRECT TRANSFER message or UPLINK DIRECT TRANSFER message on signalling radio bearer RB3 or signalling radio bearer RB4 that have not yet been confirmed by RLC:
 - 2> retransmit those NAS messages to the network on the newly established radio connection to the target radio access technology.
- 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.

NOTE: The release of the UMTS radio resources is initiated from the target RAT.

Reference(s)

TS 25.331 Clauses 8.3.7.3, 8.3.7.4.

8.3.7.2.3 Test purpose

To test that the UE hands over to the indicated channel of same data rate in the GSM target cell when it is in the data call active state in the UTRAN serving cell and receives an HANDOVER FROM UTRAN COMMAND.

8.3.7.2.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 9 is GSM. GSM 51.010 clause 40 shall be referenced for the default parameters, and clause 26.6.5.1 shall be referenced for cell allocation of cell 9.

UE: Idle state (state 2 or state 7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE. Related ICS/IXIT statement(s)

- UE supports both GSM and UTRAN Radio Access Technologies,
- UE supports UTRAN Streaming/unknown/uplink:14.4 DL:14.4 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs,
- UE supports GSM 14.4 kbps data (full rate traffic channel for 14.4 kbit/s user data (TCH/F14.4)),
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS, GSM-850, GSM-710, GSM 750, T GSM-810.

Foreseen final state of the UE

The UE is in CC state U10 on cell 9.

Test Procedure

The SS brings the UE into data call active state (CC state U10) with Streaming/unknown/uplink:14.4 DL:14.4 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs . The SS configures a 14.4 kbps data channel on the GSM cell, then sends a HANDOVER FROM UTRAN COMMAND indicating the traffic channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel of the GSM cell. The SS checks whether the handover is performed by checking that the UE transmits the HANDOVER COMPLETE message to the SS in GSM cell.

UEs for which the PIXIT indicates support for the GSM/ DCS 1800 and/ or GSM/ PCS 1900 band, the test should cover these frequencies in order to verify the correct handling of the IE "Frequency band".

Inter RAT handover is normally preceded by the configuration and activation of compressed mode (depending on UE capabilities/ PIXIT) and the configuration of inter- RAT measurements. The inter RAT handover is normally initiated by the SS upon receiving an event triggered measurement report. The verification of this functionality is covered by other subclauses.

Expected sequence

Step	Direction	Message	Comments	
_	UE SS	1		
1	UE		The SS bring the UE into UTRAN U10 state in cell 1, the configuration is: Streaming/unknown/uplink:14.4 DL:14.4 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs;	
2	SS		The SS configures a traffic channel on cell 9 (GSM cell): for GSM 14.4 kbps data.	
3	+	HANDOVER FROMUTRAN COMMAND GSM	Send on cell 1 (UTRAN cell) and the message indicates: the target channel for GSM14.4 kbps data	
4	UE		The UE accepts the handover command and switches to the GSM traffic channel specified in the HANDOVER FROM UTRAN COMMAND-GSM	
5	>	HANDOVER ACCESS	The SS receives this burst on the traffic channel of cell 9 (GSM cell) It implies that the UE has switched to GSM cell.	
6	\rightarrow	HANDOVER ACCESS		
7	\rightarrow	HANDOVER ACCESS		
8	\rightarrow	HANDOVER ACCESS		
9	+	PHYSICAL INFORMATION		
10	\rightarrow	SABM		
11	←	UA		
12	\rightarrow	HANDOVER COMPLETE	The SS receives the message on the traffic channel of GSM cell.	

Specific message contents

HANDOVER FROM UTRAN COMMAND-GSM

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	now
RAB Info	
- R AB identity	0000 0001B
	The first/leftmost bit of the bit string contains the most
	significant bit of the RAB identity.
- CN domain identity	CS domain
 NAS Synchronization Indicator 	Not present
- Re-establishment timer	Use T314
Inter-system message	
- CHOICE System type	GSM
- Frequency Band	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band"
- CHOICE GSM message	GSM message List
- Message	GSM HANDOVER COMMAND formatted and coded
	according to GSM specifications as BIT STRING(1512).
	The first/leftmost/most significant bit of the bit string
	contains bit 8 of the first octet of the GSM message. The contents of the HANDOVER COMMAND see next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = data, 14.5 kbit/s radio interface rate (14.4 kbit/s user data (TCH/F14.4))

NOTE: This test case requires that the size of the HANDOVER COMMAND does not exceed 64 octets.

Whenever the contents for the 04.18 HANDOVER COMMAND is changed, a check is needed to verify

that size constraint is still met.

8.3.7.2.5 Test requirements

At step 5 the SS receives a handover access burst on the traffic channel of the GSM cell indicating that the UE has switched to the GSM cell.

At step 12 the SS receives a HANDOVER COMPLETE message indicating a successful handover to the GSM cell.

8.3.7.2a Inter system handover from UTRAN/To GSM/Data/Same data rate/Extended Rates/Success

8.3.7.2a.1 Definition

8.3.7.2a.2 Conformance requirement

The UE shall be able to receive a HANDOVER FROM UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target cell.

The UE shall:

1> establish the connection to the target radio access technology, by using the contents of the IE "Inter-RAT message". This IE contains a message specified in another standard, as indicated by the IE "System type", and carries information about the candidate/ target cell identifier(s) and radio parameters relevant for the target radio access technology. The correspondence between the value of the IE "System type", the standard to apply and the message contained within IE "Inter RAT message" is shown in the following:

Value of the IE "System type"	Standard to apply	Inter RAT Message
GSM	GSM TS 04.18, version 8.5.0 or later	HANDOVER COMMAND
cdma2000	TIA/EIA/IS-2000 or later, TIA/EIA/IS-833	
	or later, TIA/EIQ/IS-834 or later	

- 1> if the IE "System type" has the value "GSM":
 - 2> if the IE "Frequency band" has the value "GSM /DCS 1800 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1800 band".
 - 2> if the IE "Frequency band" has the value " GSM /PCS 1900 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1900 band".
- 1> apply the "Inter RAT Message" according to the "standard to apply" in the table above.
- 1> if the IE "RAB information List" is included in the HANDOVER FROM UTRAN COMMAND message:
 - 2> if the IE "RAB information List" includes one IE "RAB Info" with the IE "CN domain Identity" set to "CS domain":
 - 3> connect upper layer entities corresponding to the indicated CS domain RAB to the radio resources indicated in the inter-RAT message.
- NOTE: In this version of the specification the maximum number of CS domain RABs which may be included in the IE "RAB information List" is limited to 1.
- NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification.

Upon successfully completing the handover, the UE shall:

- 1> if there are any NAS messages with the IE "CN domain identity" set to "CS domain" for which the successful delivery of the INITIAL DIRECT TRANSFER message or UPLINK DIRECT TRANSFER message on signalling radio bearer RB3 or signalling radio bearer RB4 that have not yet been confirmed by RLC:
 - 2> retransmit those NAS messages to the network on the newly established radio connection to the target radio access technology.
- 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.
- NOTE: The release of the UMTS radio resources is initiated from the target RAT.

Reference(s)

TS 25.331 Clauses 8.3.7.3, 8.3.7.4.

8.3.7.2a.3 Test purpose

To test that the UE hands over to the indicated channel of same data rate in the GSM target cell when it is in the data call active state in the UTRAN serving cell and receives an HANDOVER FROM UTRAN COMMAND.

8.3.7.2a.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 9 is GSM. GSM 51.010 clause 26.6.5.1 or clause 26.13.1.3 (for HSCSD) shall be referenced for the default parameters of cell 9.

UE: Idle state (state 2 or state 7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE. Related ICS/IXIT statement(s)

- UE supports both GSM and UTRAN Radio Access Technologies,
- UE supports UTRAN Streaming/unknown/uplink:14.4 DL:14.4 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs,
- UE supports UTRAN Streaming/unknown/uplink:28.8 DL:28.8 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs,
- UE supports UTRAN Streaming/unknown/uplink:57.6 DL:57.6 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs,
- UE supports GSM 14.4 kbps data (HSCSD),
- UE supports GSM 28.8 kbps data (HSCSD or enhanced circuit switched full rate traffic channel for 28.8 kbit/s user date (E-TCH/F28.8)),
- UE supports GSM 57.6 kbps data,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS.

Foreseen final state of the UE

The UE is in CC state U10 on cell 9.

Test Procedure

The SS brings the UE into data call active state (CC state U10) with a suitable configuration (e.g. Streaming/unknown/uplink:14.4 DL:14.4 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs for M=1). The SS configures an appropriate traffic channel (e.g. 14.4 kbps HSCSD data channel for M=1) on the GSM cell, then sends a HANDOVER FROM UTRAN COMMAND indicating the traffic channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel of the GSM cell. The SS checks whether the handover is performed by checking that the UE transmits the HANDOVER COMPLETE message to the SS in GSM cell.

Depending on the PIXIT parameters the above procedure is executed maximum three times, each time with a different target channel in the GSM cell.

UEs for which the PIXIT indicates support for the GSM/ DCS 1800 and/ or GSM/ PCS 1900 band, the test should cover these frequencies in order to verify the correct handling of the IE "Frequency band".

Inter RAT handover is normally preceded by the configuration and activation of compressed mode (depending on UE capabilities/ PIXIT) and the configuration of inter- RAT measurements. The inter RAT handover is normally initiated by the SS upon receiving an event triggered measurement report. The verification of this functionality is covered by other subclauses.

Expected sequence

This sequence is performed for a maximum execution counter M = 1, 2, 3, depending on the PIXIT parameters.

Step	Direction	Message	Comments
	UE SS	1	
1	UE		The SS bring the UE into UTRAN U10 state in cell 1, the configuration is: Streaming/unknown/uplink:14.4 DL:14.4 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs (for M = 1); Streaming/unknown/uplink:28.8 DL:28.8 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs (for M = 2); Streaming/unknown/uplink:57.6 DL:57.6 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs (for M = 3).
2	SS		The SS configures a traffic channel on cell 9 (GSM cell): for GSM HSCSD 14.4 kbps data (M = 1); or for GSM 28.8 kbps data (M = 2); or for GSM 57.6 kbps data (M = 3).
3	+	HANDOVER FROM UTRAN COMMAND GSM	Send on cell 1 (UTRAN cell) and the message indicates: the target channel for GSM HSCSD 14.4 kbps data (M = 1); or for GSM 28.8 kbps data (M = 2); or for GSM 57.6 kbps data (M = 3).
4	UE		The UE accepts the handover command and switches to the GSM traffic channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
5	→	HANDOVER ACCESS	The SS receives this burst on the traffic channel of cell 9 (GSM cell) It implies that the UE has switched to GSM cell.
6	\rightarrow	HANDOVER ACCESS	
7	\rightarrow	HANDOVER ACCESS	
8	\rightarrow	HANDOVER ACCESS	
9	+	PHYSIC AL INFORMATION	
10	\rightarrow	SABM	
11	+	UA	
12	→	HANDOVER COMPLETE	The SS receives the message on the traffic channel of GSM cell.
			The SS performs a 'postamble' and restores both UE and SS to their initial state so that the test can be repeated from step 1 for executions 2 and 3 (if required).

Specific message contents

HANDOVER FROM UTRAN COMMAND-GSM

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	now
RAB Info	
- R AB identity	0000 0001B
	The first/ leftmost bit of the bit string contains the most
	significant bit of the RAB identity.
- CN domain identity	CS domain
- NAS Synchronization Indicator	Not present
- Re-establishment timer	Use T314
Inter-system message	
- CHOICE System type	GSM
- Frequency Band	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band"
- CHOICE GSM message	GSM message List
- Message	GSM HANDOVER COMMAND formatted and coded
	according to GSM specifications as BIT STRING(1512).
	The first/ Ieftmost/ most significant bit of the bit string contains bit 8 of the first octet of the GSM message. The
	contents of the HANDOVER COMMAND see next table.

For execution 1:

HANDOVER COMMAND

Same as the HANDOVER COMMAND in clause 26.13.1.3 of GSM 51.010, except that the Description of a multislot configuration supporting 14.4 kbps user data.

NOTE:

This test case requires that the size of the HANDOVER COMMAND does not exceed 64 octets. Whenever the contents for the 04.18 HANDOVER COMMAND is changed, a check is needed to verify that size constraint is still met.

For execution 2:

If the UE supports enhanced circuit switched full rate traffic channel for 28.8 kbps user data:

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = data, 29.0 kbit/s radio interface rate (28.8 kbit/s user data (E-TCH/F28.8))

NOTE:

This test case requires that the size of the HANDOVER COMMAND does not exceed 64 octets. Whenever the contents for the 04.18 HANDOVER COMMAND is changed, a check is needed to verify that size constraint is still met.

If the UE supports HSCSD:

HANDOVER COMMAND

Same as the HANDOVER COMMAND in clause 26.13.1.3 of GSM 51.010, except that the Description of a multislot configuration supporting 28.8 kbps user data.

NOTE: This test case requires that the size of the HANDOVER COMMAND does not exceed 64 octets.

Whenever the contents for the 04.18 HANDOVER COMMAND is changed, a check is needed to verify that size constraint is still met.

For execution 3:

HANDOVER COMMAND

Same as the HANDOVER COMMAND in clause 26.13.1.3 of GSM 51.010, except that the Description of a multislot configuration supporting 57.6 kbps user data.

NOTE: This test case requires that the size of the HANDOVER COMMAND does not exceed 64 octets.

Whenever the contents for the 04.18 HANDOVER COMMAND is changed, a check is needed to verify that size constraint is still met.

8.3.7.2a.5 Test requirements

At step 5 the SS receives a handover access burst on the traffic channel of the GSM cell indicating that the UE has switched to the GSM cell.

At step 12 the SS receives a HANDOVER COMPLETE message indicating a successful handover to the GSM cell.

8.3.7.3 Inter system handover from UTRAN/To GSM/Data/Data rate down grading/Success

8.3.7.3.1 Definition

8.3.7.3.2 Conformance requirement

The UE shall be able to receive a HANDOVER FROM UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target cell.

The UE shall:

1> establish the connection to the target radio access technology, by using the contents of the IE "Inter-RAT message". This IE contains a message specified in another standard, as indicated by the IE "System type", and carries information about the candidate/ target cell identifier(s) and radio parameters relevant for the target radio access technology. The correspondence between the value of the IE "System type", the standard to apply and the message contained within IE "Inter RAT message" is shown in the following:

Value of the IE "System type"	Standard to apply	Inter RAT Message
GSM	GSM TS 04.18, version 8.5.0 or later	HANDOVER COMMAND
cdma2000	TIA/EIA/IS-2000 or later, TIA/EIA/IS-833 or later, TIA/EIQ/IS-834 or later	

- 1> if the IE "System type" has the value "GSM":
 - 2> if the IE "Frequency band" has the value "GSM /DCS 1800 band used":
 - $3\!\!>\!\!$ set the BAND_INDICATOR [45] to "ARFCN indicates $1800\,band$ ".
 - 2> if the IE "Frequency band" has the value " GSM /PCS 1900 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1900 band".
- 1> apply the "Inter RAT Message" according to the "standard to apply" in the table above.
- 1> if the IE "RAB information List" is included in the HANDOVER FROM UTRAN COMMAND message:
 - 2> if the IE "RAB information List" includes one IE "RAB Info" with the IE "CN domain Identity" set to "CS domain":
 - 3> connect upper layer entities corresponding to the indicated CS domain RAB to the radio resources indicated in the inter-RAT message.

NOTE: In this version of the specification the maximum number of CS domain RABs which may be included in the IE "RAB information List" is limited to 1.

NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification.

Upon successfully completing the handover, the UE shall:

- 1> if there are any NAS messages with the IE "CN domain identity" set to "CS domain" for which the successful delivery of the INITIAL DIRECT TRANSFER message or UPLINK DIRECT TRANSFER message on signalling radio bearer RB3 or signalling radio bearer RB4 that have not yet been confirmed by RLC:
 - 2> retransmit those NAS messages to the network on the newly established radio connection to the target radio access technology.
- 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.

NOTE: The release of the UMTS radio resources is initiated from the target RAT.

Reference(s)

TS 25.331 Clauses 8.3.7.3, 8.3.7.4.

8.3.7.3.3 Test purpose

To test that the UE hands over to the indicated channel of lower data rate in the GSM target cell when it is in the data call active state in the UTRAN serving cell and receives an HANDOVER FROM UTRAN COMMAND.

8.3.7.3.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 9 is GSM. GSM 51.010 clause 40 shall be referenced for the default parameters, and clause 26.6.5.1 shall be referenced for cell allocation of cell 9.

UE: Idle state (state 2 or state 7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE. Related ICS/IXIT statement(s)

- UE supports both GSM and UTRAN Radio Access Technologies,
- UE supports UTRAN Streaming/unknown/uplink:28.8 DL:28.8 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SR Bs,
- $\quad UE \, supports \,\, UTRAN \, Streaming/unknown/uplink: 57.6 \,\, DL: 57.6 \,\, kbps/CS \,\, RAB \,+\, uplink: 3.4 \,\, DL: 3.4 \,\, kbps \,\, SRBs,$
- UE supports GSM 14.4 kbps data (full rate traffic channel for 14.4 kbit/s user data (TCH/F14.4)),
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS, GSM-850, GSM-710, GSM 750, T_GSM-810.
- UE support CS and PS service.

Foreseen final state of the UE

The UE is in CC state U10 on cell 9.

Test Procedure

The SS brings the UE into data call active state (CC state U10) with a suitable configuration (e.g. Streaming/unknown/uplink:28.8 DL:28.8 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs for M=1). The SS configures a 14.4 kbps data channel on the GSM cell, then sends a HANDOVER FROM UTRAN COMMAND indicating the traffic channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel of the GSM cell. The SS checks whether the handover is performed by checking that the UE transmits the HANDOVER COMPLETE message to the SS in GSM cell.

Upon completion of the handover, depending on UE capabilities, the UE performs routing area update and (re-) establishes the connection towards the PS domain.

Depending on the PIXIT parameters the above procedure is executed maximum two times, each time with different target channel in the GSM cell.

Expected sequence

This sequence is performed for a maximum execution counter M = 1, 2 depending on the PIXIT parameters.

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS bring the UE into UTRAN U10 state in cell 1, the configuration is:
			Streaming/unknown/uplink:28.8 DL:28.8 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs (for M = 1);
			Streaming/unknown/uplink:57.6 DL:57.6 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs (for M = 2).
2	SS		The SS configures a traffic channel on cell 9 (GSM cell): for GSM 14.4 kbps data (M = 1 and 2).
3	+	HANDOVER FROMUTRAN COMMAND-GSM	Send on cell 1 (UTRAN cell) and the message indicates: the target channel for GSM 14.4 kbps data (M = 1 and 2).
4	UE		The UE accepts the handover command and switches to the GSM traffic channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
5	→	HANDOVER ACCESS	The SS receives this burst on the traffic channel of cell 9 (GSM cell) It implies that the UE has switched to GSM cell.
6	\rightarrow	HANDOVER ACCESS	
7	\rightarrow	HANDOVER ACCESS	
8	\rightarrow	HANDOVER ACCESS	
9	+	PHYSICAL INFORMATION	
10	\rightarrow	SABM	
11	+	UA	
12	→	HANDOVER COMPLETE	The SS receives the message on the traffic channel of GSM cell.
13	\rightarrow	ROUTING AREA UPDATE	Conditional on Class AUE.
			The SS performs a 'postamble' and restores both UE and
			SS to their initial state so that the test can be repeated from step 1 for execution 2 (if required).

Specific message contents

For execution 1:

Same as the message contents of clause 8.3.7.2 Procedure 1 for M=1.

For execution 2:

Same as the message contents of clause 8.3.7.2 Procedure 1 for M=1.

8.3.7.3.5 Test requirement

At step 5 the SS receives a handover access burst on the traffic channel of the GSM cell indicating that the UE has switched to the GSM cell.

At step 12 the SS receives a HANDOVER COMPLETE message indicating a successful handover to the GSM cell.

8.3.7.3a Inter system handover from UTRAN/To GSM/Data/Data rate down grading/Extended Rates/Success

8.3.7.3a.1 Definition

8.3.7.3a.2 Conformance requirement

The UE shall be able to receive a HANDOVER FROM UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target cell.

The UE shall:

1> establish the connection to the target radio access technology, by using the contents of the IE "Inter-RAT message". This IE contains a message specified in another standard, as indicated by the IE "System type", and carries information about the candidate/ target cell identifier(s) and radio parameters relevant for the target radio access technology. The correspondence between the value of the IE "System type", the standard to apply and the message contained within IE "Inter RAT message" is shown in the following:

Value of the IE "System type"	Standard to apply	Inter RAT Message
GSM	GSM TS 04.18, version 8.5.0 or later	HANDOVER COMMAND
cdma2000	TIA/EIA/IS-2000 or later, TIA/EIA/IS-833 or later, TIA/EIQ/IS-834 or later	

- 1> if the IE "System type" has the value "GSM":
 - 2> if the IE "Frequency band" has the value "GSM /DCS 1800 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1800 band".
 - 2> if the IE "Frequency band" has the value " GSM /PCS 1900 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1900 band".
- 1> apply the "Inter RAT Message" according to the "standard to apply" in the table above.
- 1> if the IE "RAB information List" is included in the HANDOVER FROM UTRAN COMMAND message:
 - 2> if the IE "RAB information List" includes one IE "RAB Info" with the IE "CN domain Identity" set to "CS domain":
 - 3> connect upper layer entities corresponding to the indicated CS domain RAB to the radio resources indicated in the inter-RAT message.
- NOTE: In this version of the specification the maximum number of CS domain RABs which may be included in the IE "RAB information List" is limited to 1.
- NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification.

Upon successfully completing the handover, the UE shall:

- 1> if there are any NAS messages with the IE "CN domain identity" set to "CS domain" for which the successful delivery of the INITIAL DIRECT TRANSFER message or UPLINK DIRECT TRANSFER message on signalling radio bearer RB3 or signalling radio bearer RB4 that have not yet been confirmed by RLC:
 - 2> retransmit those NAS messages to the network on the newly established radio connection to the target radio access technology.
- 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.
- NOTE: The release of the UMTS radio resources is initiated from the target RAT.

Reference(s)

TS 25.331 Clauses 8.3.7.3, 8.3.7.4.

8.3.7.3a.3 Test purpose

To test that the UE hands over to the indicated channel of lower data rate in the GSM target cell when it is in the data call active state in the UTRAN serving cell and receives an HANDOVER FROM UTRAN COMMAND.

8.3.7.3a.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 9 is GSM. GSM 51.010 clause 26.6.5.1 or clause 26.13.1.3 (for HSCSD) shall be referenced for the default parameters of cell 9.

UE: Idle state (state 2 or state 7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE. Related ICS/IXIT statement(s)

- UE supports both GSM and UTRAN Radio Access Technologies,
- UE supports UTRAN Streaming/unknown/uplink:28.8 DL:28.8 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs,
- UE supports UTRAN Streaming/unknown/uplink:57.6 DL:57.6 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs,
- UE supports GSM 14.4 kbps data (HSCSD),
- UE supports GSM 28.8 kbps data (HSCSD or enhanced circuit switched full rate traffic channel for 28.8 kbit/s user date (E-TCH/F28.8)),
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480 GSM-PCS.
- UE support CS and PS service.

Foreseen final state of the UE

The UE is in CC state U10 on cell 9.

Test Procedure

The SS brings the UE into data call active state (CC state U10) with a suitable configuration (e.g. Streaming/unknown/uplink:28.8 DL:28.8 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs for M=1). The SS configures a traffic channel (e.g. 14.4 kbps HSCSD data channel for M=1) on the GSM cell, then sends a HANDOVER FROM UTRAN COMMAND indicating the traffic channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel of the GSM cell. The SS checks whether the handover is performed by checking that the UE transmits the HANDOVER COMPLETE message to the SS in GSM cell.

Upon completion of the handover, depending on UE capabilities, the UE performs routing area update and (re-) establishes the connection towards the PS domain.

Depending on the PIXIT parameters the above procedure is executed maximum three times, each time with different target channel in the GSM cell.

Expected sequence

This sequence is performed for a maximum execution counter M = 1, 2, 3, depending on the PIXIT parameters.

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS bring the UE into UTRAN U10 state in cell 1, the configuration is: Streaming/unknown/uplink:28.8 DL:28.8 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs (for M = 1); Streaming/unknown/uplink:57.6 DL:57.6 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs (for M = 2 and 3).
2	SS		The SS configures a traffic channel on cell 9 (GSM cell): for GSM 14.4 kbps HSCSD data (M = 1 and 2); or for GSM 28.8 kbps data (M = 3).
3	+	HANDOVER FROMUTRAN COMMAND-GSM	Send on cell 1 (UTRAN cell) and the message indicates: the target channel for GSM HSCSD 14.4 kbps data (M = 1 and 2); or for GSM 28.8 kbps data (M = 3).
4	UE		The UE accepts the handover command and switches to the GSM traffic channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
5	>	HANDOVER ACCESS	The SS receives this burst on the traffic channel of cell 9 (GSM cell) It implies that the UE has switched to GSM cell.
6	\rightarrow	HANDOVER ACCESS	
7	\rightarrow	HANDOVER ACCESS	
8	\rightarrow	HANDOVER ACCESS	
9	←	PHYSIC AL INFORMATION	
10	\rightarrow	SABM	
11	←	UA	
12	→	HANDOVER COMPLETE	The SS receives the message on the traffic channel of GSM cell.
13	\rightarrow	ROUTING AREA UPDATE	Conditional on Class AUE.
			The SS performs a 'postamble' and restores both UE and SS to their initial state so that the test can be repeated from step 1 for executions 2 and 3 (if required).

Specific message contents

For execution 1:

Same as the message contents of clause 8.3.7.2.2 Procedure 2 for M=1.

For execution 2:

Same as the message contents of clause 8.3.7.2.2 Procedure 2 for M=1.

For execution 3:

Same as the message contents of clause 8.3.7.2.2 Procedure 2 for M=2.

8.3.7.3a.5 Test requirement

At step 5 the SS receives a handover access burst on the traffic channel of the GSM cell indicating that the UE has switched to the GSM cell.

At step 12 the SS receives a HANDOVER COMPLETE message indicating a successful handover to the GSM cell.

8.3.7.4 Inter system handover from UTRAN/To GSM/Speech/Establishment/Success

8.3.7.4.1 Definition

8.3.7.4.2 Conformance requirement

The UE shall be able to receive a HANDOVER FROM UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target cell.

The UE shall:

1> establish the connection to the target radio access technology, by using the contents of the IE "Inter-RAT message". This IE contains a message specified in another standard, as indicated by the IE "System type", and carries information about the candidate/ target cell identifier(s) and radio parameters relevant for the target radio access technology. The correspondence between the value of the IE "System type", the standard to apply and the message contained within IE "Inter RAT message" is shown in the following:

Value of the IE "System type"	Standard to apply	Inter RAT Message
GSM	GSM TS 04.18, version 8.5.0 or later	HANDOVER COMMAND
cdma2000	TIA/EIA/IS-2000 or later, TIA/EIA/IS-833 or later, TIA/EIQ/IS-834 or later	

- 1> if the IE "System type" has the value "GSM":
 - 2> if the IE "Frequency band" has the value "GSM /DCS 1800 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1800 band".
 - 2> if the IE "Frequency band" has the value " GSM /PCS 1900 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1900 band".
- 1> apply the "Inter RAT Message" according to the "standard to apply" in the table above.
- 1> if the IE "RAB information List" is included in the HANDOVER FROM UTRAN COMMAND message:
 - 2> if the IE "RAB information List" includes one IE "RAB Info" with the IE "CN domain Identity " set to "CS domain":
 - 3> connect upper layer entities corresponding to the indicated CS domain RAB to the radio resources indicated in the inter-RAT message.
- NOTE: In this version of the specification the maximum number of CS domain RABs which may be included in the IE "RAB information List" is limited to 1.
- NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification.

Upon successfully completing the handover, the UE shall:

- 1> if there are any NAS messages with the IE "CN domain identity" set to "CS domain" for which the successful delivery of the INITIAL DIRECT TRANSFER message or UPLINK DIRECT TRANSFER message on signalling radio bearer RB3 or signalling radio bearer RB4 that have not yet been confirmed by RLC:
 - 2> retransmit those NAS messages to the network on the newly established radio connection to the target radio access technology.
- 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.
- NOTE: The release of the UMTS radio resources is initiated from the target RAT.

Reference(s)

TS 25.331 Clauses 8.3.7.3, 8.3.7.4.

8.3.7.4.3 Test purpose

To test that the UE hands over to the indicated channel in the GSM target cell when it is in the call establishment phase in the UTRAN serving cell and receives an HANDOVER FROM UTRAN COMMAND.

8.3.7.4.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 9 is GSM. GSM 51.010 clause 40 shall be referenced for the default parameters, and clause 26.6.5.1 shall be referenced for cell allocation of cell 9 except the BCCH ARFCN for GSM 900 should be 18 and for GSM 1900 should be 646.

UE: Idle state (state 2 or state 7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE. Related ICS/IXIT statement(s)

- UE supports both GSM and UTRAN Radio Access Technologies,
- UE supports UTRAN AMR,
- UE supports GSM FR,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS, GSM-850, GSM-710, GSM 750, T_GSM-810.

Foreseen final state of the UE

The UE is in CC state U1 on cell 9.

Test Procedure

The UE is triggered to initialise an MO speech call. During the call establishment phase, after the SS receives SETUP message the SS configures a dedicated channel on the GSM cell, then sends the UE a HANDOVER FROM UTRAN COMMAND indicating the dedicated channel in the target GSM cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel of the GSM cell. The SS checks whether the handover is performed by checking that the UE transmits the HANDOVER COMPLETE message to the SS in GSM cell.

Expected sequence

Step	Direction UE SS	Message	Comments
1	UE		To trigger the UE to initialise an MO call
2	\rightarrow	SETUP	U1
3	SS		The SS configures a dedicated channel SDCCH on the GSM cell.
4	+	HANDOVER FROMUTRAN COMMAND-GSM	Send on cell 1 (UTRAN cell) and the message indicates: the dedicated channel SDCCH.
5	UE		The UE accepts the handover command and switches to the GSM dedicated channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
6	\rightarrow	HANDOVER ACCESS	The SS receives this burst on the dedicated channel of cell 9 (GSM cell) It implies that the UE has switched to GSM cell.
7	\rightarrow	HANDOVER ACCESS	
8	\rightarrow	HANDOVER ACCESS	
9	\rightarrow	HANDOVER ACCESS	
10	+	PHYSIC AL INFOR MATION	
11	\rightarrow	SABM	
12	←	UA	
13	\rightarrow	HANDOVER COMPLETE	The SS receives the message on the dedicated channel of GSM cell.

Specific message contents

HANDOVER FROM UTRAN COMMAND-GSM

Information Element	Value/remark
Message Type	Additionally and a state of the
RRC transaction identifier Integrity check info	Arbitrarily selects one integer between 0 to 3
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	now
RAB Info	Not present
Inter-system message	
- CHOICE System type	GSM
- Frequency Band	Set to "GSM/ PCS 1900" if GSM PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band"
- CHOICE GSM message	Single GSM message
- Message	GSM HANDOVER COMMAND formatted and coded
	according to GSM specifications as Variable Length BIT STRING without Length Indicator. The first/ I eftmost/ most
	significant bit of the bit string contains bit 8 of the first octet
	of the GSM message. The contents of the HANDOVER
	COMMAND see next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 4 in clause 26.6.5.2 of GSM 51.010 except that 'Mode of first channel' IE should be set to 'signalling only' and the BCCH ARFCN for GSM 900 should be 18 and for GSM 1900 should be 646

8.3.7.4.5 Test requirement

At step 13 the SS shall receive HANDOVER COMPLETE message on the dedicated channel of the GSM cell.

8.3.7.5 Inter system handover from UTRAN/To GSM/Speech/Failure

8.3.7.5.1 Definition

8.3.7.5.2 Conformance requirement

If the UE does not succeed in establishing the connection to the other target radio access technology, it shall

- 1> revert back to the UTRA configuration;
- 1> establish the UTRA physical channel(s) used at the time for reception of HANDOVER FROM UTRAN COMMAND;

. . .

transmit the HANDOVER FROM UTRAN FAILURE message setting the information elements as specified below:

- 2> include the IE "RRC transaction identifier"; and
- 2> set it to the value of "RRC transaction identifier" in the entry for the HANDOVER FROM UTRAN COMMAND message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 2> clear that entry;
- 2> set the IE "Inter-RAT handover failure" to "physical channel failure".
- 1> When the HANDOVER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:
 - 2> the procedure ends.

Reference(s)

TS 25.331 Clause 8.3.7.5.

8.3.7.5.3 Test purpose

To test that the UE reactivates the old configuration and uses this to transmit a HANDOVER FROM UTRAN FAILURE message to the network including IE "Inter-RAT Handover failure cause" which is set to "physical channel failure", when it receives an HANDOVER FROM UTRAN COMMAND and the connection to GSM for handover can not be established.

To verify that after the handover failure the UE resumes previously configured compressed mode patterns and measurements.

8.3.7.5.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 9 is GSM. GSM 51.010 clause 40 shall be referenced for the default parameters, and clause 26.6.5.1 shall be referenced for cell allocation of cell 9.

UE: Id le state (state 2 or state 7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Related ICS/IXIT statement(s)

- UE supports both GSM and UTRAN Radio Access Technologies,
- UE supports GSM FR,
- UE supports UTRAN AMR,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS, GSM-850, GSM-710, GSM 750, T_GSM-810
- UE supports compressed mode (FDD only).

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS brings the UE into call active state (CC state U10) with AMR. If the UE requires compressed mode (refer ICS/IXIT), the SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters. When the PHYSICAL CHANNEL RECONFIGURATION COMPLETE is received from the UE, the SS sends a MEASUREMENT CONTROL message indicating two GSM cells of which only one is actually configured. This message is used to provide measurement control parameters (GSM RSSI) to the UE and to start compressed mode for the measurement if required according to the UE capabilities. The UE replies according to request by sending RRC: MEASUREMENT REPORT messages periodically to SS (reporting period is 4000 ms).

The SS sends a HANDOVER FROM UTRAN COMMAND indicating a dedicated channel (not configured) of the target GSM cell to the UE through DCCH of the serving UTRAN cell. The UE receives the command and configures itself accordingly but can not complete the handover. The SS checks that the handover is failed by checking that the UE transmits the HANDOVER FROM UTRAN FAILURE message to the SS using the old UTRAN configuration.

After the handover failure, the UE re-activates compressed mode (if configured) and resumes periodic measurement reporting including sending MEASUREMENT REPORT messages periodically to SS.

Expected sequence

Step	Direction	Message	Comments
	UE SS	1	
1	ÜĒ		The SS bring the UE into U10 state in UTRAN cell 1. If the UE does not require compressed mode (refer ICS/IXIT), then goto step 1c.
1a	+	PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
1b	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
1c	+	MEASUREMENT CONTROL	SS provides GSM RSSI measurement control parameters to UE. Compressed mode for GSM RSSI measurement is started if required as per UE capabilities.
1d	→	MEASUREMENT REPORT	UE reports measurement results of GSM RSSI measurement to SS.
3	+	HANDOVER FROM UTR AN COMMAND-GSM	Send on cell 1 (UTRAN cell) and the message indicates: the target channel for GSM FR which does not exist in the GSM cell.
4	UE		The UE accepts the handover command and switches to the GSM traffic channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
5	→	HANDOVER FROMUTRAN FAILURE	The SS receives the message via the old UTRAN configuration.
5a	→	MEASUREMENT REPORT	The SS shall verify that the UE resumes periodic measurement reporting for GSM RSSI measurements

Specific message contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1a)

Use the same message sub-type as in TS 34.108 titled "Speech in CS", with the following exceptions:

Information Element	Value/remark	Version
Downlink information common for all radio links		
- DPCH compressed mode info		
- TGPSI	1	
- TGPS Status Flag	Deactivate	
- TGCFN	Not present	
- Transmission gap pattern sequence configuration	Trot procent	
parameters	CCM Comica DCCI Moccurement	
- TGMP	GSM Carrier RSSI Measurement	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not present	
- TGD	Undefined	
- TGPL1	12	
- TGPL2	Not present	R99 and REL-4
		only
- RPP	Mode 0	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only	
	(depends on UE's Measurement	
	capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	20 (2.0)	
- DeltaSIRAfter1	10 (1.0)	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	
- TGPSI	2	
- TGPS Status Flag	Deactivate	
- TGCFN		
- Transmission gap pattern sequence configuration	Not present	
parameters		
l ²	CCM Initial BCIC identification	
- TGMP	GSM Initial BSIC identification	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
-TGL2	Not present	
- TGD	undefined	
- TGPL1	8	
- TGPL2	Not present	R99 and REL-4
222		only
- RPP	Mode 0	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only	
	(depends on UE's Measurement	
	capability)	
 Downlink compressed mode method 	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	20 (2.0)	
- DeltaSIRAfter1	10 (1.0)	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	128	
- T Reconfirm abort	Not Present	
1 1000mmm about	11011 1000111	

MEASUREMENT CONTROL (Step 1c)

Transfer of the second	
Information Element	Value/remark
Measurement Identity Measurement Command	15 Setup
Measurement Reporting Mode	Setup
Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOICE Inter-RAT Cell Removal	Remove all inter-RAT cells
- New inter-RAT cells	
- inter-RAT cell id	0
CHOICE Radio Access Technology	GSM
- Cell individual offset	0 (0 dB)
- Cell selection and re-selection info	Not present
- BSIC	Value set to correspond with HANDOVER COMMAND
Daniel in director	IEs seen in TS 51.010 clause 26.6.5.1 M=2
- Band indicator	GSM/DCS-1800 or GSM/PCS-1900 (dependent on band
BCCH ADECN	used)
- BCCH ARFCN	Value the same as HANDOVER COMMAND in TS 51.010 clause 26.6.5.1 M=2 (dependant on band used)
- inter-RAT cell id	1
CHOICE Radio Access Technology	GSM
- Cell individual offset	0 (0 dB)
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	GSM/DCS-1800 or GSM/PCS-1900 (dependent on band
	used)
- BCCH ARFCN	Value according to the GSM band under test (see 3GPP
	34.123-1 table 6.5 for details on the ARFCN)
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTR AN quality	Not present
estimate	GSM
CHOICE system - Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	not required
- inter-RAT reporting quantity	not required
UTRAN estimated quality	FALSE
CHOICE system	GSM
- Observed time difference to GSM cell	FALSE
reporting indicator	
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOICE reported cell	
- Reported cells within active set or within	
virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOICE report criteria	
Periodical reporting criteria Amount of reporting	infinity
- Reporting interval	4000
Physical channel information elements	7000
- DPCH compressed mode status info	If the UE requires compressed mode (refer ICS/IXIT),
2 · C · · · · · · · · · · · · · · · · ·	this IE is present and contains the IEs as follows. If the
	UE does not require compressed mode (refer ICS/IXIT),
	this IE is not present.
- TGPS reconfiguration CFN	(Current CFN + (256 - TTI/10msec))mod 256
- Transmission gap pattern sequence	"
- TGPSI	1
- TGPS status flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256
- TGPSI	2
- TGPS status flag	Deactivate

Information Element	Value/remark
- TGCFN	Not present

MEASUREMENT REPORT, if the UE requires compressed mode (refer ICS/IXIT) (Step 1d and step 5a)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
 Inter-R AT measured result list 	
- CHOICE system	GSM
- Measured GSM cells	
- GSM carrier RSSI	Check to see if present
CHOICE BSIC	Check to see if present
 Observed time difference to GSM cell 	Check that not present
- GSM carrier RSSI	Check to see if present
CHOICE BSIC	Non verified BSIC
- BCCH ARFCN	Check that is set to the correct value according to the
	GSM band under test (see 3GPP 34.123-1 table 6.5 for
	details on the ARFCN)
 Observed time difference to GSM cell 	Check that not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that not present

MEASUREMENT REPORT, if the UE doesn't requires compressed mode (refer ICS/IXIT) (Step 1d and step 5a)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	
- GSM carrier RSSI	Check to see if present
CHOICE BSIC	verified BSIC
- Inter-RAT cell id	Check that is set to 0
 Observed time difference to GSM cell 	Check that not present
- GSM carrier RSSI	Check to see if present
CHOICE BSIC	Non verified BSIC
- BCCH ARFCN	Check that is set to the correct value according to
	the GSM band under test (see 3GPP 34.123-1 table
	6.5 for details on the ARFCN)
 Observed time difference to GSM cell 	Check that not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that not present

MEASUREMENT REPORT, if the UE doesn't require compressed mode (refer ICS/IXIT) (Step 1d and step 5a) (1.28Mcps TDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
 Inter-RAT measured result list 	
- CHOICE system	GSM
- Measured GSM cells	
- GSM carrier RSSI	Check to see if present
CHOICE BSIC	Check to see if present
 Observed time difference to GSM cell 	Check that not present
- GSM carrier RSSI	Check to see if present
CHOICE BSIC	Non verified BSIC
- BCCH ARFCN	Check that is set to the correct value according to the
	GSM band under test (see 3GPP 34.123-1 table 6.5 for
	details on the ARFCN)
 Observed time difference to GSM cell 	Check that not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that not present

HANDOVER FROM UTRAN COMMAND-GSM

The contents of this message is identical to the HANDOVER FROM UTRAN COMMAND-GSM message specified in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Inter-system message	
- System type	GSM
- Frequency Band	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band"
- CHOICE GSM message	Single GSM message
- Message	GSM HANDOVER COMMAND formatted as BIT STRING
	(1512). The contents of the HANDOVER COMMAND see next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = speech full rate or half rate version 1 and that the indicated target channel for GSM FR does not exist in the GSM cell

HANDOVER FROM UTRAN FAILURE

The contents of this message is identical to the HANDOVER FROM UTRAN FAILURE message specified in [9] TS 34.108 clause 9.

8.3.7.5.5 Test requirement

After step 4 the SS shall receive HANDOVER FROM UTRAN FAILURE message using the old UTRA configuration.

After step 5 the UE shall correctly report the GSM RSSI value.

8.3.7.6 Inter system handover from UTRAN/To GSM/Speech/Failure (L2 Establishment)

8.3.7.6.1 Definition

8.3.7.6.2 Conformance requirement

If the UE does not succeed to establish the connection to the other radio access technology, as is unable to obtain L2 establishment it shall

- resume the connection to UTRAN using the resources used before receiving the HANDOVER FROM UTRAN COMMAND message; and
- transmit the HANDOVER FROM UTRAN FAILURE message on uplink DCCH using AM RLC.

Reference(s)

3GPP TS 25.331 clause 8.3.7

TS 04.06 Clause 5.4.1.3

TS 04.08 Clause 3.1.5

8.3.7.6.3 Test purpose

To Test that the UE shall keep its old configuration and transmit a HANDOVER FROM UTRAN FAILURE message, which is set to "physical channel failure" in IE "Inter_RAT HO failure cause", when it receives a HANDOVER FROM UTRAN COMMAND and the connection to GSM for handover cannot be established due to failure in L2 establishment.

8.3.7.6.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 9 is GSM. GSM 51010-1 section 26.6.5.1 shall be referenced for the default parameters of cell 9.

UE: CC State U10 in cell 1

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS starts the UTRAN cell and brings the UE into call active state (CC state U10) with AMR. SS activates a dedicated GSM traffic channel then sends HANDOVER FROM UTRAN COMMAND indicating a dedicated channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. When the UE does not succeed in establishing the connection to the target radio access technology it shall revert back to UTRA configuration establish the UTRA physical channel(s) used at the time for reception of HANDOVER FROM UTRAN COMMAND transmit the HANDOVER FROM UTRAN FAILURE.

Expected sequence

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS brings the UE into UTRAN U10 state in cell 1
2	SS		The SS configures cell 9 as a GSM cell with traffic
			channel.
3	+	HANDOVER FROMUTRAN	Send on cell 1 (UTRAN cell) and the message indicates:
		COMMAND-GSM	The target channel.
4	UE		The UE accepts the handover command and switches to
			the GSM traffic channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
			FROM UTRAN COMMAND-GSM
5	→	HANDOVER ACCESS	The SS receives this burst on the traffic channel of cell 9
	-		(GSM cell) It implies that the UE has switched to GSM
			cell.
6	\rightarrow	HANDOVER ACCESS	
7	\rightarrow	HANDOVER ACCESS	
8	\rightarrow	HANDOVER ACCESS	
9	+	PHYSIC AL INFOR MATION	Allows a proper transmission by the MS.
			Sent in unacknowledged mode as soon as the SS has
			detected a HANDOVER ACCESS.
			As soon as MS detects it then it stops T3124. On SS side T3105 could be started N times at the
			maximum as long as the step 8 is not performed
10	→	ISABM	To establish L2 connection
11	SS	SABIVI	SS does not sent UA frame
12	UE		On T200 expiration, SS sends N200 times the SABM
'-			frame (steps 10)
			Then MS deactivates new channels and reactivates old
			UTRA resources it had before receiving the handover
			command
13	\rightarrow	HANDOVER FROMUTRAN	The SS receives the message on the old channel of
		FAILURE	UTRAN cell. Sent in acknowledge mode
			The cause in the IE "inter-RAT change failure" is set to
			"physical channel failure"

Specific message contents

Same as the message contents of clause 8.3.7.1 for M=3.

HANDOVER FROM UTRAN FAILURE

Information Element	Value/remark	
Message Type		
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink HANDOVER FROM UTRAN COMMAND –GSM message	
Integrity check info		
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.	
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.	
Inter-RAT handover failure		
-Inter-RAT handover failure cause	physical channel failure	
Inter-system message	Not Checked	

8.3.7.6.5 Test requirement

 $The \,SS \,shall \,\,receive \,\,HA\,NDO\,VER\,\,FROM\,\,UTRAN\,\,FAILURE\,\,message\,\,on\,\,the\,\,old\,\,channel\,\,of\,\,the\,\,UTRAN\,\,cell.$

8.3.7.7 Inter system handover from UTRAN/To GSM/Speech/Failure (L1 Synchronization)

8.3.7.7.1 Definition

8.3.7.7.2 Conformance requirement

If the UE does not succeed in establishing the connection to the target radio access technology, it shall:

- 1> revert back to the UTRA configuration;
- 1> establish the UTRA physical channel(s) used at the time for reception of HANDOVER FROM UTRAN COMMAND:

. . .

- 1> transmit the HANDOVER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the HANDOVER FROM UTRAN COMMAND message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "Inter-RAT handover failure" to "physical channel failure".
- 1> When the HANDOVER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:
 - 2> the procedure ends.

Reference(s)

TS 25.331 Clause 8.3.7.5

8.3.7.7.3 Test purpose

To test that the UE reactivates its old configuration and transmit a HANDOVER FROM UTRAN FAILURE message, which is set to "physical channel failure" in IE "Inter-RAT Handover failure cause", when it receives a HANDOVER FROM UTRAN COMMAND and the connection to GSM for handover cannot be established due to failure in L1 Synchronization.

8.3.7.7.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 9 is GSM. GSM 51.010 section 40 shall be referenced for the default parameters, and clause 26.6.5.1 shall be referenced for cell allocation of cell 9.

UE: Idle state (state 2 or state 7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Related ICS/IXIT statement(s)

- UE supports both GSM and UTRAN Radio Access Technologies,
- UE supports GSM FR,
- UE supports UTRAN AMR,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS, GSM-850, GSM-710, GSM 750, T_GSM-810.

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS brings the UE into call active state (CC state U10). The SS activates a dedicated channel in the GSM cell, then sends HANDOVER FROM UTRAN COMMAND indicating a dedicated channel of the target GSM cell to the UE through DCCH using the UTRAN configuration. The UE receives the command, configures itself accordingly and sends the HANDOVER ACCESS burst. Upon receiving this burst, the SS turns off the dedicated channel indicated to the UE, so the UE cannot complete the handover. The SS checks that the UE reverts to the old UTRA configuration by checking that the UE transmits the HANDOVER FROM UTRAN FAILURE message to the SS via the old UTRAN configuration.

Expected sequence

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS brings the UE into UTRAN U10 state in cell 1.
2	SS		The SS configures a traffic channel on cell 9 (GSM cell).
3	←	HANDOVER FROMUTRAN COMMAND-GSM	Send on cell 1 (UTRAN cell) and the message indicates: The target channel for GSM FR in GSM Cell.
4	UE		The UE accepts the handover command and switches to the GSM traffic channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
5	→	HANDOVER ACCESS	The SS receives this burst on the traffic channel of cell 9 (GSM cell) It implies that the UE has switched to GSM cell.
6	\rightarrow	HANDOVER ACCESS	
7	SS		The target GSM Traffic Channel is Switched off
8	→	HANDOVER FROMUTRAN FAILURE	The SS receives the message via the old UTRAN configuration. The cause in the IE "inter-RAT change failure" is set to "physical channel failure"

Specific message contents

HANDOVER FROM UTRAN COMMAND-GSM

The contents of this message is identical to the HANDOVER FROM UTRAN COMMAND-GSM message specified in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Inter-system message	
- System type	GSM
- Frequency Band	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band"
- CHOICE GSM message	Single GSM message
- Message	GSM HANDOVER COMMAND formatted as BIT STRING
_	(1512). The contents of the HANDOVER COMMAND see
	next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = speech full rate or half rate version 1

HANDOVER FROM UTRAN FAILURE

The contents of this message is identical to the HANDOVER FROM UTRAN FAILURE message specified in [9] TS 34.108 clause 9.

8.3.7.7.5 Test requirement

After step 7 the SS shall receive HANDOVER FROM UTRAN FAILURE message via the old UTRA configuration.

8.3.7.8 Inter system handover from UTRAN/To GSM/Speech/Failure (Invalid Inter-RAT message)

8.3.7.8.1 Definition

8.3.7.8.2 Conformance requirement

If the IE "Inter-RAT message" received within the HANDOVER FROM UTRAN COMMAND message does not include a valid inter RAT handover message in accordance with the protocol specifications for the target RAT, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> set the IE "failure cause" to the cause value "Inter-RAT protocol error";
- 1> include the IE "Inter-RAT message" in accordance with the specifications applicable to the other RAT;
- 1> transmit a HANDOVER FROM UTRAN FAILURE message on the uplink DCCH using AM RLC;
- 1> when the transmission of the HANDOVER FROM UTRAN FAILURE message has been confirmed by RLC:
 - 2> continue with any ongoing processes and procedures as if the invalid HANDOVER FROM UTRAN COMMAND message has not been received;
 - 2> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.7.6

8.3.7.8.3 Test purpose

To Test that the UE shall keep its old configuration and transmit a HANDOVER FROM UTRAN FAILURE message, which is set to "Inter-RAT protocol error" in IE "Inter_RAT HO failure cause", when it receives a Handover From UTRAN message, with the IE "Inter-RAT message" received within the HANDOVER FROM UTRAN COMMAND message not including a valid inter RAT handover message in accordance with the protocol specifications for the target RAT.

8.3.7.8.4 Method of test

Initial conditions

System Simulator: 1 UTRAN cell.

UE: CC State U10 in cell 1

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS starts the UTRAN cell and brings the UE into call active state (CC state U10) with AMR. The SS then sends a HANDOVER FROM UTRAN COMMAND message not including a valid inter RAT handover message in accordance with the protocol specifications for the target RAT, to the UE through DCCH of the serving UTRAN cell. The UE receives the command and finds that the Inter Rat message is Invalid. The SS checks that the handover is failed by checking that the UE transmits the HANDOVER FROM UTRAN FAILURE message to the SS in UTRAN cell.

Expected sequence

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS brings the UE into UTRAN U10 state in cell 1
2	+		Send on cell 1 (UTRAN cell) and the message carries an Invalid HANDOVER FROM UTRAN COMMAND -GSM
3		HANDOVER FROMUTRAN FAILURE	The SS receives the message on the old channel of UTRAN cell.

Specific message contents

HANDOVER FROM UTRAN COMMAND-GSM

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
RAB Info	Not present
Inter-system message	
- CHOICE System type	GSM
- Frequency Band	GSM/DCS 1800 Band
- CHOICE GSM message	Single GSM message
- Message	GSM HANDOVER COMMAND formatted and coded according to GSM specifications as Variable Length BIT
	STRING without Length Indicator. The first/ I eftmost/ most
	significant bit of the bit string contains bit 8 of the first octet
	of the GSM message. The contents of the HANDOVER
	COMMAND see next table.

HANDOVER COMMAND

Contains an Invalid Handover Command.

HANDOVER FROM UTRAN FAILURE

Information Element	Value/remark
Message Type	
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink HANDOVER FROMUTRAN COMMAND –GSM message
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Inter-RAT handover failure	
-Inter-RAT handover failure cause Inter-system message	Inter-RAT protocol error Not checked

8.3.7.8.5 Test requirement

In step 3 the SS shall receive HANDOVER FROM UTRAN FAILURE message on the old channel of the UTRAN cell.

8.3.7.9 Inter system handover from UTRAN/To GSM/Speech/Failure (Unsupported configuration)

8.3.7.9.1 Definition

8.3.7.9.2 Conformance requirement:

If:

. . .

- the UTRAN instructs the UE to use a non-supported configuration; or

. . .

the UE shall:

- 1> transmit a HANDOVER FROM UTRAN FAILURE message, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the HANDOVER FROM UTRAN COMMAND message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "Inter-RAT handover failure" to "configuration unacceptable";
 - 2> when the HANDOVER FROM UTRAN FAILURE message has been submitted to lower layers for transmission:
 - 3> resume normal operation as if the invalid HANDOVER FROM UTRAN COMMAND message has not been received;
 - 3> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.7.8

8.3.7.9.3 Test purpose

To test that the UE shall keep its old configuration and transmit a HANDOVER FROM UTRAN FAILURE message, which is set to "configuration unacceptable" in IE "Inter-RAT Handover failure cause", when it receives a HANDOVER FROM UTRAN COMMAND message, with the IE "GSM message" containing a HANDOVER COMMAND message including a configuration not supported by the UE.

8.3.7.9.4 Method of test

Initial conditions

System Simulator: 1 UTRAN cell.

UE: Idle state (state 2 or state 7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE. Related

ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS, GSM-850, GSM-710, GSM 750, T_GSM-810.

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS brings the UE into call active state (CC state U10) with AMR on the UTRAN cell. The SS then sends an HANDOVER FROM UTRAN COMMAND message including a configuration not supported by the UE in the HANDOVER COMMAND that is contained in the IE "GSM message", to the UE through DCCH using the UTRAN configuration. The UE receives the command and finds that the configuration given in Inter Rat message is not supported. The SS checks that the UE reverts to the old UTRA configuration by checking that the UE transmits the HANDOVER FROM UTRAN FAILURE message to the SS using the old UTRA configuration.

Expected sequence

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS brings the UE into UTRAN U10 state in cell 1
2	+	HANDOVER FROMUTRAN COMMAND -GSM	Send using the UTRAN configuration and the message carries an unsupported configuration.
3	→	HANDOVER FROMUTRAN FAILURE	The SS receives the message via the old UTRAN configuration.

Specific message contents

HANDOVER FROM UTRAN COMMAND-GSM

The contents of this message is identical to the HANDOVER FROM UTRAN COMMAND-GSM message specified in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
RAB_Info	Not present
Inter-system message	
- System type	GSM
- Frequency Band	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this
	test. Otherwise set to "GSM/DCS 1800 Band"
- CHOICE GSM message	Single GSM message
- Message	GSM HANDOVER COMMAND formatted as Variable
	Length BIT STRING without Length Indicator. The contents
	of the HANDOVER COMMAND see next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the frequency band is set to a value not supported by the UE.

HANDOVER FROM UTRAN FAILURE

The contents of this message is identical to the HANDOVER FROM UTRAN FAILURE message specified in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Inter-RAT handover failure	
-Inter-RAT handover failure cause	configuration unacceptable

8.3.7.9.5 Test requirement

After step 2 the SS shall receive a HANDOVER FROM UTRAN FAILURE message via the old UTRA configuration.

8.3.7.10 Inter system handover from UTRAN/To GSM/Speech/Failure (Reception by UE in CELL_FACH)

8.3.7.10.1 Definition

8.3.7.10.2 Conformance requirement

If the UE receives HANDOVER FROM UTRAN COMMAND while in CELL FACH, the UE shall:

- 1> transmit a HANDOVER FROM UTRAN FAILURE message, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the HANDOVER FROM UTRAN COMMAND message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "Inter-RAT handover failure" to "protocol error", include IE "Protocol error information"; and
 - 2> set the value of IE "Protocol error cause" to "Message not compatible with receiver state";
 - 2> when the HANDOVER FROM UTRAN FAILURE message has been submitted to lower layers for transmission:
 - 3> resume normal operation as if the invalid HANDOVER FROM UTRAN COMMAND message has not been received;
 - 3> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.7.8a

8.3.7.10.3 Test purpose

The UE shall keep its old configuration when the UE receives a HANDOVER FROM UTRAN COMMAND message when in CELL_FACH state and then transmit a HANDOVER FROM UTRAN FAILURE message on the DCCH using AM RLC, which sets value "protocol error" in IE "Inter_RAT HO failure cause" and is set to "Message not compatible with receiver state" in IE "Protocol error cause".

8.3.7.10.4 Method of test

Initial conditions

System Simulator: 1 UTRAN Cell

UE: RRC State CS-DCCH_FACH (state 6-6) as specified in clause 7.4 of TS 34.108, on Cell 1

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Foreseen final state of the UE

The UE is in RRC is in State CS-DCCH FACH (state 6-6) as specified in clause 7.4 of TS 34.108, on cell 1.

Test Procedure

The SS starts GSM cell without activating any dedicated channel in the cell, then sends HANDOVER FROM UTRAN COMMAND indicating a dedicated channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. The UE receives the command and configures itself accordingly but cannot complete the handover. The SS checks that the handover is failed by checking that the UE transmits the HANDOVER FROM UTRAN FAILURE message to the SS in UTRAN cell.

Expected sequence

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS brings the UE into CS-DCCH_FACH (state 6-6) _FACH state in cell 1
2		HANDOVER FROMUTRAN COMMAND	Send on cell 1 (UTRAN cell) and the message indicates: The target channel for GSM
3		HANDOVER FROMUTRAN FAILURE	The SS receives the message on the old channel of UTRAN cell.

Specific message contents

Same as the message contents of clause 8.3.7.1 for M = 3.

HANDOVER FROM UTRAN FAILURE

Information Element	Value/remark
Message Type	
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink HANDOVER FROM UTRAN COMMAND –GSM message
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Inter-RAT handover failure	
-Inter-RAT handover failure cause	Protocol Error
-Diagnostics Type	Type1
-Protocol Error Cause Inter-system message	Message Not Compatible With Receiver State Not Checked

8.3.7.10.5 Test requirement

After step 2 the SS shall receive HANDOVER FROM UTRAN FAILURE message on the old channel of the UTRAN cell.

8.3.7.11 Inter system handover from UTRAN/To GSM/Speech/Failure (Invalid message reception)

8.3.7.11.1 Definition

8.3.7.11.2 Conformance requirement:

If the HANDOVER FROM UTRAN COMMAND message contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

1> set the IE "RRC transaction identifier" in the HANDOVER FROM UTRAN FAILURE message to the value of "RRC transaction identifier" in the entry for the HANDOVER FROM UTRAN COMMAND message in the table "Rejected transactions" in the variable TRANSACTIONS; and

1> clear that entry;

- 1> set the IE "failure cause" to the cause value "protocol error";
- 1> include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION;
- 1> transmit a HANDOVER FROM UTRAN FAILURE message on the uplink DCCH using AM RLC;
- 1> when the HANDOVER FROM UTRAN FAILURE message has been submitted to lower layers for transmission:
 - 2> continue with any ongoing processes and procedures as if the invalid HANDOVER FROM UTRAN COMMAND message has not been received;
 - 2> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.7.6

8.3.7.11.3 Test purpose

The UE shall keep its old configuration when the UE receives a Handover From UTRAN message that cause the variable PROTOCOL_ERROR_REJECT to be set to TRUE. It shall then transmit a HANDOVER FROM UTRAN FAILURE message on the uplink DCCH. The IE "Protocol error information" shall contain an IE "Protocol error cause" set to "Message extension not comprehended".

8.3.7.11.4 Method of test

Initial conditions

System Simulator: 1 UTRAN cell.

UE: CC State U10 in cell 1

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS starts the UTRAN cell and brings the UE into call active state (CC state U10) with AMR. The SS then sends an HANDOVER FROM UTRAN COMMAND message, which contains an unexpected critical message extension, to the UE through DCCH of the serving UTRAN cell. The SS checks that the handover is failed by checking that the UE transmits a HANDOVER FROM UTRAN FAILURE message on the uplink DCCH. The IE "Protocol error information" shall contain an IE "Protocol error cause" set to "Message extension not comprehended".

Expected sequence

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS brings the UE into UTRAN U10 state in cell 1
2	+	Handover From UTRAN Command	Send on cell 1 (UTRAN cell) and the message is short in length to be decoded into a valid Handover From UTRAN command
3	→	HANDOVER FROMUTRAN FAILURE	The SS receives the message on the old channel of UTRAN cell.

Specific message contents

HANDOVER FROM UTRAN COMMAND

Use the HANDOVER FROM UTRAN COMMAND message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Critical extensions	'FF'H

HANDOVER FROM UTRAN FAILURE (Step 3)

Information Element	Value/remark
Message Type	
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink HANDOVER FROM UTRAN COMMAND message
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Inter-RAT handover failure	' '
-Inter-RAT handover failure cause	Protocol Error
-Diagnostics Type	Type1
-Protocol Error Cause	Message extension not comprehended
Inter-system message	Not Checked

8.3.7.11.5 Test requirement

In step 3 the SS shall receive HANDOVER FROM UTRAN FAILURE message in the UTRAN cell.

8.3.7.12 Inter system handover from UTRAN/To GSM/Speech/Failure (Physical channel Failure and Reversion Failure)

- 8.3.7.12.1 Definition
- 8.3.7.12.2 Conformance requirement
- 1. This section applies to R99 & Rel-4 releases:

If the UE does not succeed in establishing the connection to the target radio access technology, it shall:

- 1> revert back to the UTRA configuration;
- 1> establish the UTRA physical channel(s) used at the time for reception of HANDOVER FROM UTRAN COMMAND;
- 1> if the UE does not succeed to establish the UTRA physical channel(s):
 - 2> perform a cell update procedure according to subclause 8.3.1 in TS 25.331with cause "Radio link failure";
 - 2> when the cell update procedure has completed successfully:
 - 3> proceed as below.
- 1> transmit the HANDOVER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the HANDOVER FROM UTRAN COMMAND message in the table "Accepted transactions" in the variable TRANSACTIONS; and

- 2> clear that entry;
- 2> set the IE "Inter-RAT handover failure" to "physical channel failure".
- 1> When the HANDOVER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:
 - 2> the procedure ends.
- 2. This section applies from Re1-5 releases onwards:

If the UE does not succeed in establishing the connection to the target radio access technology, it shall:

- 1> revert back to the UTRA configuration;
- 1> if the CM_PATTERN_ACTIVATION_ABORTED flag is not set to TRUE:
 - 2> establish the UTRA physical channel(s) (including HS-DSCH related channels) used at the time for reception of HANDOVER FROM UTRAN COMMAND;
 - 2> perform the physical layer synchronisation procedure A as specified in [29] (FDD only);
 - 2> after the establishment of the uplink physical channel, send DPCCH and no DPDCH according to [26] during the number of frames indicated in the IE "PC preamble" in the variable LATEST_CONFIGURED_SRB_DELAY_AND_PC_PREAMBLE; and
 - 2> then not send any data on signalling radio bearers RB0 to RB4 during the number of frames indicated in the IE "SRB delay" in the variable LATEST_CONFIGURED_SRB_DELAY_AND_PC_PREAMBLE.

Reference

3GPP TS 25.331 clause 8.3.7.5

8.3.7.12.3 Test purpose

The UE shall perform a cell update when the UE fails to revert to the old configuration after the detection of physical channel failure in the target RAT cell as given in the HANDOVER FROM UTRAN COMMAND message. After the UE completes the cell update procedure, the UE shall transmit a HANDOVER FROM UTRAN FAILURE message on the DCCH using AM RLC, including IE "failure cause" set to "physical channel failure".

8.3.7.12.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 9 is GSM. GSM 51.010 section 40 shall be referenced for the default parameters, and clause 26.6.5.1 shall be referenced for cell allocation of cell 9.

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

UE: Idle state (state 2 or state 7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

The 'timer poll' value in the SS RLC transmit entity should be set to 800 ms.

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS, GSM-850, GSM-710, GSM 750, T_GSM-810

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS and brings the UE into call active state (CC state U10) with AMR on the UTRAN cell. The SS configures a target dedicated channel on the GSM cell. The SS sends a HANDOVER FROM UTRAN COMMAND indicating a dedicated channel of the target GSM cell to the UE through DCCH using the UTRAN configuration. The UE receives the command and configures itself accordingly but cannot complete the handover and wants to revert to the old configuration, but the UE cannot revert to the old configuration because the SS released the old configuration. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit CELL UPDATE CONFIRM message on downlink DCCH after receiving CELL UPDATE message. The UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits the HANDOVER FROM UTRAN FAILURE message to the SS using the new UTRA configuration, on the DCCH using AM RLC, setting the value of IE "failure cause" to "physical channel failure". In case of R99 or Rel-4, UE may transmit HANDOVER FROM UTRAN FAILURE message using uplink AM RLC and subsequently PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

Expected sequence

Step	Direction	Message	Comments
	UE SS	j	
1	UE		The SS brings the UE into UTRAN U10 state in cell 1
2	SS		The SS configures a dedicated GSM FR channel on the GSM cell.
3	+	HANDOVER FROMUTRAN COMMAND-GSM	Send using the UTRA configuration and the message indicates: the target channel for GSM FR.
4	UE		The UE accepts the handover command and switches to the GSM traffic channel specified in the HANDOVER COMMAND message that is contained within the HANDOVER FROMUTRAN COMMAND -GSM message
4a	SS		SS removes the UTRAN physical channel (DPCH) allocated to the mobile to ensure UE will not be able to revert back to the old UTRAN configuration when handover failed
5	→	HANDOVER ACCESS	The SS receives this burst on the traffic channel of cell 9 (GSM cell) It implies that the UE has switched to GSM cell. Upon receiving this burst, SS removes the target GSM Traffic Channel. As a result not only the handover will fail, but also the reversion to the old UTRA configuration.
6	\rightarrow	CELL UPDATE	The value "radio link failure" shall be set in IE "Cell update cause".
7	+	CELL UPDATE CONFIRM	This message include IE "Physical channel information elements".
8			The SS configures the dedicated physical channel according to the IE "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
9	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
10	\rightarrow	HANDOVER FROMUTRAN FAILURE	The IE "failure cause" shall be set to "physical channel failure"
			Note: For R99 and Rel-4 UEs the messages in Steps 9 and 10 may be received in either order.

Specific message contents

Same as the message contents of clause 8.3.7.1 for Execution 3.

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 6.1.0b of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	2

CELL UPDATE (Step 6)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in TS 34.108, clause 9,with the following exceptions:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	"radio link failure"

CELL UPDATE CONFIRM (Step 7) (FDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in TS 34.108, clause 9,with the following exceptions:

Information Element	Value/remark	Version
U-RNTI	Same as CELL UPDATE message in step 3	
RRC State indicator	CELL_DCH	
CHOICE channel requirement	Uplink DPCH info	
-UplinkDPCH Info	Same as specified in "Contents of RADIO BEARER	
	SETUP message: AM or UM" for condition A2	
	(Speech CS) in TS 34.108 clause 9.1	
- DPCCH power offset	-40 (-80 dB)	
- PC Preamble	1 frame	
- SRB delay	7 frames	
- Power Control Algorithm	Algorithm1	
- TPC step size	0 (1 dB)	
- Scrambling code type	Long	
- Scrambling code number	0 (0 to 16777215)	
- Number of DPDCH	Not Present(1)	
- spreading factor - TFCI existence	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set	
- Number of FBI bit	Reference to TS34.108 clause 6.10 Parameter Set	
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set	
Downlink information common for all radio links	Same as specified in "Contents of RADIO BEARER	
	SETUP message: AM or UM" for condition A2	
	(Speech CS) in TS 34.108 clause 9.1	
CHOICE Mode	FDD	
- Downlink DPCH info common for all RL		
- Timing indicator	Initialise	
- CFN-targetSFN frame offset	Not Present	
- Downlink DPCH power control information		
- DPC mode	0 (single)	
- CHOICE mode	FDD	
- Power offset PPilot-DPDCH	0	
 DL rate matching restriction information 	Not Present	
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set	
- Fixed or Flexible Position	Reference to TS34.108 clause 6.10 Parameter Set	
- TFCI existence	Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE SF	Reference to TS34.108 clause 6.10 Parameter Set	
- DPCH compressed mode info	Not Present	
- TX Diversity mode	None	D00 ID I4
- SSDT information	Not Present	R99 and Rel-4
D (DDOLLO" 1) (1	only
- Default DPCH Offset Value	Arbitrary set to value 0306688 by step of 512	
Downlink information for each radio links		
- Primary CPICH info	100	
- Primary scrambling code - PDSCH with SHO DCH info	Not Present	R99 and Rel-4
	Not Flesent	only
- PDSCH code mapping	Not Present	R99 and Rel-4
1 Doort oode mapping	Titot 1000iit	only
- Downlink DPCH info for each RL		J y
- Primary CPICH usage for channel	Primary CPICH may be used	
lestimation	l mary or forrmay bo about	
- DPCH frame offset	Set to value: Default DPCH Offset value (as	
	currently stored in SS) mod 38400	
- Secondary CPICH info	Not Present	
- DL channelisation code		
- Secondary scrambling code	2	
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set	
- Code number	SF-1(SF is reference to TS34.108 clause 6.10	
	Parameter Set)	
- Scrambling code change	No change	
- TPC combination index	0	
- SSDT Cell Identity	Not Present	R99 and Rel-4
		only
- Closed loop timing adjustment mode	Not Present	

- SCCPCH information for FACH	Not Present	R99 and Rel-4
		only

CELL UPDATE CONFIRM (Step 7) (3.84 Mcps TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 3
RRC State indicator	CELL_DCH
Frequency info	
- CHOICE mode	TDD
- UARFCN (Nt)	Reference to TS34.108 clause 5.1 Test frequencies
Maximum allowed UL TX power	30dBm
CHOICE Mode	TDD
Downlink information for each radio links	
- Primary CCPCH info	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- CHOICE SyncCase	Not Present
- Cell Parameters ID	Not Present
- Block STTD indicator	FALSE
- Downlink DPCH info for each RL	
- CHOICE mode	TDD
- DL CCTrCh List	
- TFCS ID	1
- Time info	
- Activation time	Not Present (default)
- Duration	Not Present (default)
- Common times lot info	Not Present (default)
 Downlink DPCH timeslots and codes 	Not Present (default)
- UL CCTrCH TPC List	Not Present (default)

CELL UPDATE CONFIRM (Step 7) (1.28 Mcps TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 3
RRC State indicator	CELL_DCH
Frequency info	
- CHOICE mode	TDD
- UARFCN (Nt)	Reference to TS34.108 clause 5.1 Test frequencies
Maximum allowed UL TX power	30dBm
CHOICE Mode	TDD
Downlink information for each radio links	
- Primary CCPCH info	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- TSTD indicator	FALSE
- Cell Parameters ID	Not Present
- Block STTD indicator	FALSE
- Downlink DPCH info for each RL	
- CHOICE mode	TDD
- DL CCTrCh List	
- TFCS ID	1
- Time info	
- Activation time	Not Present (default)
- Duration	Not Present (default)
- Common timeslot info	Not Present (default)
 Downlink DPCH timeslots and codes 	Not Present (default)
- UL CCTrCH TPC List	Not Present (default)

CELL UPDATE CONFIRM (Step 7) (3.84 Mcps TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in TS34.108, clause 9, with the following exceptions:

Information Element	Value/remark	
U-RNTI	Same as CELL UPDATE message in step 3	
RRC State indicator	CELL_DCH	
Frequency info		
- CHOICE mode	TDD	
- UARFCN (Nt)	Reference to TS34.108 clause 5.1 Test frequencies	
Maximum allowed UL TX power	30dBm	
CHOICE Mode	TDD	
Downlink information for each radio links		
- Primary CCPCH info		
- CHOICE mode	TDD	
- CHOICE TDD option	7.68 Mcps TDD	
- CHOICE SyncCase	Not Present	
- Cell Parameters ID	Not Present	
- Block STTD indicator	FALSE	
- Downlink DPCH info for each RL		
- CHOICE mode	TDD	
- DL CCTrCh List		
- TFCS ID	1	
- Time info		
- Activation time	Not Present (default)	
- Duration	Not Present (default)	
- Common timeslot info	Not Present (default)	
- Downlink DPCH timeslots and codes	Not Present (default)	
- UL CCTrCH TPC List	Not Present (default)	

HANDOVER FROM UTRAN COMMAND

The contents of this message is identical to the HANDOVER FROM UTRAN COMMAND-GSM message specified in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Inter-system message	
- System type	GSM
- Frequency Band	Set to "GSM/PCS 1900" if GSM/PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band"
- CHOICE GSM message	Single GSM message
- Message	GSM HANDOVER COMMAND formatted as BIT STRING (1512). The contents of the HANDOVER COMMAND see next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = speech full rate or half rate version 1

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 9)

Use the same message found in TS 34.108 clause 9, with the exceptions of the following IEs:

Information Element	Value/remark
Uplink counter synchronisation info	Not Checked

HANDOVER FROM UTRAN FAILURE (Step 10)

The contents of this message are identical to the HANDOVER FROM UTRAN FAILURE message specified in [9] TS 34.108 clause 9.

8.3.7.12.5 Test requirement

After step 5 the SS shall receive a CELL UPDATE message.

At step 9 the SS shall receive a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

At step 10 the SS shall receive a HANDOVER FROM UTRAN FAILURE message via the new UTRA configuration.

Note: For R99 and Rel-4 UEs the messages in Steps 9 and 10 may be received in either order.

8.3.7.13 Inter system handover from UTRAN/To GSM/ success / call under establishment

8.3.7.13.1 Definition

8.3.7.13.2 Conformance requirement

The UE shall be able to receive a HANDOVER FROM UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target cell.

The UE shall:

1> establish the connection to the target radio access technology, by using the contents of the IE "Inter-RAT message". This IE contains a message specified in another standard, as indicated by the IE "System type", and carries information about the candidate/ target cell identifier(s) and radio parameters relevant for the target radio access technology. The correspondence between the value of the IE "System type", the standard to apply and the message contained within IE "Inter RAT message" is shown in the following:

Value of the IE "System type"	Standard to apply	Inter RAT Message
GSM	GSM TS 04.18, version 8.5.0 or later	HANDOVER COMMAND
	TIA/EIA/IS-2000 or later, TIA/EIA/IS-833 or later, TIA/EIQ/IS-834 or later	

- 1> if the IE "System type" has the value "GSM":
 - 2> if the IE "Frequency band" has the value "GSM /DCS 1800 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1800 band".
 - $2\!\!>$ if the IE "Frequency band" has the value " GSM /PCS 1900 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1900 band".
- 1> apply the "Inter RAT Message" according to the "standard to apply" in the table above.
- 1> if the IE "RAB information List" is included in the HANDOVER FROM UTRAN COMMAND message:
 - 2> if the IE "RAB information List" includes one IE "RAB Info" with the IE "CN domain Identity" set to "CS domain":
 - 3> connect upper layer entities corresponding to the indicated CS domain RAB to the radio resources indicated in the inter-RAT message.
- NOTE: In this version of the specification the maximum number of CS domain RABs which may be included in the IE "RAB information List" is limited to 1.
- NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification.

. . . .

Upon successfully completing the handover, UTRAN should:

1> release the radio connection; and

1> remove all context information for the concerned UE.

Upon successfully completing the handover, the UE shall:

- 1> if the USIM is present:
 - 2> store the current START value for every CN domain in the USIM [50];
 - 2> if the "START" stored in the USIM [50] for a CN domain is greater than or equal to the value "THRESHOLD" of the variable START_THRESHOLD:
 - 3> delete the ciphering and integrity keys that are stored in the USIM for that CN domain;
 - 3> inform the deletion of these keys to upper layers.
- 1> if the SIM is present:
 - 2> store the current START value for every CN domain in the UE;
 - 2> if the "START" stored in the UE for a CN domain is greater than or equal to the value "THRESHOLD" of the variable START_THRESHOLD:
 - 3> delete the ciphering and integrity keys that are stored in the SIM for that CN domain;
 - 3> inform the deletion of these keys to upper layers.
- 1> if there are any NAS messages with the IE "CN domain identity" set to "CS domain" for which the successful delivery of the INITIAL DIRECT TRANSFER message or UPLINK DIRECT TRANSFER message on signalling radio bearer RB3 or signalling radio bearer RB4 that have not yet been confirmed by RLC:
 - 2> retransmit those NAS messages to the network on the newly established radio connection to the target radio access technology.
- 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.

NOTE: The release of the UMTS radio resources is initiated from the target RAT.

Reference

3GPP TS 25.331 clause 8.3.7.3, 8.3.7.4

8.3.7.13.3 Test purpose

To test that the UE supporting both GSM and UTRAN performs handover from UTRAN to the indicated channel of GSM target cell when the UE receives a HANDOVER FROM UTRAN COMMAND in call establishment phase.

To test that the UE continues the call in the GSM cell, after successful completion of the Handover.

8.3.7.13.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 9 is GSM. GSM 51.010-1 26.6.5.1 section 40 shall be referenced for the default parameters, and clause 26.6.5.1 shall be referenced for cell allocation of cell 9 except the BCCH ARFCN for GSM 900 should be 18 and for GSM 1900 should be 646.

UE: CC State U0 (NULL state) in cell 1.

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-850, GSM-PCS, GSM-710, GSM 750, T_GSM-810.

Foreseen final state of the UE

The UE is in CC state U0 (NULL) on cell 1.

Test Procedure

The SS activates the UTRAN cell and GSM Cell. The UE is triggered to initialise an MO speech call. During the call establishment phase, the SS is configured to not transmit the RLC Acknowledgment for SETUP message. SS configures a dedicated channel in GSM Cell, then sends the UE a HANDOVER FROM UTRAN COMMAND indicating the dedicated channel in the target GSM cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel of the GSM cell. The SS checks whether the handover is performed by checking that the UE transmits the HANDOVER COMPLETE message to the SS in GSM cell. The SS checks that the MS correctly retransmits a CC SETUP message that was not acknowledged by UTRAN RLC Layer before the Handover, following completion of the handover to GSM cell.

Expected sequence

Step	Direction	Message	Comments
	UE SS]	
1	UE		To trigger the UE to initialise an MO call
2	\rightarrow	SETUP	SS does not Acknowledge it
3	SS		The SS starts the GSM cell and configure a dedicated channel SDCCH.
4	+	HANDOVER FROMUTRAN COMMANDGSM	Send via the UTRA configuration and the message indicates: the dedicated channel SDCCH.
5	UE		The UE accepts the handover command and switches to the GSM dedicated channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
6	→	HANDOVER ACCESS	The SS receives this burst on the dedicated channel of cell 9 (GSM cell) It implies that the UE has switched to GSM cell.
7	\rightarrow	HANDOVER ACCESS	
8	\rightarrow	HANDOVER ACCESS	
9	\rightarrow	HANDOVER ACCESS	
10	←	PHYSIC AL INFOR MATION	
11		Void	
12		Void	
13	→	HANDOVER COMPLETE	The SS receives the message on the dedicated channel of GSM cell.
14	->	SETUP	The SS receives the message on the dedicated channel of GSM cell.
15	<-	CHANNEL RELEASE	

Specific message contents

HANDOVER FROM UTRAN COMMAND-GSM

The contents of this message is identical to the HANDOVER FROM UTRAN COMMAND-GSM message specified in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
RAB_info	Not present
Inter-system message	
- System type	GSM
- Frequency Band	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSWDCS 1800 Band"
- CHOICE GSM message	Single GSM message
- Message	GSM HANDOVER COMMAND formatted as Variable Length BIT STRING without Length Indicator. The contents of the HANDOVER COMMAND see next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 4 in clause 26.6.5.2 of GSM 51.010, except that the CHANNEL MODE IE is included with value = signalling only and the BCCH ARFCN for GSM 900 should be 18 and for GSM 1900 should be 646

8.3.7.13.5 Test requirement

At step 14 the SS shall receive SETUP message on the dedicated channel of the GSM cell.

8.3.7.14 Inter system handover from UTRAN/To GSM/Speech/Success (stop of HS-DSCH reception)

8.3.7.14.1 Definition and applicability

All UEs which support FDD or TDD, HS-PDSCH and GSM.

8.3.7.14.2 Conformance requirement

The UE shall be able to receive a HANDOVER FROM UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target cell.

The UE shall:

- 1> if HS-DSCH is configured for UTRA:
 - 2> stop any HS-DSCH reception procedures;
 - 2> clear any stored HS-PDSCH configuration;
 - 2> act as if the IE "MAC-hs reset indicator" is received and set to TRUE;
 - 2> release all HARQ resources;
 - 2> remove any H-RNTI stored;
 - 2> clear the variable H_RNTI;
 - 2> set the variable HS_DSCH_RECEPTION to FALSE.
- 1> establish the connection to the target radio access technology, by using the contents of the IE "Inter-RAT message". This IE contains a message specified in another standard, as indicated by the IE "System type", and carries information about the candidate/ target cell identifier(s) and radio parameters relevant for the target radio access technology. The correspondence between the value of the IE "System type", the standard to apply and the message contained within IE "Inter RAT message" is shown in the following:

Value of the IE	Standard to apply	Inter RAT Message
"System type"		
GSM	GSM TS 04.18, version 8.5.0 or later, or	HANDOVER COMMAND
	3GPP TS 44.018	
GERAN lu	3GPP TS 44.118	RADIO BEARER RECONFIGURATION
cdma2000	TIA/EIA/IS-2000 or later, TIA/EIA/IS-833	
	or later, TIA/EIQ/IS-834 or later	

- $1\!\!>$ if the IE "System type" has the value "GSM" or "GERA N Iu":
 - $2\!\!>$ if the IE "Frequency band" has the value "GSM /DCS 1800 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1800 band".
 - 2> if the IE "Frequency band" has the value " GSM /PCS 1900 band used":
 - 3> set the BAND INDICATOR [45] to "ARFCN indicates 1900 band".
- 1> apply the "Inter RAT Message" according to the "standard to apply" in the table above.

- 1> if the IE "RAB information List" is included in the HANDOVER FROM UTRAN COMMAND mess age:
 - 2> if the IE "RAB information List" includes one IE "RAB Info" with the IE "CN domain Identity" set to "CS domain":
 - 3> connect upper layer entities corresponding to the indicated CS domain RAB to the radio resources indicated in the inter-RAT message.
- NOTE1: In this version of the specification the maximum number of CS domain RABs which may be included in the IE "RAB information List" is limited to 1.
- NOTE2: In handover to GERAN *Iu mode*, the RAB information is included in the RADIO BEARER RECONFIGURATION message specified in [53].
- NOTE3: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification.
- NOTE4: The UE may ignore the IE "NAS synchronisation indicator" if included in the HANDOVER FROM UTRAN COMMAND message;
- NOTE5: The UE behaviour is undefined if the IE "Re-establishment timer" in the IE "RAB info" indicates a timer different from the timer currently configured for this RAB.

During compressed mode on the associated DPCH or F-DPCH, the following applies for the UE for transmission of HS-DPCCH and reception of HS-SCCH and HS-PDSCH:

- The UE shall neglect a HS-SCCH or HS-PDSCH transmission, if a part of the HS-SCCH or a part of the corresponding HS-PDSCH overlaps with a downlink transmission gap on the associated DPCH or F-DPCH. In this case, neither ACK, nor NACK shall be transmitted by the UE to respond to the corresponding downlink transmission.
- If a part of a HS-DPCCH slot allocated to HARQ-ACK overlaps with an uplink transmission gap on the associated DPCH, the UE shall use DTX on the HS-DPCCH in that HS-DPCCH slot.
- If in a HS-DPCCH sub-frame a part of the slots allocated for CQI information overlaps with an uplink transmission gap on the associated DPCH, the UE shall not transmit CQI information in that sub-frame.
- If a CQI report is scheduled in the current CQI field according to subclause 6A.1.2 paragraph (2), and the corresponding 3-slot reference period (as defined in subclause 6A.2) wholly or partly overlaps a downlink transmission gap, then the UE shall use DTX in the current CQI field and in the CQI fields in the next (*N_cqi_transmit*-1) subframes.

Reference(s)

TS 25.331 Clause 8.3.7.5.

TS 25.214 Clause 6A.3.

8.3.7.14.3 Test purpose

- 1. To test that the UE supporting both GSM and UTRAN hands over from a UTRAN serving cell to the indicated channel of GSM target cell when the UE is in the speech call active state, active PS RAB with HS-DSCH reception and receives an HANDOVER FROM UTRAN COMMAND.2. To verify that UE stops HS-DSCH reception after receiving the HANDOVER FROM UTRAN COMMAND.
- 3. For the UEs supporting compressed mode, to verify that the HS-DSCH reception has no impact on the GSM cells measurement when GSM compressed mode is activated.

8.3.7.14.4 Method of test

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 9 is GSM. GSM 51.010 clause 26.6.5.1 shall be referenced for the default parameters of cell 9.

UE: Idle state (state 2 or state 7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Related ICS/IXIT statement(s)

- UE supports both GSM and UTRAN Radio Access Technologies,
- UE supports PS+CS
- UE supports GSM AMR
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS, GSM-850, GSM-710, GSM 750, T GSM-810
- UE supports compressed mode (FDD only).

Foreseen final state of the UE

The UE is in CC state U10 on cell 9.

Test Procedure

The SS brings the UE into call active state (CC state U10) with AMR with configuration (conversational/speech/uplink: 12.2 DL: 12.2 kbps/CS RAB + interactive/ background UL: 384kbps, DL: (max bit rate depending on UE category) PS RAB + uplink: 3.4 DL3.4 kbps SRBs). In case UE does not support data rate of 384kbps in UL, then 64kbps should be used in UL for the PS RAB. PS RAB is configured with HS-DSCH.

The SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters. When the PHYSICAL CHANNEL RECONFIGURATION COMPLETE is received from the UE, the SS sends a MEASUREMENT CONTROL message indicating two GSM cells of which only one is actually configured. This message is used to provide measurement control parameters (GSM RSSI) to the UE and to start compressed mode for the measurement if required according to the UE capabilities. The UE replies according to request by sending MEASUREMENT REPORT messages periodically to SS (reporting period is 4000 ms).

The SS configures the appropriate traffic channel on the GSM cell, then sends HANDOVER FROM UTRAN COMMAND indicating the traffic channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel on the target GSM cell. The SS checks whether the handover is performed by checking that the UE transmits the HANDOVER COMPLETE message to the SS through GSM cell. SS receives GPRS SUSPENSION REQUEST from the UE.

SS disconnects the CS call and releases the RR connection.

Once RR connection is released, an RAU procedure is performed. To check that PDP context is active, SS sends MODIFY PDP CONTEXT REQUEST and assigns new QoS in GPRS cell. The UE may or may not accept the new QoS and replies to the SS accordingly.

For UEs where the PIXIT indicates support for the GSM/ DCS 1800 and/ or GSM/ PCS 1900 band, the whole test should be repeated to cover these frequencies in order to verify the correct handling of the IE "Frequency band".

Inter RAT handover is normally preceded by the configuration and activation of compressed mode (depending on UE capabilities/ PIXIT) and the configuration of inter- RAT measurements. The inter RAT handover is normally initiated by the SS upon receiving an event triggered measurement report. The verification of this functionality is covered by other subclauses.

Expected sequence

Step	Direction UE SS	Message	Comments
1	UE		The SS bring the UE into UTRAN U10 state and PS RAB
'	OL		with HS-DSCH active in cell 1. If the UE does not require
			compressed mode (refer ICS/IXIT), then go to step 1c.
1a	-	PHYSICAL CHANNEL	Compressed mode pattern sequence parameters are
l la	•	RECONFIGURATION	loaded to UE.
1b	\rightarrow	PHYSICAL CHANNEL	
		RECONFIGURATION COMPLETE	
1c	-	MEASUREMENT CONTROL	SS provides GSM RSSI measurement control parameters
			to UE. Compressed mode for GSM RSSI measurement is
			started if required as per UE capabilities.
1d	\rightarrow	MEASUREMENT REPORT	UE reports measurement results of GSM RSSI
			measurement to SS.
2	SS		The SS configures a traffic channel on cell 9 (GSM cell):
			for GSM AMR (M = 1); or
3	+	HANDOVER FROMUTRAN	Send on cell 1 (UTRAN cell) and the message indicates:
		COMMAND-GSM	
4	UE		The UE accepts the handover command and switches to
			the GSM traffic channel specified in the HANDOVER
			FROM UTRAN COMMAND-GSM
5	\rightarrow	HANDOVER ACCESS	The SS receives this burst on the traffic channel of cell 9
			(GSM cell) It implies that the UE has switched to GSM cell.
6	\rightarrow	HANDOVER ACCESS	ceii.
7	→	HANDOVER ACCESS	
8	→	HANDOVER ACCESS	
9	→	PHYSICAL INFORMATION	
10	→	SABM	
11	/	UA	
12	→	HANDOVER COMPLETE	The SS receives the message on the traffic channel of
12	7	I IANDOVER COMPLETE	IGSM cell.
13	\rightarrow	GPRS SUSPENSION REQUEST	UE sends GPRS SUSPENSION REQUEST on FACCH.
	,		Suspension cause value is not checked
14	←	CHANNEL RELEASE	SS disconnects the CS call and releases the RR
			connection. The GPRS Resumption IE is included and is
			set to "resumption of GPRS services successfully
			acknowledged."
14a	\rightarrow	CHANNEL REQUEST	The SS receives this burst on the RACH of cell 9(GSM
			cell).
14b	←	IMMEDIATE ASSIGNMENT	Sent on AGCH.
15	\rightarrow	ROUTING AREA UPDATE	GMM "update type" = 'combined RA/LA updating'
4.0	,	REQUEST	CMM D TMCLie included
16	←	ROUTING AREA UPDATE	GMM. P-TMSI is included
17	→	ACCEPT ROUTING AREA UPDATE	
''	7	COMPLETE	
18	-	MODIFY PDP CONTEXT	SS requests the modification of a PDP context, with a
'0	`	REQUEST	new QoS (peak throughput is changed to '0011')
A19	\rightarrow	MODIFY PDP CONTEXT	UE behaviour type A: Accept the PDP context
5		ACCEPT	modification
B19	\rightarrow	DEACTIVATE PDP CONTEXT	UE behaviour type B: Initiate the PDP context
		REQUEST	deactivation. Cause set to 'QoS not accepted'
B19a	+	DEACTIVATE PDP CONTEXT	UE behaviour type B: Accept the PDP context
		ACCEPT	deactivation.
B19b	\rightarrow	DETACH REQUEST	UE behaviour type B: A non-auto attach UE may
			(optionally) send a Detach Request. The SS shall wait up
	_		to 'T3390' seconds for the Detach Request.
B19c	+	DETACH ACCEPT	If the UE transmitted a Detach Request message in step
			B20b then the SS responds with a Detach Accept
			message.

Specific message contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1a)

Use the same message sub-type as in TS 34.108 titled "Speech in CS", with the following exceptions:

Information Element	Value/remark
Downlink information common for all radio links	1 0101011 0 1110111
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration	
parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	Undefined
- TGPL1	12
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only
	(depends on UE's Measurement
	capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	HLS
- Downlink frame type	A
- DeltaSIR1	20 (2.0)
- DeltaSIRAfter1	10 (1.0)
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TGPSI	2
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration	
parameters	
- TGMP	GSM Initial BSIC identification
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	Undefined
- TGPL1	8
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only
	(depends on UE's Measurement
	capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	HLS
- Downlink frame type	A
- DeltaSIR1	20 (2.0)
- DeltaSIRAfter1	10 (1.0)
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	128
- T Reconfirm abort	Not Present

MEASUREMENT CONTROL (Step 1c)

Information Element	Value/remark	
Measurement Identity	15	
Measurement Command	Setup	
Measurement Reporting Mode		
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC	
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting	
Additional measurements list	Not Present	
CHOICE measurement type	Hot Hoosit	
- inter-RAT measurement		
- inter-RAT measurement object list		
CHOICE Inter-RAT Cell Removal	Remove all inter-RAT cells	
- New inter-RAT cells	INCHIOVE All IIILETNAT CEIIS	
- inter-RAT cell id	0	
	GSM	
CHOICE Radio Access Technology		
- Cell individual offset	0 (0 dB)	
- Cell selection and re-selection info	Not present	
- BSIC	Value set to correspond with HANDOVER COMMAND	
D 11 11 1	IEs seen in TS 51.010 clause 26.6.5.1 M=2	
- Band indicator	GSM/DCS-1800 or GSM/PCS-1900 (dependent on band	
	used)	
- BCCH ARFCN	Value the same as HANDOVER COMMAND in TS	
	51.010 clause 26.6.5.1 M=2 (dependant on band used)	
- inter-RAT cell id	1	
CHOICE Radio Access Technology	GSM	
- Cell individual offset	0 (0 dB)	
 Cell selection and re-selection info 	Not present	
- BSIC	BSIC2	
- Band indicator	GSM/DCS-1800 or GSM/PCS-1900 (dependent on band	
	used)	
- BCCH ARFCN	Value according to the GSM band under test (see 3GPP	
	34.123-1 table 6.5 for details on the ARFCN)	
- Cell for measurement	Not present	
- inter-RAT measurement quantity		
- Measurement quantity for UTR AN quality	Not present	
estimate	·	
CHOICE system	GSM	
- Measurement quantity	GSM carrier RSSI	
- Filter coefficient	0	
- BSIC verification required	not required	
- inter-RAT reporting quantity	· ·	
UTR AN estimated quality	FALSE	
CHOICE system	GSM	
- Observed time difference to GSM cell	FALSE	
reporting indicator		
- GSM carrier RSSI reporting indicator	TRUE	
- Reporting cell status		
CHOICE reported cell		
- Reported cells within active set or within		
virtual active set or of the other RAT		
- Maximum number of reported cells	6	
CHOICE report criteria		
- Periodical reporting criteria		
- Amount of reporting	Infinity	
- Reporting interval	4000	
Physical channel information elements	1000	
- DPCH compressed mode status info	If the UE requires compressed mode (refer ICS/IXIT),	
- Di Oii compressed mode status inio	this IE is present and contains the IEs as follows. If the	
	UE does not require compressed mode (refer ICS/IXIT),	
	this IE is not present.	
TCPS reconfiguration CEN		
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256	
- Transmission gap pattern sequence		
- TGPSI	1 Activate	
- TGPS status flag	Activate	
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256	
- TGPSI	2 Departies to	
- TGPS status flag	Deactivate	

Information Element	Value/remark
- TGCFN	Not present

MEASUREMENT REPORT, if the UE requires compressed mode (refer ICS/IXIT) (Step 1d)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
 Inter-RAT measured result list 	
- CHOICE system	GSM
- Measured GSM cells	
- GSM carrier RSSI	Check to see if present
CHOICE BSIC	Check to see if present
 Observed time difference to GSM cell 	Check that not present
- GSM carrier RSSI	Check to see if present
CHOICE BSIC	Non verified BSIC
- BCCH ARFCN	Check that is set to the correct value according to the
	GSM band under test (see 3GPP 34.123-1 table 6.5 for
	details on the ARFCN)
 Observed time difference to GSM cell 	Check that not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that not present

MEASUREMENT REPORT, if the UE doesn't requires compressed mode (refer ICS/IXIT) (Step 1d)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	list
- CHOICE system	GSM
- Measured GSM cells	
- GSM carrier RSSI	Check to see if present
CHOICE BSIC	verified BSIC
- Inter-RAT cell id	Check that is set to 0
 Observed time difference to GSM cell 	Check that not present
- GSM carrier RSSI	Check to see if present
CHOICE BSIC	Non verified BSIC
- BCCH ARFCN	Check that is set to the correct value according to
	the GSM band under test (see 3GPP 34.123-1 table
	6.5 for details on the ARFCN)
 Observed time difference to GSM cell 	Check that not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that not present

MEASUREMENT REPORT (1.28Mcps TDD) (Step 1d)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	
- GSM carrier RSSI	Check to see if present
CHOICE BSIC	Check to see if present
 Observed time difference to GSM cell 	Check that not present
- GSM carrier RSSI	Check to see if present
CHOICE BSIC	Non verified BSIC
- BCCH ARFCN	Check that is set to the correct value according to the
	GSM band under test (see 3GPP 34.123-1 table 6.5 for
	details on the ARFCN)
 Observed time difference to GSM cell 	Check that not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that not present

HANDOVER FROM UTRAN COMMAND-GSM

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	now
RAB Info	
- R AB identity	0000 0001B
•	The first/ leftmost bit of the bit string contains the most
	significant bit of the RAB identity.
- CN domain identity	CŠ domain
- NAS Synchronization Indicator	Not present
- Re-establishment timer	Use T314
Inter-system message	
- CHOICE System type	GSM
- Frequency Band	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this
	test. Otherwise set to "GSM/DCS 1800 Band"
- CHOICE GSM message	Single GSM message
- Message	GSM HANDOVER COMMAND formatted and coded
	according to GSM specifications as Variable Length BIT
	STRING without Length Indicator. The first/ leftmost/ most
	significant bit of the bit string contains bit 8 of the first octet
	of the GSM message. The contents of the HANDOVER
	COMMAND see next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = speech full rate or half rate version 3

8.3.7.14.5 Test requirement

At step 1b the SS receives a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message indicating the successful download of the compressed mode parameters.

At step 1d the SS receives a MEASUREMENT REPORT message containing the measured results of the GSM cell.

At step 5 the SS receives a handover access burst on the traffic channel of the GSM cell indicating that the UE has switched to the GSM cell.

At step 12 the SS receives a HANDOVER COMPLETE message indicating a successful handover to the GSM cell.

At step 15 SS receives ROUTING AREA UPDATE REQUEST message.

After step 18, SS should either receive DEACTIVATE PDP CONTEXT REQUEST message with cause as "QoS not accepted" or receive a MODIFY PDP CONTEXT ACCEPT message from UE.

8.3.7.15 Inter system handover from UTRAN/To GSM/Speech/Failure(stop of HS-DSCH reception)

8.3.7.15.1 Definition

8.3.7.15.2 Conformance requirement

If the UE does not succeed in establishing the connection to the target radio access technology, it shall:

1> revert back to the UTRA configuration;

NOTE: If configured for HS-DSCH while in UTRA, the UE will have still stored the IEs "Added or Reconfigured MAC-d flow" and "RB mapping Info".

. . .

- 1> transmit the HANDOVER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the HANDOVER FROM UTRAN COMMAND message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "Inter-RAT handover failure" to "physical channel failure".
- 1> When the HANDOVER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:
 - 2> the procedure ends.

Reference(s)

TS 25.331 Clause 8.3.7.5.

8.3.7.15.3 Test purpose

To test that the UE reactivates the old configuration and uses this to transmit a HANDOVER FROM UTRAN FAILURE message to the network including IE "Inter-RAT Handover failure cause" which is set to "physical channel failure", when it receives an HANDOVER FROM UTRAN COMMAND and the connection to GSM for handover can not be established.

To verify that UE stops using the HS-PDSCH configuration after receiving the HANDOVER FROM UTRAN COMMAND.

8.3.7.15.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 9 is GSM. GSM 51.010 clause 26.6.5.1 shall be referenced for the default parameters of cell 9.

UE: Id le state (state 2 or state 7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Related ICS/IXIT statement(s)

- UE supports both GSM and UTRAN Radio Access Technologies,
- UE supports both CS and PS

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS starts the UTRAN cell and brings the UE into call active state (CC state U10) with AMR with configuration [conversational/speech/uplink:12.2 DL:12.2 kbps/CS RAB + interactive/ background UL: 32kbps, DL:(max bit rate depending on UE category) PS RAB + uplink:3.4 DL3.4 kbps SRBs]. PS RAB is configured with HS-DSCH. SS activates a dedicated GSM traffic channel then sends HANDOVER FROM UTRAN COMMAND indicating a dedicated channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. When the UE does not succeed in establishing the connection to the target radio access technology it shall revert back to UTRA configuration establish the UTRA physical channel(s) used at the time for reception of HANDOVER FROM UTRAN COMMAND transmit the HANDOVER FROM UTRAN FAILURE.

Expected sequence

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS brings the UE into UTRAN U10 state and PS
			RAB with HS-DSCH active in cell 1.
2	SS		The SS configures a traffic channel on cell 9 (GSM cell).
3	+	HANDOVER FROMUTRAN COMMAND-GSM	Send on cell 1 (UTRAN cell) and the message indicates: The target channel for GSM FR in GSM Cell.
4	UE		The UE accepts the handover command and switches to
			the GSM traffic channel specified in the HANDOVER
			FROM UTRAN COMMAND-GSM
	,		T1 00 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
5	\rightarrow	HANDOVER ACCESS	The SS receives this burst on the traffic channel of cell 9
			(GSM cell) It implies that the UE has switched to GSM cell.
6	\rightarrow	HANDOVER ACCESS	
7	SS		The target GSM Traffic Channel is Switched off
8	\rightarrow	HANDOVER FROMUTRAN	The SS receives the message via the old UTRAN
		FAILURE	configuration.
			The cause in the IE "inter-RAT change failure" is set to
			"physical channel failure"

Specific message contents

HANDOVER FROM UTRAN COMMAND-GSM

The contents of this message is identical to the HANDOVER FROM UTRAN COMMAND-GSM message specified in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Inter-system message	
- System type	GSM
- Frequency Band	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSWDCS 1800 Band"
- CHOICE GSM message	Single GSM message
- Message	GSM HANDOVER COMMAND formatted as BIT STRING
-	(1512). The contents of the HANDOVER COMMAND see
	next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = speech full rate or half rate version 1

HANDOVER FROM UTRAN FAILURE

The contents of this message is identical to the HANDOVER FROM UTRAN FAILURE message specified in [9] TS 34.108 clause 9.

8.3.7.15.5 Test requirement

After step 4 the SS shall receive HANDOVER FROM UTRAN FAILURE message using the old UTRA configuration. UE shall not resume HS-DSCH reception

8.3.7.16 Inter system handover from UTRAN/To GSM/Simultaneous CS and PS domain services/Success/TBF Establishment Success

8.3.7.16.1 Definition

8.3.7.16.2 Conformance requirement

The purpose of the inter-RAT handover procedure is to, under the control of the network, transfer a connection between the UE and UTRAN to another radio access technology (e.g. GSM). This procedure may be used in CELL_DCH state. This procedure may be used when no RABs are established or when the established RABs are only in the CS do main or when the established RABs are in both CS and PS do mains

The UE shall be able to receive a HANDOVER FROM UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target cell.

. . .

For a UE in CELL_DCH state using both CS and PS Domain services the Inter-RAT handover procedure is based on measurement reports from the UE but initiated from UTRAN.

The UE performs the Inter-RAT handover from UTRA RRC Connected Mode to GSM Connected Mode first. When the UE has sent handover complete message to GSM / BSS the UE initiates a temporary block flow towards GPRS and sends a RA update request.

If the Inter-RAT handover from UTRA RRC Connected Mode to GSM Connected Mode was successful the handover is considered as successful regardless if the UE was able to establish a temporary block flow or not towards GPRS.

In case of Inter-RAT handover failure the UE has the possibility to go back to UTRA RRC Connected Mode and reestablish the connection in the state it originated from

Reference(s)

TS 25.331 Clause 8.3.7, B.6.1

8.3.7.16.3 Test purpose

To test that in UTRAN cell when UE is in speech call active state and PS data call is established, UE performs handover to GSM RAT(cell not supporting DTM) after receiving HANDOVER FROM UTRAN COMMAND.

8.3.7.16.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 9 is GPRS with BCCH. 51.010 clause 40.1.1 shall be referenced for the default parameters, and clause 26.6.5.1 shall be referenced for cell allocation of cell 9

Parameter	Unit	Cell 9 (GSM)
Qsearch_I (TDD)	dBm	15 (never)

UE: Registered Idle Mode on CS/PS (state 7) as specified in clause 7.4 of TS 34.108

Related ICS/IXIT statements

- UE supports both GSM and UTRAN Radio Access Technologies,
- UE supports UTRAN Conversational/Speech UL: 12.2kbps DL: 12.2 kbps /CS RAB+ Interactive or Background UL: 64kbps DL: 64kbps /PS RAB + uplink: 3.4 DL: 3.4 kbps SRBs
- UE supports UE operation mode A: PS and CS simultaneously
- UE supports GPRS operation mode class B
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS, GSM-850, GSM-710, GSM 750, T_GSM-810

Foreseen final state of the UE

UE is in packet Idle mode on cell 9

Test Procedure

The SS brings the UE into call active state (CC state U10) with conversational/speech /uplink: 12.2 DL: 12.2 kbps/CS RAB + UL: 3.4 DL: 3.4 kbps SRBs. During call active state, SS configures PS RAB with Interactive or Background/UL: 64 kbps DL: 64 kbps configuration. The SS configures an appropriate traffic channel on the GSM cell. SS sends a HANDOVER FROM UTRAN COMMAND indicating the traffic channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel of the GSM cell. The SS checks whether the handover is performed by checking that the UE transmits the HANDOVER COMPLETE message to the SS in GSM cell. SS receives GPRS SUSPENSION REQUEST from the UE.

SS disconnects the CS call and releases the RR connection.

Once RR connection is released, an RAU procedure is performed. To check that PDP context is active, SS sends MODIFY PDP CONTEXT REQUEST and assigns new QoS in GPRS cell. The UE may or may not accept the new QoS and replies to the SS accordingly.

Expected sequence

Step	Direction	Message	Comments
	UE SS		
1	\leftrightarrow		The SS brings the UE into UTRAN U10 state in cell 1 with configuration: Conversational/Speech/uplink: 12.2 DL: 12.2 kbps/CS RAB + uplink: 3.4 DL: 3.4 kbps SRBs
			·
2	\leftrightarrow	SS executes Procedure P19 (clause 7.4.2.8.1.2) specified in TS 34.108	Session Setup is initiated from UE side. PS RAB configuration is Interactive/Background UL: 64 kbps DL: 64 kbps/PS RAB + UL: 3.4kbps DL: 3.4kbps SRBs
3		SS	The SS configures a traffic channel on cell 9 for GSM FR
4	+	HANDOVER FROMUTRAN COMMAND	Send on cell 1 (UTRAN cell) and the message indicates: the target channel for GSM
5	UE		The UE accepts the handover command and switches to the GSM traffic channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
6	→	HANDOVER ACCESS	The SS receives this burst on the traffic channel of cell 9 (GSM cell) It implies that the UE has switched to GSM cell.
7	\rightarrow	HANDOVER ACCESS	
8	\rightarrow	HANDOVER ACCESS	
9	\rightarrow	HANDOVER ACCESS	
10	+	PHYSIC AL INFOR MATION	
11	\rightarrow	SABM	
12	+	UA	
13	→	HANDOVER COMPLETE	The SS receives the message on the traffic channel of GSM cell.
14	\rightarrow	GPRS SUSPENSION REQUEST	UE sends GPRS SUSPENSION REQUEST on FACCH. Suspension cause value is not checked
15	+	CHANNEL RELEASE	SS disconnects the CS call and releases the RR connection. The GPRS Resumption IE is included and is set to "resumption of GPRS services successfully acknowledged."
15a	→	CHANNEL REQUEST	The SS receives this burst on the RACH of cell 9(GSM cell).
15b	←	IMMEDIATE ASSIGNMENT	Sent on AGCH.
16	→	ROUTING AREA UPDATE REQUEST	GMM "update type" = 'combined RA/LA updating'
17	+	ROUTING AREA UPDATE ACCEPT	GMM. P-TMSI is included
18	\rightarrow	ROUTING AREA UPDATE COMPLETE	
19	+	MODIFY PDP CONTEXT REQUEST	SS requests the modification of a PDP context, with a new QoS (peak throughput is changed to '0011')
A20	→	MODIFY PDP CONTEXT ACCEPT	UE behaviour type A: Accept the PDP context modification
B20	→	DEACTIVATE PDP CONTEXT REQUEST	UE behaviour type B: Initiate the PDP context deactivation. Cause set to 'QoS not accepted'
B20a	+	DEACTIVATE PDP CONTEXT ACCEPT	UE behaviour type B: Accept the PDP context deactivation.
B20b	→	DETACH REQUEST	UE behaviour type B: A non-auto attach UE may (optionally) send a Detach Request. The SS shall wait up to 'T3390' seconds for the Detach Request.
B20c	+	DETACH ACCEPT	If the UE transmitted a Detach Request message in step B20b then the SS responds with a Detach Accept message.

Specific message contents

HANDOVER FROM UTRAN COMMAND (step 4)

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
RAB Info	
- R AB identity	0000 0001B
	The first/leftmost bit of the bit string contains the most
	significant bit of the RAB identity.
- CN domain identity	CS domain
- NAS Synchronization Indicator	Not present
- Re-establishment timer	Use T314
Inter-system message	
- CHOICE System type	GSM
- Frequency Band	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band"
- CHOICE GSM message	GSM message List
- Message	GSM HANDOVER COMMAND formatted and coded
	according to GSM specifications as BIT STRING (1512).
	The first/ leftmost/ most significant bit of the bit string
	contains bit 8 of the first octet of the GSM message. The
	contents of the HANDOVER COMMAND see next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = speech full rate

8.3.7.16.5 Test requirements

At step 6 the SS receives a handover access burst on the traffic channel of the GSM cell indicating that the UE has switched to the GSM cell.

At step 13 the SS receives a HANDOVER COMPLETE message indicating a successful handover to the GSM cell.

At step 16 SS receives ROUTING AREA UPDATE REQUEST message.

After step 19, SS should either receive DEACTIVATE PDP CONTEXT REQUEST message with cause as "QoS not accepted" or receive a MODIFY PDP CONTEXT ACCEPT message from UE.

8.3.7.17 Inter system handover from UTRAN/To GSM/DTM Support/Simultaneous CS and PS domain services/Success

8.3.7.17.1 Definition

8.3.7.17.2 Conformance requirement

The purpose of the inter-RAT handover procedure is to, under the control of the network, transfer a connection between the UE and UTRAN to another radio access technology (e.g. GSM). This procedure may be used in CELL_DCH state. This procedure may be used when no RABs are established or when the established RABs are only in the CS domain or when the established RABs are in both CS and PS domains

The UE shall be able to receive a HANDOVER FROM UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target cell.

. . .

For a UE in CELL_DCH state using both CS and PS Domain services the Inter-RAT handover procedure is based on measurement reports from the UE but initiated from UTRAN.

The UE performs the Inter-RAT handover from UTRA RRC Connected Mode to GSM Connected Mode first. When the UE has sent handover complete message to GSM / BSS the UE initiates a temporary block flow towards GPRS and sends a RA update request.

If the Inter-RAT handover from UTRA RRC Connected Mode to GSM Connected Mode was successful the handover is considered as successful regardless if the UE was able to establish a temporary block flow or not towards GPRS.

In case of Inter-RAT handover failure the UE has the possibility to go back to UTRA RRC Connected Mode and reestablish the connection in the state it originated from

. . .

The establishment of a packet resource is supported by procedures on the main DCCH when the mobile station is in dedicated mode. The procedures are only applicable to a mobile station supporting DTM with GPRS or EGPRS. The procedures are optional for the network.

These procedures constitute a complement to the corresponding procedures for temporary block flow establishment using CCCH or PCCCH while in idle mode defined in 3GPP TS 04.18 and 3GPP TS 04.60, respectively

. . .

While in dedicated mode, upper layers in the mobile station or in the network may request the transport of GPRS information transparently over the radio interface. This procedure is only applicable when:

- the information from upper layers is signalling information; and
- the GTTP length of the message is below the maximum indicated by the network.

In any other case, the RR procedures related to packet resource establishment while in dedicated mode apply.

The information from upper layers shall be carried inside the GTTP Information message. The GTTP Information message contains:

- the TLLI of the MS; and
- the LLC PDU.

The GTTP messages are sent using "normal" priority at the data link layer. Reference(s)

TS 25.331 Clause 8.3.7, B.6.1, TS 04.18 Clause 3.4.26

8.3.7.17.3 Test purpose

To verify that in UTRAN cell when UE (supporting DTM) is in speech call active state and PS data call is established, UE performs handover to GSM RAT after receiving HANDOVER FROM UTRAN COMMAND.

8.3.7.17.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 9 is GPRS with BCCH. 51.010 clause 40.1.1 shall be referenced for the default parameters, and clause 26.6.5.1 shall be referenced for cell allocation of cell 9

DTM support is indicated in SI6 for cell 9. MAX_LAPDm is set to 111.

UE: Registered Idle Mode on CS/PS (state 7) as specified in clause 7.4 of TS 34.108

Related ICS/IXIT statements

- UE supports both GSM and UTRAN Radio Access Technologies,
- UE supports UTRAN Conversational/Speech UL: 12.2kbps DL: 12.2 kbps /CS RAB+ Interactive or Background UL: 64kbps DL: 64kbps /PS RAB + uplink: 3.4 DL: 3.4 kbps SRBs
- UE supports UE operation mode A: PS and CS simultaneously
- UE supports DTM
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS, GSM-850, GSM-710, GSM 750, T_GSM-810

Foreseen final state of the UE

UE is in CC state U10 and packet Idle mode on cell 9

Test Procedure

The SS brings the UE into call active state (CC state U10) with conversational/speech /uplink: 12.2 DL: 12.2 kbps/CS RAB + UL: 3.4 DL: 3.4 kbps SRBs. During call active state, SS configures PS RAB with Interactive or Background/UL: 64 kbps DL: 64 kbps configuration. The SS configures an appropriate traffic channel on the GSM cell. SS sends a HANDOVER FROM UTRAN COMMAND indicating the traffic channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel of the GSM cell. The SS checks whether the handover is performed by checking that the UE transmits the HANDOVER COMPLETE message to the SS in GSM cell. The RAU procedure is performed.

To check that PDP context is active, SS sends MODIFY PDP CONTEXT REQUEST and assigns new QoS in GPRS cell. The UE may or may not accept the new QoS and replies to the SS accordingly.

Expected sequence

Step	Direction	Message	Comments
· •	UE SS	1	
1	\leftrightarrow		The SS brings the UE into UTRAN U10 state in cell 1 with configuration: Conversational/Speech/uplink: 12.2 DL: 12.2 kbps/CS RAB + uplink: 3.4 DL: 3.4 kbps SRBs
2	\leftrightarrow	SS executes Procedure P19 (clause 7.4.2.8.1.2) specified in TS 34.108	Session Setup is initiated from UE side. PS RAB configuration is Interactive/Background UL: 64 kbps DL: 64 kbps/PS RAB + UL: 3.4kbps DL: 3.4kbps SRBs
3	\leftrightarrow	SS	The SS configures a traffic channel on cell 9 for GSM FR
4	+	HANDOVER FROMUTRAN COMMAND	Send on cell 1 (UTRAN cell) and the message indicates: the target channel for GSM
5	UE		The UE accepts the handover command and switches to the GSM traffic channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
6	→	HANDOVER ACCESS	The SS receives this burst on the traffic channel of cell 9 (GSM cell) It implies that the UE has switched to GSM cell.
7	→	HANDOVER ACCESS	
8	\rightarrow	HANDOVER ACCESS	
9	\rightarrow	HANDOVER ACCESS	
10	+	PHYSICAL INFORMATION	
11	→	SABM	
12	+	UA	
13	→	HANDOVER COMPLETE	The SS receives the message on the traffic channel of GSM cell.
14	+	DTM INFORMATION	MAX_LAPDm set to 111.
15	→	GPRS INFORMATION	Contains the ROUTING AREAUPDATE REQUEST message.
16	+	GPRS INFORMATION	Contains the ROUTING AREA UPD ATE ACCEPT message, reallocating the UEs P-TMSI to C2345678Hex.
17	→	GPRS INFORMATION	Contains the ROUTING AREAUPDATE COMPLETE message.
18	+	GPRS INFOR MATION	Contains the MODIFY PDP CONTEXT REQUEST to request the modification of a PDP context, with a new QoS (peak throughput is changed to '0011')
A19	\rightarrow	GPRS INFORMATION	Contains the MODIFY PDP CONTEXT ACCEPT to accept the PDP Context modification.
B19	→	GPRS INFORMATION	Contains the DEACTIVATE PDP CONTEXT REQUEST. Cause set to 'QoS not accepted'
B20	+	GPRS INFORMATION	Contains the DEACTIVATE PDP CONTEXT ACCEPT to accept the PDP context deactivation. Steps B21-B22 are optional
B21 (Option al)	→	GPRS INFORMATION	Contains the DETACH REQUEST. This is sent optionally by a non-auto attach UE. behaviour type B: The SS shall wait up to 'T3390' seconds for the DETACH REQUEST.
B22 (Option al)	+	GPRS INFORMATION	Contains the DETACH ACCEPT.

NOTE: The UE follows either branch A or B after step 18

Specific message contents

HANDOVER FROM UTRAN COMMAND (step 4)

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
RAB Info	
- R AB identity	0000 0001B
	The first/leftmost bit of the bit string contains the most
	significant bit of the RAB identity.
- CN domain identity	CS domain
 NAS Synchronization Indicator 	Not present
- Re-establishment timer	Use T314
Inter-system message	
- CHOICE System type	GSM
- Frequency Band	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band"
- CHOICE GSM message	GSM message List
- Message	GSM HANDOVER COMMAND formatted and coded
	according to GSM specifications as BIT STRING (1512).
	The first/ leftmost/ most significant bit of the bit string
	contains bit 8 of the first octet of the GSM message. The contents of the HANDOVER COMMAND see next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND in clause 26.6.5.1 of TS 3GPP 51.010-1.

8.3.7.17.5 Test requirements

At step 6 the SS receives a handover access burst on the traffic channel of the GSM cell indicating that the UE has switched to the GSM cell.

At step 13 the SS receives a HANDOVER COMPLETE message indicating a successful handover to the GSM cell.

At step 15 SS receives ROUTING AREA UPDATE REQUEST message.

After step 18, SS should either receive DEACTIVATE PDP CONTEXT REQUEST message with cause as "QoS not accepted" or receive a MODIFY PDP CONTEXT ACCEPT message from UE

8.3.8 Inter system cell reselection to UTRAN

[Editor's note: This test is FFS until R2000 core specification will be defined.]

8.3.9 Inter system cell reselection from UTRAN

If not specified differently in the individual tests of this group, the Contents of System Information Block type 12 (FDD) shall be as specified in the following table:

EACH measurement accession info	Not Procent
- FACH measurement occasion info	Not Present
- Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system	
information	
- Intra-frequency measurement identity	Not Present
, , , , , , , , , , , , , , , , , , , ,	Absence of this IE is equivalent to default value 1
- Intra-frequency cell info list	7 60 611 60 61 1110 12 10 equivalent to delidat value 1
- CHOICE intra-frequency cell removal	NULL
	NULL
removeNoIntraFreqCells:	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
 Cell individual offset 	Not present
	Absence of this IE is equivalent to default value 0dB
- Reference time difference to cell	Not present .
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2
- Fillinary Scrambling code	
	(FDD)" in clause 6.1.4 of 3GPP TS 34.108.
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
 Cell Selection and Re-selection info 	Not present
	For neighbouring cell, if HCS is not used and all the
	parameters in cell selection and re-selection info are
	Default value, this IE is absent.
- Intra-frequency cell id	3
- Cell info	Same content as specified for Intra-frequency cell
- Gen inio	id=2 with the exception that value for Primary
	scrambling code shall be according to clause titled
	"Default settings for cell No.3 (FDD)" in clause 6.1.4
	of 3GPP TS 34.108.
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter coefficient	Not present
	Absence of this IE is equivalent to the default value 0
- CHOICE mode	FDD
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for R ACH	Not Present
	Not i lesent
Reporting	N . D
- Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronization information reporting	FALSE
indicator	
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
	FALSE
- CPICH Ec/N0 reporting indicator	
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
 Cell synchronization information reporting 	TRUE
indicator	
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE

- Reporting quantities for detected set cells	Not Present
- Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting	Event trigger
Mode	
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Intra-frequency measurement reporting criteria	intia inequency ineastrement reporting cinena
- Parameters required for each event	3 kinds
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range Constant	10 (5 dB)
- Cells forbidden to affect Reporting range	Not Present
- W	10 (1.0)
- Hysteresis	0 (0.0)
- Threshold Used Frequency	Not Present
- Reporting deactivation threshold	2
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	4
- Reporting interval	4 000
- Reporting cell status	4 000
- CHOICE reported cell	Report cell within active set and/or monitored set
- OF OIGH Teported cell	
Marian was assessed as a fine a set of a self-	cells on used frequency
- Maximum number of reported cells	3
- Intra-frequency event identity	16
- Triggering condition 1	Active set cells
- Triggering condition 2	Not Present
- Reporting Range Constant	10 (5 dB)
- Cells forbidden to affect Reporting range	Not Present
- W	10 (1.0)
- Hysteresis	0 (0.0)
- Threshold Used Frequency	Not Present
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	Trott Tooding
- CHOICE reported cell	Report cell within active set and/or monitored set
Official reported cell	cells on used frequency
Maximum number of reported cells	' '
- Maximum number of reported cells	3
- Intra-frequency event identity	10
- Triggering condition 1	Not Present
- Triggering condition 2	Not Present
- Reporting Range Constant	Not Present
- Cells forbidden to affect Reporting range	Not Present
- W	Not Present
- Hysteresis	0 (0.0)
- Threshold Used Frequency	Not Present
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	3
- Time to trigger	640
- Amount of reporting	4
- Reporting interval	4 000
- Reporting cell status	
- CHOICE reported cell	
	Report cell within active set and/or monitored set
- Choice reported cell	Report cell within active set and/or monitored set
·	cells on used frequency
- Maximum number of reported cells	
- Maximum number of reported cells - Inter-frequency measurement system	cells on used frequency
- Maximum number of reported cells - Inter-frequency measurement system information	cells on used frequency
- Maximum number of reported cells - Inter-frequency measurement system information - Inter-frequency cell info list	cells on used frequency 3
- Maximum number of reported cells - Inter-frequency measurement system information	cells on used frequency 3 Not present
- Maximum number of reported cells - Inter-frequency measurement system information - Inter-frequency cell info list - CHOICE Inter-frequency cell removal	cells on used frequency 3
- Maximum number of reported cells - Inter-frequency measurement system information - Inter-frequency cell info list - CHOICE Inter-frequency cell removal - New inter-frequency cells	Cells on used frequency 3 Not present (This IE shall be ignored by the UE for SIB11)
- Maximum number of reported cells - Inter-frequency measurement system information - Inter-frequency cell info list - CHOICE Inter-frequency cell removal - New inter-frequency cells - Inter frequency cell id	cells on used frequency 3 Not present
- Maximum number of reported cells - Inter-frequency measurement system information - Inter-frequency cell info list - CHOICE Inter-frequency cell removal - New inter-frequency cells - Inter frequency cell id - Frequency info	Cells on used frequency 3 Not present (This IE shall be ignored by the UE for SIB11)
- Maximum number of reported cells - Inter-frequency measurement system information - Inter-frequency cell info list - CHOICE Inter-frequency cell removal - New inter-frequency cells - Inter frequency cell id	Cells on used frequency 3 Not present (This IE shall be ignored by the UE for SIB11)

- UARFCN uplink(Nu)	Not present Absence of this IE is equivalent to apply the default
- UARFCN downlink(Nd)	duplex distance defined for the operating frequency according to 3GPP TS 25.101 [11] Reference to table 6.1.2 of 3GPP TS 34.108 for Cell
	4
- Cell info	Network
- Cell individual offset	Not present Absence of this IE is equivalent to default value 0 dB
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.4
	(FDD)" in clause 6.1.4 of 3GPP TS 34.108.
- Primary CPICH Tx power	Not present FALSE
- TX Diversity Indicator - Cell Selection and Re-selection Info	Not present (same values as for serving cell applies)
- Inter frequency cell id	5
- Frequency info	
- CHOICE mode	FDD
- UARFCN uplink(Nu)	Not present.
	Absence of this IE is equivalent to apply the default
	duplex distance defined for the operating frequency
LIARECN downlink(Nd)	according to 3GPP TS 25.101 [11] Reference to table 6.1.2 of 3GPP TS 34.108 for Cell
- UARFCN downlink(Nd)	5
- Cell info	Same content as specified for Inter-frequency cell
	id=4 with the exception that value for Primary
	scrambling code shall be according to clause titled
	"Default settings for cell No.5 (FDD)" in clause 6.1.4
Inter frequency cell id	of 3GPP TS 34.108.
 Inter frequency cell id Frequency info 	O
- CHOICE mode	FDD
- UARFCN uplink(Nu)	Not present
	Absence of this IE is equivalent to apply the default
	duplex distance defined for the operating frequency
LIADECNI dovunijak/Nd\	according to 3GPP TS 25.101 [11] Reference to table 6.1.2 of 3GPP TS 34.108 for Cell
- UARFCN downlink(Nd)	Reference to table 6.1.2 of 3GPP 13 34.106 for Cell
- Cell info	6
- Cell info	
- Cell info	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled
	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4
- Cell for measurement	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present
- Cell for measurement - Inter-RAT measurement system information	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4
- Cell for measurement	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present
- Cell for measurement - Inter-RAT measurement system information - Inter-RAT measurement system information	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present Not Present Not Present
- Cell for measurement - Inter-RAT measurement system information - Inter-RAT measurement system information - Inter-RAT cell info list - CHOICE Inter-RAT cell removal	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present Not Present
- Cell for measurement - Inter-RAT measurement system information - Inter-RAT measurement system information - Inter-RAT cell info list - CHOICE Inter-RAT cell removal - New inter-RAT cells	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present Not Present Not Present (This IE shall be ignored by the UE for SIB11)
- Cell for measurement - Inter-RAT measurement system information - Inter-RAT measurement system information - Inter-RAT cell info list - CHOICE Inter-RAT cell removal - New inter-RAT cells - Inter-RAT cell id	Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present Not Present Not Present (This IE shall be ignored by the UE for SIB11)
- Cell for measurement - Inter-RAT measurement system information - Inter-RAT measurement system information - Inter-RAT cell info list - CHOICE Inter-RAT cell removal - New inter-RAT cells	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present Not Present Not Present (This IE shall be ignored by the UE for SIB11)
- Cell for measurement - Inter-RAT measurement system information - Inter-RAT measurement system information - Inter-RAT cell info list - CHOICE Inter-RAT cell removal - New inter-RAT cells - Inter-RAT cell id - CHOICE Radio Access Technology	Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present Not Present Not Present (This IE shall be ignored by the UE for SIB11)
- Cell for measurement - Inter-RAT measurement system information - Inter-RAT measurement system information - Inter-RAT cell info list - CHOICE Inter-RAT cell removal - New inter-RAT cells - Inter-RAT cell id - CHOICE Radio Access Technology - GSM	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present Not Present Not Present (This IE shall be ignored by the UE for SIB11) 9 GSM
- Cell for measurement - Inter-RAT measurement system information - Inter-RAT measurement system information - Inter-RAT cell info list - CHOICE Inter-RAT cell removal - New inter-RAT cells - Inter-RAT cell id - CHOICE Radio Access Technology - GSM - Cell individual offset - Cell selection and re-selection info - BSIC	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present Not Present Not Present (This IE shall be ignored by the UE for SIB11) 9 GSM 0 (0 dB) Not Present
- Cell for measurement - Inter-RAT measurement system information - Inter-RAT measurement system information - Inter-RAT cell info list - CHOICE Inter-RAT cell removal - New inter-RAT cells - Inter-RAT cell id - CHOICE Radio Access Technology - GSM - Cell individual offset - Cell selection and re-selection info - BSIC - Base transceiver Station Identity Code	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present Not Present Not Present (This IE shall be ignored by the UE for SIB11) 9 GSM 0 (0 dB) Not Present Reference to table 6.1.10 of 3GPP TS 34.108. for
- Cell for measurement - Inter-RAT measurement system information - Inter-RAT measurement system information - Inter-RAT cell info list - CHOICE Inter-RAT cell removal - New inter-RAT cells - Inter-RAT cell id - CHOICE Radio Access Technology - GSM - Cell individual offset - Cell selection and re-selection info - BSIC - Base transceiver Station Identity Code (BSIC)	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present Not Present Not Present (This IE shall be ignored by the UE for SIB11) 9 GSM 0 (0 dB) Not Present Reference to table 6.1.10 of 3GPP TS 34.108. for Cell 9
- Cell for measurement - Inter-RAT measurement system information - Inter-RAT measurement system information - Inter-RAT cell info list - CHOICE Inter-RAT cell removal - New inter-RAT cells - Inter-RAT cell id - CHOICE Radio Access Technology - GSM - Cell individual offset - Cell selection and re-selection info - BSIC - Base transceiver Station Identity Code	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present Not Present Not Present (This IE shall be ignored by the UE for SIB11) 9 GSM 0 (0 dB) Not Present Reference to table 6.1.10 of 3GPP TS 34.108. for
- Cell for measurement - Inter-RAT measurement system information - Inter-RAT measurement system information - Inter-RAT cell info list - CHOICE Inter-RAT cell removal - New inter-RAT cells - Inter-RAT cell id - CHOICE Radio Access Technology - GSM - Cell individual offset - Cell selection and re-selection info - BSIC - Base transceiver Station Identity Code (BSIC) - Band indicator	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present Not Present Not Present (This IE shall be ignored by the UE for SIB11) 9 GSM 0 (0 dB) Not Present Reference to table 6.1.10 of 3GPP TS 34.108. for Cell 9 According to PICS/PIXIT
- Cell for measurement - Inter-RAT measurement system information - Inter-RAT measurement system information - Inter-RAT cell info list - CHOICE Inter-RAT cell removal - New inter-RAT cells - Inter-RAT cell id - CHOICE Radio Access Technology - GSM - Cell individual offset - Cell selection and re-selection info - BSIC - Base transceiver Station Identity Code (BSIC) - Band indicator - BCCH ARFCN	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present Not Present Not Present (This IE shall be ignored by the UE for SIB11) 9 GSM 0 (0 dB) Not Present Reference to table 6.1.10 of 3GPP TS 34.108. for Cell 9 According to PICS/PIXIT Reference to table 6.1.10 of 3GPP TS 34.108. for Cell 9 10
- Cell for measurement - Inter-RAT measurement system information - Inter-RAT measurement system information - Inter-RAT cell info list - CHOICE Inter-RAT cell removal - New inter-RAT cells - Inter-RAT cell id - CHOICE Radio Access Technology - GSM - Cell individual offset - Cell selection and re-selection info - BSIC - Base transceiver Station Identity Code (BSIC) - Band indicator - BCCH ARFCN - Inter-RAT cell id - CHOICE Radio Access Technology	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present Not Present Not Present (This IE shall be ignored by the UE for SIB11) 9 GSM 0 (0 dB) Not Present Reference to table 6.1.10 of 3GPP TS 34.108. for Cell 9 According to PICS/PIXIT Reference to table 6.1.10 of 3GPP TS 34.108. for Cell 9
- Cell for measurement - Inter-RAT measurement system information - Inter-RAT measurement system information - Inter-RAT cell info list - CHOICE Inter-RAT cell removal - New inter-RAT cells - Inter-RAT cell id - CHOICE Radio Access Technology - GSM - Cell individual offset - Cell selection and re-selection info - BSIC - Base transceiver Station Identity Code (BSIC) - Band indicator - BCCH ARFCN - Inter-RAT cell id - CHOICE Radio Access Technology - GSM	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present Not Present Not Present (This IE shall be ignored by the UE for SIB11) 9 GSM 0 (0 dB) Not Present Reference to table 6.1.10 of 3GPP TS 34.108. for Cell 9 According to PICS/PIXIT Reference to table 6.1.10 of 3GPP TS 34.108. for Cell 9 10 GSM
- Cell for measurement - Inter-RAT measurement system information - Inter-RAT measurement system information - Inter-RAT cell info list - CHOICE Inter-RAT cell removal - New inter-RAT cells - Inter-RAT cell id - CHOICE Radio Access Technology - GSM - Cell individual offset - Cell selection and re-selection info - BSIC - Base transceiver Station Identity Code (BSIC) - Band indicator - BCCH ARFCN - Inter-RAT cell id - CHOICE Radio Access Technology	6 Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Not present Not Present Not Present (This IE shall be ignored by the UE for SIB11) 9 GSM 0 (0 dB) Not Present Reference to table 6.1.10 of 3GPP TS 34.108. for Cell 9 According to PICS/PIXIT Reference to table 6.1.10 of 3GPP TS 34.108. for Cell 9 10

- BSIC - Base transceiver Sta	ation Identity Code	Reference to table 6.1.10 for Cell 10
(BSIC)		
- Band indicator		According to PICS/PIXITs
- BCCH ARFCN		Reference to table 6.1.10 of 3GPP TS 34.108. for
		Cell 10
- Cell for measurement		Not present

If not specified differently in the individual tests of this group, the Contents of System Information Block type 12 (1.28Mcps TDD) shall be as specified in the following table:

- FACH measurement occasion info	Not Present
- Measurement control system information - Use of HCS	Not used
- Cell selection and reselection quality	CPICH RSCP
measureCell	or lorricor
- Intra-frequency measurement system	
information	
- Intra-frequency measurement identity	Not Present Absence of this IE is equivalent to default value 1
- Intra-frequency cell info list	7 Booties of the 12 to equivalent to delaut value 1
- CHOICE intra-frequency cell removal	Not present
·	(This IE shall be ignored by the UE for SIB11)
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	Netween
- Cell individual offset	Not present Absence of this IE is equivalent to default value 0dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 of 3GPP TS 34.108 Default
D: OODOUTY	settings for cell
- Primary CCPCH TX power - Timeslot list	Not Present Not Present
- Timesionist - CHOICE TDD option	Not Present
- 1.28 Mcps TDD	
- Timeslot number	Not Present
- Cell Selection and Re-selection info	Not Present
	(The IE shall be absent as this is the serving cell)
	,
- Intra-frequency cell id	3
- Intra-frequency cell id - Cell info	3 Same content as specified for intra-frequency cell
	3 Same content as specified for intra-frequency cell id=2 with the exception that value for Cell
	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled
	3 Same content as specified for intra-frequency cell id=2 with the exception that value for Cell
- Cell info	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled "Default settings for cell No.3(TDD)" in clause 6.1.4
- Cell info - Cell for measurement - Intra-frequency measurement quantity	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled "Default settings for cell No.3(TDD)" in clause 6.1.4 of 3GPP TS 34.108 Not Present
- Cell info	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled "Default settings for cell No.3(TDD)" in clause 6.1.4 of 3GPP TS 34.108 Not Present Not present
- Cell info - Cell for measurement - Intra-frequency measurement quantity - Filter coefficient	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled "Default settings for cell No.3(TDD)" in clause 6.1.4 of 3GPP TS 34.108 Not Present Not present Absence of this IE is equivalent to the default value 0
- Cell info - Cell for measurement - Intra-frequency measurement quantity - Filter coefficient - CHOICE mode	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled "Default settings for cell No.3(TDD)" in clause 6.1.4 of 3GPP TS 34.108 Not Present Not present
- Cell info - Cell for measurement - Intra-frequency measurement quantity - Filter coefficient - CHOICE mode - Measurement quantity list	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled "Default settings for cell No.3(TDD)" in clause 6.1.4 of 3GPP TS 34.108 Not Present Not present Absence of this IE is equivalent to the default value 0 TDD
- Cell info - Cell for measurement - Intra-frequency measurement quantity - Filter coefficient - CHOICE mode	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled "Default settings for cell No.3(TDD)" in clause 6.1.4 of 3GPP TS 34.108 Not Present Not present Absence of this IE is equivalent to the default value 0
- Cell info - Cell for measurement - Intra-frequency measurement quantity - Filter coefficient - CHOICE mode - Measurement quantity list - Measurement quantity - Intra-frequency reporting quantity for RACH Reporting	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled "Default settings for cell No.3(TDD)" in clause 6.1.4 of 3GPP TS 34.108 Not Present Not present Absence of this IE is equivalent to the default value 0 TDD P-CCPCH RSCP Not Present
- Cell info - Cell for measurement - Intra-frequency measurement quantity - Filter coefficient - CHOICE mode - Measurement quantity list - Measurement quantity - Intra-frequency reporting quantity for RACH Reporting - Maximum number of reported cells on RACH	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled "Default settings for cell No.3(TDD)" in clause 6.1.4 of 3GPP TS 34.108 Not Present Not present Absence of this IE is equivalent to the default value 0 TDD P-CCPCH RSCP
- Cell for measurement - Intra-frequency measurement quantity - Filter coefficient - CHOICE mode - Measurement quantity list - Measurement quantity - Intra-frequency reporting quantity for RACH Reporting - Maximum number of reported cells on RACH - Reporting information for state CELL_DCH	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled "Default settings for cell No.3(TDD)" in clause 6.1.4 of 3GPP TS 34.108 Not Present Not present Absence of this IE is equivalent to the default value 0 TDD P-CCPCH RSCP Not Present
- Cell for measurement - Intra-frequency measurement quantity - Filter coefficient - CHOICE mode - Measurement quantity list - Measurement quantity - Intra-frequency reporting quantity for RACH Reporting - Maximum number of reported cells on RACH - Reporting information for state CELL_DCH - Intra-frequency reporting quantity	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled "Default settings for cell No.3(TDD)" in clause 6.1.4 of 3GPP TS 34.108 Not Present Not present Absence of this IE is equivalent to the default value 0 TDD P-CCPCH RSCP Not Present
- Cell for measurement - Intra-frequency measurement quantity - Filter coefficient - CHOICE mode - Measurement quantity list - Measurement quantity - Intra-frequency reporting quantity for RACH Reporting - Maximum number of reported cells on RACH - Reporting information for state CELL_DCH - Intra-frequency reporting quantity - Reporting quantities for active set cells	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled "Default settings for cell No.3(TDD)" in clause 6.1.4 of 3GPP TS 34.108 Not Present Not present Absence of this IE is equivalent to the default value 0 TDD P-CCPCH RSCP Not Present Not Present Not Present
- Cell for measurement - Intra-frequency measurement quantity - Filter coefficient - CHOICE mode - Measurement quantity list - Measurement quantity - Intra-frequency reporting quantity for RACH Reporting - Maximum number of reported cells on RACH - Reporting information for state CELL_DCH - Intra-frequency reporting quantity	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled "Default settings for cell No.3(TDD)" in clause 6.1.4 of 3GPP TS 34.108 Not Present Not present Absence of this IE is equivalent to the default value 0 TDD P-CCPCH RSCP Not Present
- Cell for measurement - Intra-frequency measurement quantity - Filter coefficient - CHOICE mode - Measurement quantity list - Measurement quantity - Intra-frequency reporting quantity for RACH Reporting - Maximum number of reported cells on RACH - Reporting information for state CELL_DCH - Intra-frequency reporting quantity - Reporting quantities for active set cells - Cell synchronization information reporting	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled "Default settings for cell No.3(TDD)" in clause 6.1.4 of 3GPP TS 34.108 Not Present Not present Absence of this IE is equivalent to the default value 0 TDD P-CCPCH RSCP Not Present Not Present Not Present
- Cell for measurement - Intra-frequency measurement quantity - Filter coefficient - CHOICE mode - Measurement quantity list - Measurement quantity - Intra-frequency reporting quantity for RACH Reporting - Maximum number of reported cells on RACH - Reporting information for state CELL_DCH - Intra-frequency reporting quantity - Reporting quantities for active set cells - Cell synchronization information reporting indicator - Cell identity reporting indicator - CHOICE mode	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled "Default settings for cell No.3(TDD)" in clause 6.1.4 of 3GPP TS 34.108 Not Present Not present Absence of this IE is equivalent to the default value 0 TDD P-CCPCH RSCP Not Present Not Present TRUE TRUE TRUE
- Cell for measurement - Intra-frequency measurement quantity - Filter coefficient - CHOICE mode - Measurement quantity list - Measurement quantity - Intra-frequency reporting quantity for RACH Reporting - Maximum number of reported cells on RACH - Reporting information for state CELL_DCH - Intra-frequency reporting quantity - Reporting quantities for active set cells - Cell synchronization information reporting indicator - Cell identity reporting indicator - CHOICE mode - Timeslot ISCP reporting indicator	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled "Default settings for cell No.3(TDD)" in clause 6.1.4 of 3GPP TS 34.108 Not Present Not present Absence of this IE is equivalent to the default value 0 TDD P-CCPCH RSCP Not Present Not Present TRUE
- Cell for measurement - Intra-frequency measurement quantity - Filter coefficient - CHOICE mode - Measurement quantity list - Measurement quantity - Intra-frequency reporting quantity for RACH Reporting - Maximum number of reported cells on RACH - Reporting information for state CELL_DCH - Intra-frequency reporting quantity - Reporting quantities for active set cells - Cell synchronization information reporting indicator - Cell identity reporting indicator - CHOICE mode	Same content as specified for intra-frequency cell id=2 with the exception that value for Cell Parameters ID shall be according to clause titled "Default settings for cell No.3(TDD)" in clause 6.1.4 of 3GPP TS 34.108 Not Present Not present Absence of this IE is equivalent to the default value 0 TDD P-CCPCH RSCP Not Present Not Present TRUE TRUE TRUE

- Pathloss reporting indicator	FALSE
 Reporting quantities for monitored set cells Cell synchronization information reporting 	FALSE
indicator	I ALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TSGN reporting required	FALSE
 P-CCPCH RSCP reporting indicator Pathloss reporting indicator 	TRUE FALSE
Reporting quantities for detected set cells	Not Present
- Measurement reporting mode	Trott room
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger	Event trigger
Reporting Mode	
-CHOICE report criteria	
- Intra-frequency measurement reporting	
criteria	
- Parameters required for each event	10
 Intra-frequency event identity Triggering condition1 	1g Not Present
- Triggering condition2	Not Present
- Reporting Range Constant	Not Present
- cells forbidden to affect reporting range	Not Present
- W(optional in case of 1a,1b)	Not Present
- Hysteresis	0.0
- Threshold used frequency	Not Present
- Reporting deactivation threshold	3
- Replacement activation threshold	Not Present
 Time to trigger Amount of reporting 	640 4
- Reporting interval	4000
- Reporting cell status	
- CHOICE reported cells	Report cell within active set and/or monitored cells
·	on used frequency
 Maximum number of reported cells 	3
- Inter-frequency measurement system	
information	
- Inter-frequency cell info list	Nothropant
- CHOICE Inter-frequency cell removal	Not present (This IE shall be ignored by the UE for SIB11)
- New inter-frequency cells	
- Inter frequency cell id	4
- Frequency info	
- CHOICE mode	TDD
- UARFCN (Nt)	Reference to table 6.1.7 of 3GPP TS 34.108 for Cell
	4
- Cell info	
- Cell individual offset	Not present
Peteranee time difference to call	Absence of this IE is equivalent to default value 0dB Not present
Reference time difference to cell Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info	Refer to clause titled "Default settings for cell No.4
Timuly Got Girinio	(TDD)" in clause 6.1.4 of 3GPP TS 34.108
- Primary CCPCH Tx power	Not present
- TX Diversity Indicator	FALSE
 Cell Selection and Re-selection Info 	Not present (same values as for serving cell applies)
- Inter frequency cell id	5
- Frequency info	Not Present
	Absence of this IE is equivalent to value of the
- Cell info	previous "frequency info" in the list. Same content as specified for Inter-frequency cell
	id=4 with the exception that value for Cell
	parameters ID shall be according to clause titled
	"Default settings for cell No.5 (TDD)" in clause 6.1.4
	of 3GPP TS 34.108
- Inter frequency cell id	[6

- Frequency info	Not Present Absence of this IE is equivalent to value of the
	previous "frequency info" in the list.
- Cell info	Same content as specified for Inter-frequency cell
	id=4 with the exception that value for Cell
	parameters ID shall be according to clause titled "Default settings for cell No.6 (TDD)" in clause 6.1.4
	of 3GPP TS 34.108
- Cell for measurement	Not present
- Inter-RAT measurementsystem information	
- Inter-RAT cell info list	
- CHOICE Inter-RAT cell removal	Not Present
- New inter-RAT cells	(This IE shall be ignored by the UE for SIB11)
- Inter-RAT cell id	9
- CHOICE Radio Access Technology	GSM
- GSM	
- Cell individual offset	0
- Cell selection and re-selection info	Not Present
- BSIC	Deference to table 6.4.40 of 2CDD TC 24.400 for
- Base transceiver Station Identity Code (BSIC)	Reference to table 6.1.10 of 3GPP TS 34.108 for Cell 9
- Band indicator	According to PICS/PIXIT
- BCCH ARFCN	Reference to table 6.1.10 of 3GPP TS 34.108 for
	Cell 9
- Inter-R AT cell id	10
- CHOICE Radio Access Technology - GSM	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not Present
- BSIC	Defense on to table 0.4.40 of 20DD T0.24.400 for
- Base transceiver Station Identity Code (BSIC)	Reference to table 6.1.10 of 3GPP TS 34.108 for Cell 10
- Band indicator	According to PICS/PIXITs
- BCCH ARFCN	Reference to table 6.1.10 of 3GPP TS 34.108 for Cell 10
- Cell for measurement	Not present
- Traffic volume measurement system information	Not Present

8.3.9.1 Cell reselection if cell becomes barred or S<0; UTRAN to GPRS (CELL_FACH)

8.3.9.1.1 Definition

Test to verify that if both a GSM/GPRS and UTRAN network is available, the UE performs cell reselection from UTRAN to GSM/GPRS if the UTRAN cell becomes barred or S falls below zero.

8.3.9.1.2 Conformance requirement

- 1. The purpose of the inter-RAT cell reselection procedure from UTRAN is to transfer, under the control of the UE and to some extent the UTRAN, a connection between the UE and UTRAN to another radio access technology (e.g. GSM/GPRS).
- 2. This procedure is applicable in states CELL_FACH, CELL_PCH or URA_PCH. When the UE based on received system information makes a cell reselection to a radio access technology other than UTRAN, e.g. GSM/GPRS, according to the criteria specified in [4], the UE shall:
- 1> If the NAS procedures associated with inter-system change specified in [5] require the establishment of a connection:
 - 2> initiate the establishment of a connection to the target radio access technology according to its specifications.
- 3. When the UE has succeeded in reselecting a cell in the target radio access technology, the UE shall:

1> release all UTRAN specific resources.

References

TS 25.331, clause 8.3.9

8.3.9.1.3 Test purpose

- 1. To verify that the UE performs reselection from UTRAN to GPRS in the state CELL_FACH on the following occasions:
 - Serving cell becomes barred.
 - S<0 for serving cell.
- 2. To verify when the UE has succeeded in reselecting a cell in the target radio access technology and has initiated the establishment of a connection, it shall release all UTRAN specific resources.

8.3.9.1.4 Method of test

Initial conditions

System Simulator: 3 cells – Cell 1 is UTRAN FDD, Cell 2 is GPRS and Cell 3 is GSM. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2. 51.010 clause 26.6.5.1 shall be referenced for the default parameters of cell 3. When executing the test in FDD band II or FDD band VIII cell 1 shall use the low range UARFCN, defined in TS 34.108 clause 5.1.1. This is to avoid the FDD band overlapping with the GSM band under test.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

The Inter-RAT Cell Info List of Cell 1 (UTRAN) refers to Cell 2 (GPRS) and Cell 3 (GSM).

The 3G Neighbour Cell Description of Cell 2 (GPRS) and Cell 3 (GSM) refers to Cell 1 (UTRAN).

UE: Power-Off (State 1) as specified in clause 7.4 of TS 34.108.

In SIB3 and SIB4 the IE "SearchRAT", is set to value "20dB" in Cell 1 (UTRAN).

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-850, GSM-PCS, GSM-710, GSM 750, T_GSM-810

Step a-c:

Parameter	Unit	Cell 1 (UTRAN)
Test Channel		1
CPICH Ec (FDD)	dBm / 3.84 MHz	-60
P-CCPCH RSCP (TDD)	dBm	-60
Srxlev*	dB	19
CellBarred		Not barred

Parameter	Unit	Cell 2 (GPRS)
Test Channel		1
RF Signal Level	dBm	-75
RXLEV_ACCESS_MIN	dBm	-100
C1*	dBm	25
FDD_Qmin	dB	-20
FDD_Qoffset	dBm	0

Parameter	Unit	Cell 3 (GSM)
Test Channel		2
RF Signal Level	dBm	-85
RXLEV_ACCESS_MIN	dBm	-100
C1*	dBm	15
FDD_Qmin	dB	-20
FDD_Qoffset	dBm	0

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Step d-f:

Parameter	Unit	Cell 1 (UTRAN)
CellBarred		Not barred -> Barred
Tbarred	S	80

Step i:

Parameter	Unit	Cell 1 (UTRAN)
CPICH Ec (FDD)	dBm / 3.84 MHz	-60 -> -90
P-CCPCH RSCP (TDD)	dBm	-60 -> -90
Srxlev*	dB	19 -> -11

Test procedure

- a) The SS activates cells 1, 2, and 3. The SS monitors cells 1, 2 and 3 for random access requests from the UE.
- b) The UE is switched on.
- c) The SS brings the UE to PS-DCCH+DTCH_FACH (State 6-11). SS then sends SystemInformation Type 11 and 12 with FACH Measurement Occasions.
- d) The SS sets Cell 1 to be barred.
- e) The SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.
- f) The SS waits for channel request from the UE SS sends an IMMEDIATE ASSIGNMENT REJECT to bring the UE to idle mode..
- g) The SS pages the UE with PAGING TYPE 2 in Cell 1 (UTRAN), if UE does not respond by transmitting an upper layer message to answer this page, it means UE has released the UTRAN resources.
- h) The UE is switched off.
- i) Step a-h) is repeated with the same initial conditions except that in step d) and e), the signal level is reduced, so S will become negative instead of being barred.

Specific Message Contents

RADIO BEARER SETUP (Step c)

Use the same message as specified for PS-DCCH+DTCH_FACH (state 6-11) in clause 7.4 of TS 34.108, except for the following:

Information Element	Value/remark
New C-RNTI	'0000 0000 0000 0001'

System Information Block type 11 (Step c)

Use the message type reference found in clause 6.1.0b of TS 34.108, with the following exceptions:

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length	3
coefficient	
 Inter-frequency FDD measurement indicator 	FALSE
 Inter-frequency TDD measurement indicator 	FALSE
- Inter-RAT measurement indicators	GSM

System Information Block type 12 (Step c)

Use the message type reference found in clause 8.3.9 of TS 34.123-1, with the following exceptions:

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length	3
coefficient	
 Inter-frequency FDD measurement indicator 	FALSE
 Inter-frequency TDD measurement indicator 	FALSE
- Inter-RAT measurement indicators	GSM

8.3.9.1.5 Test Requirements

In step f), the UE shall respond on Cell 2

In step g), the UE shall not respond in UTRAN cell.

In step i), the UE shall respond on Cell 2 after the signal level is reduced.

8.3.9.1a Cell reselection if cell becomes barred or S<0; UTRAN to GPRS (CELL_FACH), 1.28Mcps TDD

8.3.9.1a.1 Definition

Test to verify that if both a GSM/GPRS and UTRAN network is available, the UE performs cell reselection from UTRAN to GSM/GPRS if the UTRAN cell becomes barred or S falls below zero.

8.3.9.1a.2 Conformance requirement

- 1. The purpose of the inter-RAT cell reselection procedure from UTRAN is to transfer, under the control of the UE and to some extent the UTRAN, a connection between the UE and UTRAN to another radio access technology (e.g. GSM/GPRS).
- 2. This procedure is applicable in states CELL_FA CH, CELL_PCH or URA_PCH. When the UE based on received system information makes a cell reselection to a radio access technology other than UTRAN, e.g. GSM/GPRS, according to the criteria specified in [4], the UE shall:
- 1> If the NAS procedures associated with inter-system change specified in [5] require the establishment of a connection:
 - 2> initiate the establishment of a connection to the target radio access technology according to its specifications.
- 3. When the UE has succeeded in reselecting a cell in the target radio access technology, the UE shall:
 - 1> release all UTRAN specific resources.

References

TS 25.331, clause 8.3.9

8.3.9.1a.3 Test purpose

1. To verify that the UE performs reselection from UTRAN to GPRS in the state CELL_FACH on the following occasions:

- Serving cell becomes barred.
- S<0 for serving cell.
- 2. To verify when the UE has succeeded in reselecting a cell in the target radio access technology and has initiated the establishment of a connection, it shall release all UTRAN specific resources.

8.3.9.1a.4 Method of test

Initial conditions

System Simulator: 3 cells – Cell 1 is UTRAN 1.28Mcps TDD, Cell 2 is GPRS and Cell 3 is GSM. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2. 51.010 clause 26.6.5.1 shall be referenced for the default parameters of cell 3.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

The Inter-RAT Cell Info List of Cell 1 (UTRAN) refers to Cell 2 (GPRS) and Cell 3 (GSM).

The 3G Neighbour Cell Description of Cell 2 (GPRS) and Cell 3 (GSM) refers to Cell 1 (UTRAN).

UE: Power-Off (State 1) as specified in clause 7.4 of TS 34.108.

In SIB3 and SIB4 the IE "SearchRAT", is set to value "20dB" in Cell 1 (UTRAN).

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-850, GSM-PCS, GSM-710, GSM 750, T_GSM-810

Step a-c:

Parameter	Unit	Cell 1 (UTRAN)
Test Channel		1
P-CCPCH RSCP (TDD)	dBm	-65
Srxlev*	dB	19
CellBarred		Not barred

Parameter	Unit	Cell 2 (GPRS)
Test Channel		1
RF Signal Level	dBm	-75
RXLEV_ACCESS_MIN	dBm	-100
C1*	dBm	25
TDD_Qoffset	dBm	-60

Parameter	Unit	Cell 3 (GSM)
Test Channel		2
RF Signal Level	dBm	-85
RXLEV_ACCESS_MIN	dBm	-100
C1*	dBm	15
TDD_Qoffset	dBm	-60

Step d-f:

Parameter	Unit	Cell 1 (UTRAN)
CellBarred		Not barred -> Barred
Tbarred	S	80

Step i:

Parameter	Unit	Cell 1 (UTRAN)
P-CCPCH RSCP (TDD)	dBm	-65 -> -95
Srxlev*	dB	19 -> -11

Test procedure

- a) The SS activates cells 1, 2, and 3. The SS monitors cells 1, 2 and 3 for random access requests from the UE.
- b) The UE is switched on.
- c) The SS brings the UE to PS-DCCH+DTCH_FACH (State 6-11). SS then sends SystemInformation Type 11 and 12 with FACH Measurement Occasions.
- d) The SS sets Cell 1 to be barred.
- e) The SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.
- f) The SS waits for channel request from the UE SS sends an IMMEDIATE ASSIGNMENT REJECT to bring the UE to idle mode.
- g) The SS pages the UE with PAGING TYPE 2 in Cell 1 (UTRAN), if UE does not respond by transmitting an upper layer message to answer this page, it means UE has released the UTRAN resources.
- h) The UE is switched off.
- i) Step a-h) is repeated with the same initial conditions except that in step d) and e), the signal level is reduced, so S will become negative instead of being barred.

Specific Message Contents

RADIO BEARER SETUP (Step c)

Use the same message as specified for PS-DCCH+DTCH_FACH (state 6-11) in clause 7.4 of TS 34.108, except for the following:

Information Element	Value/remark
New C-RNTI	'0000 0000 0000 0001'

System Information Block type 11 (Step c)

Use the message type reference found in clause 6.1.0b of TS 34.108, with the following exceptions:

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length	3
coefficient	
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	GSM

System Information Block type 12 (Step c)

Use the message type reference found in clause 8.3.9 of TS 34.123-1, with the following exceptions:

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	3
 Inter-frequency FDD measurement indicator 	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	GSM

8.3.9.1a.5 Test Requirements

In step f), the UE shall respond on Cell 2

In step g), the UE shall not respond in UTRAN cell.

In step i), the UE shall respond on Cell 2 after the signal level is reduced.

8.3.9.2 Cell reselection if cell becomes barred or S<0; UTRAN to GPRS (URA_PCH)

8.3.9.2.1 Definition

Test to verify that if both a GSM/GPRS and UTRAN network is available, the UE performs cell reselection from UTRAN to GSM/GPRS if the UTRAN cell becomes barred or S falls below zero.

8.3.9.2.2 Conformance requirement

- 1. The purpose of the inter-RAT cell reselection procedure from UTRAN is to transfer, under the control of the UE and to some extent the UTRAN, a connection between the UE and UTRAN to another radio access technology (e.g. GSM/GPRS).
- 2. This procedure is applicable in states CELL_FACH, CELL_PCH or URA_PCH.

When the UE based on received system information makes a cell reselection to a radio access technology other than UTRAN, e.g. GSM/GPRS, according to the criteria specified in [4], the UE shall.

- 1> If the NAS procedures associated with inter-system change specified in [5] require the establishment of a connection:
 - 2> initiate the establishment of a connection to the target radio access technology according to its specifications.
- 3. When the UE has succeeded in reselecting a cell in the target radio access technology, the UE shall:
 - 1> release all UTRAN specific resources.

References

TS 25.331, clause 8.3.9

8.3.9.2.3 Test purpose

To verify that the UE performs reselection from UTRAN to GPRS in the state URA_PCH on the following occasions:

- Serving cell becomes barred.
- S<0 for serving cell.

8.3.9.2.4 Method of test

Initial conditions

System Simulator: 2 cells – Cell 1 is UTRAN FDD, Cell 9 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 9.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

The Inter-RAT Cell Info List of Cell 1 (UTRAN) refers to Cell 9 (GPRS).

The 3G Neighbour Cell Description of Cell 9 (GPRS) refers to Cell 1 (UTRAN)

UE: Power-Off (State 1) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH,

Step a-c:

Parameter	Unit	Cell 1 (UTRAN)
Test Channel		1
CPICH Ec (FDD)	dBm	-60
P-CCPCH RSCP (TDD)	dBm	-60
Qrxle vm in	dBm	-101
Srxlev*	dBm	41
CellBarred		Not barred

Parameter	Unit	Cell 9 (GPRS)
Test Channel		1
RF Signal Level	dBm	-80
RXLEV_ACCESS_MIN	dBm	-100
C1*	dBm	20
FDD_Qmin	dB	-20
FDD_Qoffset	dBm	0

Step d-f:

Parameter	Unit	Cell 1 (UTRAN)
CellBarred		Not barred -> Barred
Tbarred	S	80

Step i:

Parameter	Unit	Cell 1 (UTRAN)
Qrxle vm in	dB	-101 -> -41
Srxlev*	dB	41 -> -19

Test procedure

- a) The SS activates cells 1 and 9. The SS monitors cells 1 and 9 for random access requests from the UE.
- b) The UE is switched on.
- c) The SS brings the UE to URA_PCH (State 6-13).
- d) The SS sets Cell 1 to be barred.
- e) The SS sends Paging Type1 message to UE to inform UE of the modification in the system information.
- f) The SS waits for channel request from the UE to establish Temporary Block flow.
- g) The SS pages the UE with PAGING TYPE 1 in cell 1 (UTRAN), if UE does not respond with Cell Update with cause 'Paging Response', it means UE has released the UTRAN resources.
- h) The UE is switched off.
- i) Step a-e) is repeated with the same initial conditions except that in step d), Qrxlev min is increased, so S will become negative instead of being barred.

8.3.9.2.5 Test Requirements

In step f), the UE shall respond on Cell 9.

In step g), the UE shall not respond in UTRAN cell.

In step i), the UE shall respond on Cell 9 after Qrxlev min is increased.

8.3.9.2a Cell reselection if cell becomes barred or S<0; UTRAN to GPRS (URA_PCH), 1.28Mcps TDD

8.3.9.2a.1 Definition

Test to verify that if both a GSM/GPRS and UTRAN network is available, the UE performs cell reselection from UTRAN to GSM/GPRS if the UTRAN cell becomes barred or S falls below zero.

8.3.9.2a.2 Conformance requirement

- 1. The purpose of the inter-RAT cell reselection procedure from UTRAN is to transfer, under the control of the UE and to some extent the UTRAN, a connection between the UE and UTRAN to another radio access technology (e.g. GSM/GPRS).
- 2. This procedure is applicable in states CELL_FACH, CELL_PCH or URA_PCH.

When the UE based on received system information makes a cell reselection to a radio access technology other than UTRAN, e.g. GSM/GPRS, according to the criteria specified in [4], the UE shall.

- 1> If the NAS procedures associated with inter-system change specified in [5] require the establishment of a connection:
 - 2> initiate the establishment of a connection to the target radio access technology according to its specifications.
- 3. When the UE has succeeded in reselecting a cell in the target radio access technology, the UE shall:
 - 1> release all UTRAN specific resources.

References

TS 25.331, clause 8.3.9

8.3.9.2a.3 Test purpose

To verify that the UE performs reselection from UTRAN to GPRS in the state URA_PCH on the following occasions:

- Serving cell becomes barred.
- S<0 for serving cell.

8.3.9.2a.4 Method of test

Initial conditions

System Simulator: 2 cells – Cell 1 is UTRAN 1.28Mcps TDD, Cell 9 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 9.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

The Inter-RAT Cell Info List of Cell 1 (UTRAN) refers to Cell 9 (GPRS).

The 3G Neighbour Cell Description of Cell 9 (GPRS) refers to Cell 1 (UTRAN)

UE: Power-Off (State 1) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH,

Step a-c:

Parameter	Unit	Cell 1 (UTRAN)
Test Channel		1
P-CCPCH RSCP (TDD)	dBm	-65
Qrxle vm in	dBm	-106
Srxlev*	dBm	41
CellBarred		Not barred

Parameter	Unit	Cell 9 (GPRS)
Test Channel		1
RF Signal Level	dBm	-80
RXLEV_ACCESS_MIN	dBm	-100
C1*	dBm	20
TDD_Qoffset	dBm	-60

Step d-f:

Parameter	Unit	Cell 1 (UTRAN)
CellBarred		Not barred -> Barred
Tbarred	S	80

Step i:

Parameter	Unit	Cell 1 (UTRAN)
Qrxle vm in	dB	-106 -> -46
Srxlev*	dB	41 -> -19

Test procedure

- a) The SS activates cells 1 and 9. The SS monitors cells 1 and 9 for random access requests from the UE.
- b) The UE is switched on.
- c) The SS brings the UE to URA_PCH (State 6-13).
- d) The SS sets Cell 1 to be barred.
- e) The SS sends Paging Type1 message to UE to inform UE of the modification in the system information.
- f) The SS waits for channel request from the UE to establish Temporary Block flow.
- g) The SS pages the UE with PA GING TYPE 1 in cell 1 (UTRAN), if UE does not respond with Cell Update with cause 'Paging Response', it means UE has released the UTRAN resources.
- h) The UE is switched off.
- i) Step a-e) is repeated with the same initial conditions except that in step d), Qrxlev min is increased, so S will become negative instead of being barred.

8.3.9.2a.5 Test Requirements

In step f), the UE shall respond on Cell 9.

In step g), the UE shall not respond in UTRAN cell.

In step i), the UE shall respond on Cell 9 after Qrxlev min is increased.

8.3.9.3 Cell reselection if cell rank changes; UTRAN to GPRS (UE in CELL_FACH fails to complete an inter-RAT cell reselection)

8.3.9.3.1 Definition

8.3.9.3.2 Conformance requirement

If the inter-RAT cell reselection fails, the UE shall:

1> resume the connection to UTRAN using the resources used before initiating the inter-RAT cell reselection procedure.

References

TS 25.331, clause 8.3.9.4

8.3.9.3.3 Test purpose

To verify if the inter-RAT cell reselection fails before the UE in CELL_FACH succeeds in initiating the establishment of a connection to the GPRS cell, the UE shall:

 resume the connection to UTRAN using the resources used before initiating the inter-RAT cell reselection procedure.

8.3.9.3.4 Method of test

Initial conditions

System Simulator: 2 cells – Cell 1 is UTRAN, Cell 9 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 9.

All cells belong to the same PLMN.

The Inter-RAT Cell Info List of Cell 1 (UTRAN) refers to Cell 9 (GPRS).

The 3G Neighbour Cell Description of Cell 9 (GPRS) refers to Cell 1 (UTRAN)

UE: Power-Off (State 1) (UTRAN) as specified in clause 7.4 of TS 34.108.

[FDD] In SIB3 and SIB4 the IE "SearchRAT", is set to value "20dB" in Cell 1 (UTRAN).

[TDD] In SIB3 and SIB4 the IE "SearchRAT", is set to value "21dB" in Cell 1 (UTRAN).

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-850, GSM-PCS, GSM-710, GSM 750, T GSM-810.

Step a-c:

Parameter	Unit	Cell 1 (UTRAN)
Test Channel		1
CPICH Ec (FDD)	dBm/3.84MHz	-60
P-CCPCH RSCP (TDD)	dBm	-63
Treselections	S	5
R*	dB	-58
CellBarred		Not barred

Parameter	Unit	Cell 9 (GPRS)
Test Channel		1
RF Signal Level	dBm	-80
R*	dB	-80
CellBarred		barred

Step d:

Parameter	Unit	Cell 1 (UTRAN)
CPICH Ec (FDD)	dBm/3.84MHz	-60 -> -70
P-CCPCH RSCP (TDD)	dBm	-63 -> -70
R*	dB	-58 -> -68

Parameter	Unit	Cell 9 (GPRS)
RF Signal Level	dBm	-80 -> -50
C1*	dBm	20 -> 50
C32*	dB	20 -> 50
R*	dB	-80 -> -50
CellBarred		barred

Test procedure

- a) The SS activates cells 1 and 9. The SS monitors cells 1 and 9 for random access requests from the UE.
- b) The UE is switched on.
- c) The SS brings the UE to PS-DCCH+DTCH_FACH (State 6-11). SS then sends SystemInformation Type 11 and 12 with FACH Measurement Occasions.
- d) The SS increases RF Signal Level of the GPRS Cell to -50 dBm and decreases the CPICH (FDD)/ P-CCPCH(TDD) of the UMTS cell to -70 dBm so that the ranking of the UMTS cell goes lower than the GPRS cell.
- e) After the expiry of the timer Treselection, SS waits for 5 seconds to allow UE to read the system information for a GPRS cell and finds that the cell is barred. SS then sends SystemInformation Type 11 and 12 without FACH Measurement Occasions. Later SS calls for generic procedure C.2 in cell 1 (UTRAN) to check that UE is in CELL_FACH state. The UE resumes the connection to UTRAN using the resources used before initiating the inter-RAT cell reselection procedure.
- f) The UE is switched off.

Specific Message Contents

RADIO BEARER SETUP (Step c)

Use the same message as specified for PS-DCCH+DTCH_FACH (state 6-11) in clause 7.4 of TS 34.108, except for the following:

Information Element	Value/remark
New C-RNTI	'0000 0000 0000 0001'

Contents of System Information Block type 11 (Step c)

Use the same message type found in clause 6.1.0b of TS 34.108, with the following exceptions:

- FACH measurement occasion info	
- FACH Measurement occasion cycle length	3
coefficient	
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	
- RAT-Type	GSM
Inter-frequency FDD measurement indicator Inter-frequency TDD measurement indicator Inter-RAT measurement indicators	FALSE

Contents of System Information Block type 12 (Step c)

Use the message type reference found in clause 8.3.9 of TS 34.123-1, with the following exceptions:

FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	3
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	
- RAT-Type	GSM

Contents of System Information Block type 11 (Step e, 1.28Mcps TDD)

Use the same message type found in clause 6.1.0b of TS 34.108, with the following exceptions:

 Inter-RAT measurement system information 	Not Present

Contents of System Information Block type 12 (Step e, 1.28Mcps TDD)

Use the message type reference found in clause 8.3.9 of TS 34.123-1, with the following exceptions:

- Inter-RAT measurement system information	Not Present

8.3.9.3.5 Test Requirements

After step e, the UE remains in CELL_FACH in cell 1.

8.3.9.4 Cell reselection if S<0; UTRAN to GPRS (UE in CELL_PCH fails to complete an inter-RAT cell reselection)

8.3.9.4.1 Definition

8.3.9.4.2 Conformance requirement

If the inter-RAT cell reselection fails, the UE shall:

1> resume the connection to UTRAN using the resources used before initiating the inter-RAT cell reselection procedure.

References

TS 25.331, clause 8.3.9.4

8.3.9.4.3 Test purpose

To verify if the inter-RAT cell reselection fails before the UE in CELL_PCH succeeds in initiating the establishment of a connection to the GPRS cell, the UE shall:

- resume the connection to UTRAN using the resources used before initiating the inter-RAT cell reselection procedure.

8.3.9.4.4 Method of test

Initial conditions

System Simulator: 2 cells – Cell 1 is UTRAN FDD, Cell 9 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 9.

All cells belong to the same PLMN.

The Inter-RAT Cell Info List of Cell 1 (UTRAN) refers to Cell 9 (GPRS).

The 3G Neighbour Cell Description of Cell 9 (GPRS) refers to Cell 1 (UTRAN).

UE: Power-Off (State 1) (UTRAN) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480,

Step a-c:

Parameter	Unit	Cell 1 (UTRAN)
Test Channel		1
CPICH Ec (FDD)	dBm	-60
P-CCPCH RSCP (TDD)	dBm	-60
Qrxle vm in	dBm	-101
Treselections	S	5
Srxlev*	dBm	41
CellBarred		Not barred

Parameter	Unit	Cell 9 (GPRS)
Test Channel		1
RF Signal Level	dBm	-80
RXLEV_ACCESS_MIN	dBm	-100
C1*	dBm	20
FDD_Qmin	dB	-20
FDD_Qoffset	dBm	0
CellBarred		barred

Step d:

Parameter	Unit	Cell 1 (UTRAN)
Qrxle vm in	dB	-101 -> -41
Srxlev*	dB	41 -> -19

Step f:

Parameter	Unit	Cell 1 (UTRAN)
Qrxlevmin	dB	-41 -> -101
Srxlev*	dB	-19-> 41

Test procedure

- a) The SS activates cells 1 and 9. The SS monitors cells 1 and 9 for random access requests from the UE.
- b) The UE is switched on.
- c) The SS brings the UE to CELL_PCH (State 6-12).
- d) The SS increases Qrxlev min, so S will become negative.
- e) The SS sends Paging Type 1 message to UE to inform UE of the modification in the system information.
- f) The SS decreases Qrxlev min, so S will become positive (After the expiry of the timer Treselection)
- g) SS calls for generic procedure C.4 in cell 1 (UTRAN) to check that UE is in CELL_PCH state. The UE resumes the connection to UTRAN using the resources used before initiating the inter-RAT cell reselection procedure

8.3.9.4.5 Test Requirements

In step f, the UE remains in CELL_PCH in cell 1.

8.3.9.4a Cell reselection if S<0; UTRAN to GPRS (UE in CELL_PCH fails to complete an inter-RAT cell reselection), 1.28Mcps TDD

8.3.9.4a.1 Definition

8.3.9.4a.2 Conformance requirement

If the inter-RAT cell reselection fails, the UE shall:

1> resume the connection to UTRAN using the resources used before initiating the inter-RAT cell reselection procedure.

References

TS 25.331, clause 8.3.9.4

8.3.9.4a.3 Test purpose

To verify if the inter-RAT cell reselection fails before the UE in CELL_PCH succeeds in initiating the establishment of a connection to the GPRS cell, the UE shall:

- resume the connection to UTRAN using the resources used before initiating the inter-RAT cell reselection procedure.

8.3.9.4a.4 Method of test

Initial conditions

System Simulator: 2 cells – Cell 1 is UTRAN 1.28Mcps TDD, Cell 9 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 9.

All cells belong to the same PLMN.

The Inter-RAT Cell Info List of Cell 1 (UTRAN) refers to Cell 9 (GPRS).

The 3G Neighbour Cell Description of Cell 9 (GPRS) refers to Cell 1 (UTRAN).

UE: Power-Off (State 1) (UTRAN) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480,

Step a-c:

Parameter	Unit	Cell 1 (UTRAN)
Test Channel		1
P-CCPCH RSCP (TDD)	dBm	-65
Qrxle vm in	dBm	-106
Treselections	S	5
Srxlev*	dBm	41
CellBarred		Not barred

Parameter	Unit	Cell 9 (GPRS)
Test Channel		1
RF Signal Level	dBm	-80
RXLEV_ACCESS_MIN	dBm	-100
C1*	dBm	20
TDD_Qoffset	dBm	-60
CellBarred		barred

Step d:

Parameter	Unit	Cell 1 (UTRAN)
Qrxlevmin	dB	-106 -> -46
Srxlev*	dB	41 -> -19

Step f:

Parameter	Unit	Cell 1 (UTRAN)
Qrxlevmin	dB	-46 -> -106
Srxlev*	dB	-19-> 41

Test procedure

- a) The SS activates cells 1 and 9. The SS monitors cells 1 and 9 for random access requests from the UE.
- b) The UE is switched on.
- c) The SS brings the UE to CELL_PCH (State 6-12).
- d) The SS increases Qrxlev min, so S will become negative.
- e) The SS sends Paging Type 1 message to UE to inform UE of the modification in the system information.
- f) The SS decreases Qrxlev min, so S will become positive (After the expiry of the timer Treselection)
- g) SS calls for generic procedure C.4 in cell 1 (UTRAN) to check that UE is in CELL_PCH state. The UE resumes the connection to UTRAN using the resources used before initiating the inter-RAT cell reselection procedure

8.3.9.4a.5 Test Requirements

In step f, the UE remains in CELL_PCH in cell 1.

8.3.9.5 Successful Cell Reselection with RAU – Q_{offset} value modification; UTRAN to GPRS (CELL_FACH)

8.3.9.5.1 Definition

8.3.9.5.2 Conformance requirement

- 1. The purpose of the inter-RAT cell reselection procedure from UTRAN is to transfer, under the control of the UE and to some extent the UTRAN, a connection between the UE and UTRAN to another radio access technology (e.g. GSM/GPRS).
- 2. This procedure is applicable in states CELL_FACH, CELL_PCH or URA_PCH.

When the UE based on received system information makes a cell reselection to a radio access technology other than UTRAN, e.g. GSM/GPRS, according to the criteria specified in [4], the UE shall.

- 1> If the NAS procedures associated with inter-system change specified in [5] require the establishment of a connection:
 - 2> initiate the establishment of a connection to the target radio access technology according to its specifications.
- 3. When the UE has succeeded in reselecting a cell in the target radio access technology, the UE shall:
 - 1> release all UTRAN specific resources.

References

TS 25.331, clause 8.3.9

8.3.9.5.3 Test purpose

To verify that the UE performs reselection correctly considering the Q_{offset} value broadcast in SIB 11.

8.3.9.5.4 Method of test

Initial conditions

System Simulator: 2 cells – Cell 1 is UTRAN FDD, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

The Inter-RAT Cell Info List of Cell 1 (UTRAN) refers to Cell 2 (GPRS).

The 3G Neighbour Cell Description of Cell 2 (GPRS) refers to Cell 1 (UTRAN).

UE: Power-Off (State 1) as specified in clause 7.4 of TS 34.108.

In SIB3 and SIB4 the IE "SearchRAT", is set to value "20dB" in Cell 1 (UTRAN).

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-850, GSM-PCS, GSM-710, GSM 750, T_GSM-810

Step a-c:

Parameter	Unit	Cell 1 (UTRAN)
Test Channel		1
CPICH Ec (FDD)	dBm	-60
P-CCPCH RSCP (TDD)	dBm	-60
Qrxlevmin	dBm	-101
Srxlev*	dB	41
CellBarred		Not barred

Parameter	Unit	Cell 2 (GPRS)
Test Channel		1
RF Signal Level	dBm	-70
RXLEV_ACCESS_MIN	dBm	-100
C1*	dBm	30
FDD_Qmin	dB	-20
FDD_Qoffset	dBm	16

Step d:

Parameter	Unit	Cell 1 (UTRAN)
Qoffset1 _{s,n}	dBm	-25

Test procedure

- a) The SS activates cells 1 and 2. The SS monitors cells 1 and 2 for random access requests from the UE.
- b) The UE is switched on.
- c) The SS brings the UE to PS-DCCH+DTCH_FACH (State 6-11). SS then sends SystemInformation Type 11 and 12 with FACH Measurement Occasions.
- d) Q_{offset} value is modified at UTRAN such that it makes the GSM cell look the best.

- e) The SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.
- f) Void.
- g) The SS monitors for random access requests from the UE.
- h) The SS pages the UE with PAGING TYPE 2 and PAGING TYPE 1 messages in Cell 1 (UTRAN), if UE does not respond by transmitting an upper layer message to answer this page, it means UE has released the UTRAN resources.

Specific Message Contents

RADIO BEARER SETUP (Step c)

Use the same message as specified for PS-DCCH+DTCH_FACH (state 6-11) in clause 7.4 of TS 34.108, except for the following:

Information Element	Value/remark
New C-RNTI	'0000 0000 0000 0001'

System Information Block type 11 (Step c)

Use the message type reference found in clause 6.1.0b of TS 34.108, with the following exceptions:

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length	3
coefficient	
 Inter-frequency FDD measurement indicator 	FALSE
 Inter-frequency TDD measurement indicator 	FALSE
- Inter-RAT measurement indicators	GSM

System Information Block type 12 (Step c)

Use the message type reference found in clause 8.3.9 of TS 34.123-1, with the following exceptions:

Information Element	Value/remark
FACH measurement occasion info	
 FACH Measurement occasion cycle length 	3
coefficient	
 Inter-frequency FDD measurement indicator 	FALSE
 Inter-frequency TDD measurement indicator 	FALSE
- Inter-RAT measurement indicators	GSM

8.3.9.5.5 Test Requirements

In step g), the UE shall respond on Cell 2 and enter PACKET TRANSFER mode after performing the routing area update procedure.

In step h), the UE shall not respond in UTRAN cell.

8.3.9.5a Successful Cell Reselection with RAU – Q_{offset} value modification; UTRAN to GPRS (CELL_FACH), 1.28Mcps TDD

8.3.9.5a.1 Definition

8.3.9.5a.2 Conformance requirement

- 1. The purpose of the inter-RAT cell reselection procedure from UTRAN is to transfer, under the control of the UE and to some extent the UTRAN, a connection between the UE and UTRAN to another radio access technology (e.g. GSM/GPRS).
- 2. This procedure is applicable in states CELL_FACH, CELL_PCH or URA_PCH.

When the UE based on received system information makes a cell reselection to a radio access technology other than UTRAN, e.g. GSM/GPRS, according to the criteria specified in [4], the UE shall.

- 1> If the NAS procedures associated with inter-system change specified in [5] require the establishment of a connection:
 - 2> initiate the establishment of a connection to the target radio access technology according to its specifications.
- 3. When the UE has succeeded in reselecting a cell in the target radio access technology, the UE shall:
 - 1> release all UTRAN specific resources.

References

TS 25.331, clause 8.3.9

8.3.9.5a.3 Test purpose

To verify that the UE performs reselection correctly considering the Q_{offset} value broadcast in SIB 11.

8.3.9.5a.4 Method of test

Initial conditions

System Simulator: 2 cells – Cell 1 is UTRAN 1.28Mcps TDD, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

The Inter-RAT Cell Info List of Cell 1 (UTRAN) refers to Cell 2 (GPRS).

The 3G Neighbour Cell Description of Cell 2 (GPRS) refers to Cell 1 (UTRAN).

UE: Power-Off (State 1) as specified in clause 7.4 of TS 34.108.

In SIB3 and SIB4 the IE "SearchRAT", is set to value "20dB" in Cell 1 (UTRAN).

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-850, GSM-PCS, GSM-710, GSM 750, T_GSM-810

Step a-c:

Parameter	Unit	Cell 1 (UTRAN)
Test Channel		1
P-CCPCH RSCP (TDD)	dBm	-65
Qrxlevmin	dBm	-106
Srxlev*	dB	41
CellBarred		Not barred

Parameter	Unit	Cell 2 (GPRS)
Test Channel		1
RF Signal Level	dBm	-70
RXLEV_ACCESS_MIN	dBm	-100
C1*	dBm	30
TDD_Qoffset	dBm	-60

Step d:

Parameter	Unit	Cell 1 (UTRAN)
Qoffset1 _{s,n}	dBm	-25

Test procedure

- a) The SS activates cells 1 and 2. The SS monitors cells 1 and 2 for random access requests from the UE.
- b) The UE is switched on.
- c) The SS brings the UE to PS-DCCH+DTCH_FACH (State 6-11). SS then sends SystemInformation Type 11 and 12 with FACH Measurement Occasions.
- d) Q_{offset} value is modified at UTRAN such that it makes the GSM cell look the best.
- e) The SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.
- f) Void.
- g) The SS monitors for random access requests from the UE.
- h) The SS pages the UE with PAGING TYPE 2 and PAGING TYPE 1 messages in Cell 1 (UTRAN), if UE does not respond by transmitting an upper layer message to answer this page, it means UE has released the UTRAN resources.

Specific Message Contents

RADIO BEARER SETUP (Step c)

Use the same message as specified for PS-DCCH+DTCH_FACH (state 6-11) in clause 7.4 of TS 34.108, except for the following:

Information Element	Value/remark
New C-RNTI	'0000 0000 0000 0001'

System Information Block type 11 (Step c)

Use the message type reference found in clause 6.1.0b of TS 34.108, with the following exceptions:

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	3
·	
- Inter-frequency FDD measurement indicator	FALSE
	FALSE
- Inter-RAT measurement indicators	GSM

System Information Block type 12 (Step c)

Use the message type reference found in clause 8.3.9 of TS 34.123-1, with the following exceptions:

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	3
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	GSM

8.3.9.5a.5 Test Requirements

In step g), the UE shall respond on Cell 2 and enter PACKET TRANSFER mode after performing the routing area update procedure.

In step h), the UE shall not respond in UTRAN cell.

8.3.10 Void

8.3.11 Inter-RAT cell change order from UTRAN

8.3.11.1 Inter-RAT cell change order from UTRAN/To GPRS/CELL_DCH/Success

8.3.11.1.1 Definition

8.3.11.1.2 Conformance requirement

The purpose of the inter-RAT cell change order procedure is to transfer, under the control of the network, a connection between the UE and UTRAN to another radio access technology (e.g. GSM). This procedure may be used in CELL_DCH and CELL_FACH state. This procedure may be used when no RABs are established or when the established RABs are only from PS domain. This procedure may not be used when there is no PS signalling connection.

The procedure is initiated when UTRAN orders a UE in CELL_DCH or CELL_FACH state, to make a cell change to a radio access technology other than UTRAN, e.g. GSM.

To initiate the procedure, UTRAN sends a CELL CHANGE ORDER FROM UTRAN message.

The UE shall be able to receive a CELL CHANGE ORDER FROM UTRAN message and perform a cell change order to another RAT, even if no prior UE measurements have been performed on the target cell.

If the variable ESTABLISHED_SIGNALLING_CONNECTIONS does not include the CN domain identity "PS domain", or if the variable ESTABLISHED_SIGNALLING_CONNECTIONS includes the CN domain identity "CS domain":

1> the UE behaviour is not specified.

The UE shall:

- 1> start timer T309; and
- 1> establish the connection to the other radio access technology, as specified within IE "Target cell description". This IE specifies the target cell identity, in accordance with the specifications for that other RAT. In case the

target cell is a GSM/ GPRS cell, IE "Target cell description" may also include IE "NC mode", which specifies the cell selection mode to be applied in the target cell; and

- 1> if IE "NC mode" is not included in the CELL CHANGE ORDER FROM UTRAN:
 - 2> retrieve it from the target cell as specified in [43];
 - 2> act upon IE "NC mode" as specified in [43].
- 1> if the IE "RAB Information List" is included in the CELL CHANGE ORDER FROM UTRAN message:
 - 2> ignore the contents of the IE "RAB Information List".

NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification. In case of GSM/GPRS proceed according to the procedure Network control cell reselection procedure as specified in [44].

The UE regards the procedure as completed when it has received a successful response from the target RAT, e.g. in case of GSM when it received the response to a (PACKET) CHANNEL REQUEST in the new cell.

Upon successful completion of the cell change order, the UE shall:

- 1> stop timer T309;
- 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.

Upon indication of the UE having successfully completed the cell change order, UTRAN should:

- 1> release the radio connection; and
- 1> remove all context information for the concerned UE.

NOTE: The release of the UMTS radio resources is initiated from another RAT.

Reference(s)

TS 25.331 clause 8.3.11, B.6

8.3.11.1.3 Test purpose

To test that the UE shall be able to receive a CELL CHANGE ORDER FROM UTRAN message in CELL_DCH state and perform a cell change to another RAT, even if no prior UE measurements have been performed on the target cell. The UE regards the procedure as completed when it has received a successful response from the target RAT, e.g. in case of GSM when it received the response to a (PACKET) CHANNEL REQUEST in the new cell.

8.3.11.1.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

Cell 1-SIB 1 T309 set to 8 seconds (see specific message contents)

UE: PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink: 3.4 DL: 3.4 kbps SRBs,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-850, GSM-PCS, GSM-710, GSM 750, T_GSM-810

Test Procedure

The SS starts the UTRAN cell and brings the UE into PS-DCCH+DTCH_DCH (State 6-10). The SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel on the target GPRS cell. The SS checks whether the cell change is performed by checking that the UE receives a successful response to the CHANNEL REQUEST message from the SS through GPRS cell. The UE sends a RA UPDATE REQUEST message to indicate that the UTRAN UE context needs to be transferred to GPRS.

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS brings the UE into PS-DCCH+DTCH_DCH (State 6-10) in cell 1
2	SS		The SS configures cell 2 as a GSM cell with GPRS enabled
3	+	CELL CHANGE ORDER FROM UTRAN	Send on cell 1 (UTRAN cell) and the message indicates: the target cell description for GPRS.
4	UE		The UE accepts the cell change command and switches to the GPRS cell specified in the CELL CHANGE ORDER FROM UTRAN
5	→	CHANNEL REQUEST	The SS receives this burst on the RACH of cell 2 to establish temporary block flow (GPRS cell). It implies that the UE has switched to GPRS cell.
6	+	IMMEDIATE ASSIGNMENT	Uplink dynamic allocation. Sent on AGCH.
7	→	ROUTING AREA UPDATE REQUEST	

Specific message contents

SYSTEM INFORMATION BLOCK TYPE 1

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark
T309	8 Sec

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
Target cell description	
- CHOICE Radio Access Technology	
- GSM	
- BSIC	BSIC of Cell 2
- Band Indicator	Set to "GSM PCS 1900" if GSM/ PCS 1900 is used in this
	test. Otherwise set to "GSMDCS 1800 Band"
- BCCH ARFCN	Allocated BCCH ARFCN of Cell 2
- NC mode	NOT PRESENT

8.3.11.1.5 Test requirement

After step 3 the UE shall transmit a CHANNEL REQUEST message on RACH.

8.3.11.1a Inter-RAT cell change order from UTRAN/To GPRS/CELL_DCH/Success with UEA2/UIA2, GEA2 ciphering

8.3.11.1a.1 Definition

This test case is specified for the Rel-7 (or later) UE in the interRAT cell change order from UTRAN to GERAN. UIA2/UEA2 are applied in the UTRAN cell and GEA2 is applied in the GERAN cell.

8.3.11.1a.2 Conformance requirement

Identical to 8.3.11.1.2

8.3.11.1a.3 Test purpose

Identical to 8.3.11.1.3 but in the UTRAN cell UIA2/UEA2 are applied, and in the GERAN cell GEA2 is applied

8.3.11.1a.4 Method of test

Identical to 8.3.11.1.4.

Specific message contents

Similar to the specific message contents in 8.3.11.1.4 but instead, the Rel-7 IEs are used, also the UE capability to support UEA2/UIA2 and GEA2 are checked.

8.3.11.1a.5 Test requirement

Identical to 8.3.11.1.5

8.3.11.1b Inter-RAT cell change order from UTRAN/To GPRS/CELL_DCH/Success with UEA2/UIA2 and GEA3 ciphering

8.3.11.1b.1 Definition

This test case is specified for the Rel-7 (or later) UE in the interRAT cell change order from UTRAN to GERAN. UIA2/UEA2 are applied in the UTRAN cell and GEA3 is applied in the GERAN cell.

8.3.11.1b.2 Conformance requirement

Identical to 8.3.11.1.2

8.3.11.1b.3 Test purpose

Identical to 8.3.11.1.3 but in the UTRAN cell UIA2/UEA2 are applied, and in the GERAN cell GEA3 is applied.

8.3.11.1b.4 Method of test

Identical to 8.3.11.1.4,.

Specific message contents

Similar to the specific message contents in 8.3.11.1.4 but instead, the Rel-7 IEs are used, also the UE capability to support UEA2/UIA2 and GEA3 are checked.

8.3.11.1b.5 Test requirement

Identical to 8.3.11.1.5

8.3.11.2 Inter-RAT cell change order from UTRAN/To GPRS/CELL_FACH/Success

8.3.11.2.1 Definition

8.3.11.2.2 Conformance requirement

The purpose of the inter-RAT cell change order procedure is to transfer, under the control of the network, a connection between the UE and UTRAN to another radio access technology (e.g. GSM). This procedure may be used in

CELL_DCH and CELL_FACH state. This procedure may be used when no RABs are established or when the established RABs are only from PS domain. This procedure may not be used when there is no PS signalling connection.

The procedure is initiated when UTRAN orders a UE in CELL_DCH or CELL_FACH state, to make a cell change to a radio access technology other than UTRAN, e.g. GSM.

To initiate the procedure, UTRAN sends a CELL CHANGE ORDER FROM UTRAN message.

The UE shall be able to receive a CELL CHANGE ORDER FROM UTRAN message and perform a cell change order to another RAT, even if no prior UE measurements have been performed on the target cell.

If the variable ESTABLISHED_SIGNALLING_CONNECTIONS does not include the CN domain identity "PS domain", or if the variable ESTABLISHED_SIGNALLING_CONNECTIONS includes the CN domain identity "CS domain":

1> the UE behaviour is not specified.

The UE shall:

- 1> start timer T309; and
- 1> establish the connection to the other radio access technology, as specified within IE "Target cell description". This IE specifies the target cell identity, in accordance with the specifications for that other RAT. In case the target cell is a GSM/ GPRS cell, IE "Target cell description" may also include IE "NC mode", which specifies the cell selection mode to be applied in the target cell; and
- 1> if IE "NC mode" is not included in the CELL CHANGE ORDER FROM UTRAN:
 - 2> retrieve it from the target cell as specified in [43];
 - 2> act upon IE "NC mode" as specified in [43].
- 1> if the IE "RAB Information List" is included in the CELL CHANGE ORDER FROM UTRAN message:
 - $2\!\!>\!$ ignore the contents of the IE "RAB Information List".

NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification. In case of GSM/GPRS proceed according to the procedure Network control cell reselection procedure as specified in [44].

The UE regards the procedure as completed when it has received a successful response from the target RAT, e.g. in case of GSM when it received the response to a (PACKET) CHANNEL REQUEST in the new cell.

Upon successful completion of the cell change order, the UE shall:

- 1> stop timer T309;
- 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.

Upon indication of the UE having successfully completed the cell change order, UTRAN should:

- 1> release the radio connection; and
- 1> remove all context information for the concerned UE.

NOTE: The release of the UMTS radio resources is initiated from another RAT.

Reference(s)

TS 25.331 clause 8.3.11, B.6

8.3.11.2.3 Test purpose

To test that the UE shall be able to receive a CELL CHANGE ORDER FROM UTRAN message in CELL_FACH state and perform a cell change to another RAT, even if no prior UE measurements have been performed on the target cell. The UE regards the procedure as completed when it has received a successful response from the target RAT, e.g. in case of GSM when it received the response to a CHANNEL REQUEST in the new cell.

8.3.11.2.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

UE: PS-DCCH+DTCH_FA CH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink: 3.4 DL: 3.4 kbps SRBs,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Test Procedure

The SS starts the UTRAN cell and brings the UE into PS-DCCH+DTCH_FACH (state 6-11). The SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel on the target GPRS cell. The SS checks whether the cell change is performed by checking that the UE receives a successful response to the CHANNEL REQUEST message from the SS through GPRS cell. The UE sends a RA UPDATE REQUEST message to indicate that the UTRAN UE context needs to be transferred to GPRS.

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS brings the UE into PS-DCCH_DTCH_FACH
			(State 6-11) in cell 1
2	SS		The SS configures cell 2 as a GSM cell with GPRS
			enabled
3	←	CELL CHANGE ORDER FROM	Send on cell 1 (UTRAN cell) and the message indicates:
		UTRAN	the target cell description for GPRS.
4	UE		The UE accepts the cell change command and switches
			to the GPRS specified in the CELL CHANGE ORDER
			FROM UTRAN
5	\rightarrow	PACKET CHANNEL REQUEST	The SS receives this burst on PRACH of cell 2 (GPRS
			cell) to establish temporary block flow. It implies that the
			UE has switched to GPRS cell.
6	←	PACKET UPLINK ASSIGNMENT	Uplink dynamic allocation
			Sent on PAGCH.
7	\rightarrow	ROUTING AREA UPDATE	
		REQUEST	

Specific message contents

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark	
Message Type		
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3	
Integrity check info		
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.	
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.	
Activation time	Now	
Target cell description		
- CHOICE Radio Access Technology		
- GSM		
- BSIC	BSIC of Cell 2	
- Band Indicator	Set to "GSM PCS 1900" if GSM/ PCS 1900 is used in this	
	test. Otherwise set to "GSWDCS 1800 Band"	
- BCCH ARFCN	Allocated BCCH ARFCN of Cell 2	
- NC mode	NOT PRESENT	

8.3.11.2.5 Test requirement

After step 3 the UE shall transmit a CHANNEL REQUEST message on RACH.

8.3.11.3 Inter-RAT cell change order from UTRAN/To GPRS/CELL_DCH/Failure (T309 expiry)

- 8.3.11.3.1 Definition
- 8.3.11.3.2 Conformance requirement

If:

- timer T309 expires prior to the successful establishment of a connection to the target RAT; or
- if the establishment of the connection to the other RAT failed due to other reasons e.g. (random) access failure, rejection due to lack of resources:

the UE shall:

- 1> if it received the CELL CHANGE ORDER FROM UTRAN message in state CELL_DCH:
 - 2> revert back to the UTRA configuration;
 - 2> establish the UTRA physical channel(s) used at the time for reception of CELL CHANGE ORDER FROM UTRAN;
 - 2> if the UE does not succeed in establishing the UTRA physical channel(s):
 - 3> perform a cell update procedure according to subclause 8.3.1 with cause "Radio link failure";
 - 3> when the cell update procedure has completed successfully:
 - 4> proceed as below.
 - 2> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 3> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry;
 - 3> set the IE "Inter-RAT change failure" to "physical channel failure".

2> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission, the procedure ends.

Reference(s)

TS 25.331 clause 8.3.11

8.3.11.3.3 Test purpose

To verify that when UE received CELL CHANGE ORDER FROM UTRAN message in CELL_DCH state and if the establishment of the connection to the other RAT failed due to expiry of timer T309 prior to the successful establishment of a connection to the target RAT:

- a. revert back to the UTRA configuration;
- b. establish the UTRA physical channel(s) used at the time for reception of CELL CHANGE ORDER FROM UTRAN;
- c. transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message and set the IE "Inter-RAT change failure" to "physical channel failure".

8.3.11.3.4 Method of test

Initial conditions

System Simulator: 3 cells - Cells 1 and 3 are UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

UE: PS-DCCH_DCH (State 6-7) in cell 1 as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480,

Test Procedure

The SS starts the UTRAN cell and brings the UE into state PS-DCCH_DCH (State 6-7). The SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. The UE starts the timer T309. After the UE receives the command it shall configure itself accordingly but cannot complete the cell change, as SS does not respond to the CHANNEL REQUEST message transmitted by UE till the expiry of T309 timer. The SS checks that the cell change has failed by checking that the UE transmits the CELL CHANGE ORDER FROM UTRAN FAILURE message to the SS in UTRAN cell.

Step	Direction	Message	Comments
	UE SS]	
1	UE		The SS bring the UE into PS-DCCH _DCH (State 6-7) in cell 1
2	SS		The SS configures cell 2 as a GSM cell with GPRS enabled
3	+	CELL CHANGE ORDER FROM UTRAN	Send on cell 1 (UTRAN cell) and the message indicates: the target cell description for GSMGPRS.
4	UE		UE starts the timer T309. The UE accepts the cell change command and switches to the GPRS specified in the CELL CHANGE ORDER FROM UTRAN
5	→	CHANNEL REQUEST	The SS receives this burst on RACH of cell 2 (GPRS cell) to establish temporary block flow
6	→		SS does not respond to the channel request. UE sends M+1 CHANNEL REQUEST messages
			The SS does not transmit a response and wait for T309 timer to expire. Upon expiry of T309 the UE shall start timer T3311 and shall perform ROUTING AREA UPDATE. The UE shall perform ROUTING AREA UPDATE also when a new cell 3 is entered.
7	\rightarrow	CELL CHANGE ORDER FROM UTRAN FAILURE	The SS receives the message on the old channel of UTRAN cell 1.

Specific message contents

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark	
Message Type		
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3	
Integrity check info		
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.	
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.	
Activation time	Now	
Target cell description		
- CHOICE Radio Access Technology		
- GSM		
- BSIC	BSIC of Cell 2	
- Band Indicator	Set to "GSM/PCS 1900" if GSM/PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band"	
- BCCH ARFCN	Allocated BCCH ARFCN of Cell 2	
- NC mode	Not present	

CELL CHANGE ORDER FROM UTRAN FAILURE

Information Element	Value/remark
Message Type	
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink CELL CHANGE ORDER FROM UTRAN message
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Inter-RAT change failure	
-Inter-RAT change failure cause	physical channel failure

8.3.11.3.5 Test requirement

In step 5 the UE shall transmit a CHANNEL REQUEST message on RACH.

In step 7 the SS shall receive CELL CHANGE ORDER FROM UTRAN FAILURE message on the old channel of the UTRAN cell.

8.3.11.4 Inter-RAT cell change order from UTRAN/To GPRS/CELL_DCH/Failure (Physical channel Failure and Reversion Failure)

8.3.11.4.1 Definition

8.3.11.4.2 Conformance requirement

If:

- timer T309 expires prior to the successful establishment of a connection to the target RAT; or
- if the establishment of the connection to the other RAT failed due to other reasons e.g. (random) access failure, rejection due to lack of resources:

the UE shall:

- 1> if it received the CELL CHANGE ORDER FROM UTRAN message in state CELL_DCH:
 - 2> revert back to the UTRA configuration;
 - 2> establish the UTRA physical channel(s) used at the time for reception of CELL CHANGE ORDER FROM UTRAN;
 - 2> if the UE does not succeed in establishing the UTRA physical channel(s):
 - 3> perform a cell update procedure according to subclause 8.3.1 with cause "Radio link failure";
 - 3> when the cell update procedure has completed successfully:
 - 4> proceed as below.
 - 2> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 3> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry;
 - 3> set the IE "Inter-RAT change failure" to "physical channel failure".
 - 2> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission, the procedure ends.

Reference(s)

TS 25.331 clause 8.3.11

8.3.11.4.3 Test purpose

To verify that when UE received CELL CHANGE ORDER FROM UTRAN message in CELL_DCH state and if the establishment of the connection to the other RAT failed due to other reasons e.g. (random) access failure, rejection due to lack of resources:

- a. revert back to the UTRA configuration;
- b. if the UE does not succeed in establishing the UTRA physical channel(s):
 - perform a cell update procedure with cause "Radio link failure";
- c. when the cell update procedure is completed successfully, it transmits the CELL CHANGE ORDER FROM UTRAN FAILURE message and set the IE "Inter-RAT change failure" to "physical channel failure".

8.3.11.4.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

UE: PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

NOTE: The 'timer poll' value in the SS RLC transmit entity should be set to 800 ms.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink: 3.4 DL: 3.4 kbps SRBs.
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-850, GSM-PCS, GSM-710, GSM 750, T_GSM-810

Test Procedure

The SS starts the UTRAN cell and brings the UE into PS-DCCH+DTCH_DCH (state 6-10). The SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. The UE receives the command and configures itself accordingly but cannot complete the cell change and wants to revert to the old configuration, but the UE cannot revert to the old configuration because the SS shall not use the old configuration. The UE transmits CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. The UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits the CELL CHANGE ORDER FAILURE message to the SS in UTRAN cell, on the DCCH using AM RLC, setting the value of IE " Inter-RAT change failure " to " physical channel failure".

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS brings the UE into PS-DCCH+DTCH_DCH (State
			6-10) in cell 1
2	SS		The SS configures cell 2 as a GSM cell with GPRS
			enabled
3	←	CELL CHANGE ORDER FROM	Send on cell 1 (UTRAN cell) and the message indicates:
		UTRAN	the target cell description for GSWGPRS.
3a	SS		SS removes the physical channel (DPCH), which was
			allocated to the mobile before Cell Change Order From
			UTRAN transmission
4	UE		The UE accepts the cell change command and switches
			to the GSM/GPRS specified in the CELL CHANGE ORDER FROM UTR AN
5	→	CHANNEL REQUEST	The SS receives this burst on RACH of cell 2 (GPRS cell)
5	7	CHANNEL REQUEST	to establish temporary block flow. It implies that the UE
			has switched to GPRS cell.
6	+	IMMEDIATE ASSIGNMENT	SS rejects the channel request
	`	REJECT	oo rejects the charmer request
7		VOID	
8	\rightarrow	CELL UPDATE	The value "radio link failure" shall be set in IE "Cell
			update cause".
9	←	CELL UPDATE CONFIRM	This message include IE "Physical channel information
			elements".
10			The SS configure the dedicated physical channel
			according to the IE "Physical channel information
			elements" induded in the CELL UPDATE CONFIRM
			message.
11	\rightarrow	PHYSICAL CHANNEL	
40		RECONFIGURATION COMPLETE	The IC Wester DAT feiture equal shall be not to we have in-
12	\rightarrow	CELL CHANGE ORDER FROM UTRAN FAILURE	The IE "Inter-R AT failure cause" shall be set to "physical channel failure"
13		UTRANTAILURE	Note: The UE may send a ROUTING AREA UPD ATE
13			REQUEST to complete the RA Update procedure
			initiated at step 5.
			ווווומוכט מו זוכף ט.

Specific message contents

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 6.1.0b of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
Target cell description	
- CHOICE Radio Access Technology	
- GSM	
- BSIC	BSIC of Cell 2
- Band Indicator	Set to "GSM PCS 1900" if GSM/ PCS 1900 is used in this
	test. Otherwise set to "GSM/DCS 1800 Band"
- BCCH ARFCN	Allocated BCCH ARFCN of Cell 2
- NC mode	Not present

CELL UPDATE (Step 8)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	"radio link failure"

CELL UPDATE CONFIRM (Step 9) (FDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in TS 34.108, clause 9,with the following exceptions:

Information Element	Value/remark	Version
U-RNTI	Same as CELL UPDATE message in step 3	
RRC State indicator	CELL_DCH	
Frequency info		
- UARFCN uplink (Nu)	Reference to TS34.108 clause 5.1 Test	
LIADEON I E I (ALI)	frequencies	
- UARFCN downlink (Nd)	Reference to TS34.108 clause 5.1 Test	
	frequencies	
Maximum allowed UL TX power	33dBm	
CHOICE channel requirement	Uplink DPCH info	
Uplink DPCH power control info DPCCH power offset	-40 (-80 dB)	
- PC Preamble	1 frame	
- SRB delay	7 frames	
- Power Control Algorithm	Algorithm1	
- TPC step size	0 (1 dB)	
- Scrambling code type	Long	
- Scrambling code number	0	
- Number of DPDCH	Not Present	
- spreading factor	Reference to TS34.108 clause 6.10 Parameter	
	Set	
- TFCI existence	TRUE	
- Number of FBI bit	Not present	
- Puncturing Limit	p10-96	
Downlink information common for all radio links		
- Downlink DPCH info common for all RL	La SC a Ca	
- Timing indicator	Initialise	
- CFN-targetSFN frame offset - Downlink DPCH power control information	Not Present	
- DPC mode	0 (single)	
- CHOICE mode	FDD	
- Power offset P _{Pilot-DPDCH}	0	
- DL rate matching restriction information	Not Present	
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter	
	Set	
- Fixed or Flexible Position	flexible	
- TFCI existence	TRUE	
- CHOICE SF	Reference to TS34.108 clause 6.10 Parameter	
	Set	
- DPCH compressed mode info	Not Present	
- TX Diversity mode - SSDT information	None Not Present	R99 and Rel-
- 33D1 IIII0IIIIaii0II	Not Fresent	4 only
- Default DPCH Offset Value	Arbitrary set to value 0306688 by step of 512.	4 Offiny
Downlink information for each radio links	7 15 11 at y 50 t to 1 at a 5 1.00 50 50 5 y 5 top 5 1 5 1 2.	
CHOICE Mode	FDD	
- Primary CPICH info		
- Primary scrambling code	100	
- PDSCH with SHO DCH info	Not Present	R99 and Rel-
		4 only
- PDSCH code mapping	Not Present	R99 and Rel-
Downlink DDOLLinfo for ac -t- DL		4 only
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Primary CPICH may be used	
- DPCH frame offset	Set to value : Default DPCH Offset Value (as set	
- DI OIT IIAIIIE OIISEL	above) mod 38400	
- Secondary CPICH info	Not Present	
- DL channelisation code		
- Secondary scrambling code	2	
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter	
	Set	
- Code number	SF-1 (SF is reference to TS34.108 clause 6.10	
	Parameter Set)	

 Scrambling code change 	No change	
 TPC combination index 	0	
 SSDT Cell Identity 	Not Present	R99 and Rel-
		4 only
 Closed loop timing adjustment mode 	Not Present	
 SCCPCH information for FACH 	Not Present	R99 and Rel-
		4 only

CELL UPDATE CONFIRM (Step 9) (3.84 Mcps TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in TS 34.108, clause 9,with the following exceptions:

Information Element	Value/remark	Version
U-RNTI	Same as CELL UPDATE message in step 3	
RRC State indicator	CELL_DCH	
Frequency info		
- UAŘFCN (Nt)	Reference to TS34.108 clause 5.1 Test frequencies	
Maximum allowed UL TX power	33dBm	
CHOICE channel requirement	Uplink DPCH info	
- Uplink DPCH power control info	'	
- CHOICE mode	TDD	
- UL target SIR	12 (6 dB)	
- CHOICE UL OL PC info	Broadcast UL OL PC info	
- CHOICE mode	TDD	
- UL CCTrCH List	1	
- UL target SIR	12 (6 dB)	
- Time info	12 (0 db)	
- Activation time	Now	
	Infinite	
- Duration	Infinite	
Downlink information common for all radio links - Downlink DPCH info common for all RL		
 Timing indication 	Initialise	
 CFN-targetSFN frame offset 	Not Present	
 Downlink DPCH power control 		
information		
- CHOICE mode	TDD (No Data)	
- CHOICE mode	TDD (No Data)	
- CHOICE mode	TDD	
- CHOICE TDD option	3.84 Mcps TDD (No Data)	
- Default DPCH Offset Value	Set to value: Default DPCH Offset Value (as currently stored in SS) mod 38400	
Downlink information for each radio links		
- CHOICE Mode	TDD	
- Primary CCPCH info		
- CHOICE Mode	TDD	
- CHOICE TDD option	3.84 Mcps TDD	
- CHOICE SyncCase	Sync Case 1	
- Timeslot	0	
- SCTD indicator	FALSE	
- Downlink DPCH info for each RL	FALSE	
- CHOICE mode	TDD	
	טטו	
- DL CCTrCh List	_	
- TFCS ID	1	1
- Time info		1
- Activation time	Now	1
- Duration	Infinite	
- Common timeslot info	Default	
 Downlink DPCH times lots and 	Default	
codes		
 UL CCTrCH TPC List 	Default	1
 SCCPCH information for FACH 	Not Present	R99 and Rel-
		4 only

CELL UPDATE CONFIRM (Step 9) (1.28 Mcps TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in TS 34.108, clause 9,with the following exceptions:

Information Element	Value/remark	Version
U-RNTI	Same as CELL UPDATE message in step 3	
RRC State indicator	CELL_DCH	
Frequency info		
- UARFCN uplink (Nu)	Reference to TS34.108 clause 5.1 Test frequencies	
- UARFCN downlink (Nd)	Reference to TS34.108 clause 5.1 Test frequencies	
Maximum allowed UL TX power	33dBm	
CHOICE channel requirement	Uplink DPCH info	
- Uplink DPCH power control info		
- CHOICE mode	TDD	
- UL target SIR	12 (6 dB)	
- CHOIČE UL OL PC info	Individually Signalled	
- CHOICE TDD option	1.28 Mcps TDD	
- TPC step size	0 (1 dB)	
- UL CCTrCH List	1	
- UL target SIR	12 (6 dB)	
- Time info	, ,	
- Activation time	Now	
- Duration	Infinite	
Downlink information common for all radio links		
- Downlink DPCH info common for all RL		
- Timing indicator	Initialise	
- CFN-targetSFN frame offset	Not Present	
- Downlink DPCH power control		
information		
- CHOICE mode	TDD (NoData)	
- CHOICE mode	TDD (NoData)	
- CHOICE mode	TDD `	
- CHOICE TDD option	1.28 Mcps TDD	
- TSTD indicator	FALSE	
- Default DPCH Offset Value	Set to value: Default DPCH Offset Value (as currently	
	stored in SS) mod 38400	
Downlink information for each radio links	,	
- CHOICE Mode	TDD	
- Primary CCPCH info		
- CHOICE Mode	TDD	
- CHOICE TDD option	1.28 Mcps TDD	
- TSTD indicator	FALSE	
- SCTD indicator	FALSE	
- Downlink DPCH info for each RL		
- CHOICE mode	TDD	
- DL CCTrCh List		
- TFCS ID	1	
- Time info		
- Activation time	Now	
- Duration	Infinite	
- Common timeslot info	Default	
- Downlink DPCH timeslots and	Default	
codes		
- UL CCTrCH TPC List	Default	
- SCCPCH information for FACH	Not Present	R99 and Rel-
		4 only

CELL UPDATE CONFIRM (Step 9) (3.84 Mcps TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in TS 34.108, clause 9,with the following exceptions:

Information Element	Value/remark	Version
U-RNTI	Same as CELL UPDATE message in step 3	
RRC State indicator	CELL DCH	
Frequency info	_	
- UARFCN (Nt)	Reference to TS34.108 clause 5.1 Test frequencies	
Maximum allowed UL TX power	33dBm	
CHOICE channel requirement	Uplink DPCH info	
- Uplink DPCH power control info		
- CHOICE mode	TDD	
- UL target SIR	12 (6 dB)	
- CHOICE UL OL PC info	Broadcast UL OL PC info	
- CHOICE mode	TDD	
- UL CCTrCH List	1	
- UL target SIR	12 (6 dB)	
- Time info	12 (0 db)	
- Activation time	Now	
- Duration	Infinite	
Downlink information common for all radio links		
- Downlink DPCH info common for all RL		
- Timing indication	Initialise	
- CFN-targetSFN frame offset	Not Present	
- Downlink DPCH power control	Not Flesent	
information		
- CHOICE mode	TDD (No Data)	
- CHOICE mode	TDD (No Data)	
	TDD (No Data)	
- CHOICE mode - CHOICE TDD option	7.68 Mcps TDD (No Data)	
- CHOICE TOD option - Default DPCH Offset Value	Not Present	
	Not Present	
Downlink information for each radio links	TDD	
- CHOICE Mode - Primary CCPCH info	TDD	
	TDD	
- CHOICE Mode	TDD	
- CHOICE TDD option	7.68 Mcps TDD	
- CHOICE SyncCase	Sync Case 1	
- Timeslot	0	
- SCTD indicator	FALSE	
- Downlink DPCH info for each RL	TDD	
- CHOICE mode	TDD	
- DL CCTrCh List		
- TFCS ID	1	
- Time info		
- Activation time	Now	
- Duration	Infinite	
- Common timeslot info	Default	
- Downlink DPCH timeslots and	Default	
codes VHCR		
- UL CCTrCH TPC List	Default	
- SCCPCH information for FACH	Not Present	R99 and Rel-
		4 only

CELL CHANGE ORDER FROM UTRAN FAILURE

Information Element	Value/remark	
Message Type		
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink CELL CHANGE ORDER FROM UTRAN message	
Integrity check info		
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.	
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.	
Inter-RAT change failure		
-Inter-RAT change failure cause	physical channel failure	

8.3.11.4.5 Test requirement

In step 5 the UE shall transmit a CHANNEL REQUEST message on RACH.

In step 8 the SS shall receive CELL UPDATE message on the old channel of the UTRAN cell with the IE "Cell update cause" set to cause "radio link failure".

In step 11 the SS shall receive PHYSICAL CHANNEL COMPLETE message.

In step 12 the SS shall receive CELL CHANGE ORDER FROM UTRAN FAILURE message with the IE "Inter-RAT change failure cause" set to "physical channel failure".

8.3.11.5 Inter-RAT cell change order from UTRAN/To GPRS/CELL_FACH/Failure (T309 expiry)

8.3.11.5.1 Definition

8.3.11.5.2 Conformance requirement

If:

- timer T309 expires prior to the successful establishment of a connection to the target RAT; or
- if the establishment of the connection to the other RAT failed due to other reasons e.g. (random) access failure, rejection due to lack of resources:

the UE shall:

- 1> if the UE receives the CELL CHANGE ORDER FROM UTRAN message in CELL_FACH state:
 - 2> revert to the cell it was camped on at the reception of the CELL CHANGE ORDER FROM UTRAN message;
 - 2> if the UE is unable to return to this cell:
 - 3> select a suitable UTRA cell according to [4];
 - 3> initiate the cell update procedure according to subclause 8.3.1 using the cause "cell re-selection";
 - 3> when the cell update procedure completed successfully:
 - 4> proceed as below.
 - 2> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 3> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the CELL CHANGE ORDER FROM UTRAN message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry;
 - 3> set the IE "Inter-RAT change failure" to "physical channel failure".
 - 2> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:
 - 3> the procedure ends.

Reference(s)

TS 25.331 clause 8.3.11

8.3.11.5.3 Test purpose

To verify that when UE received CELL CHANGE ORDER FROM UTRAN message in CELL_FACH state and if the establishment of the connection to the other RAT failed due to expiry of timer T309 prior to the successful establishment of a connection to the target RAT:

- a. revert to the cell it was camped on at the reception of the CELL CHANGE ORDER FROM UTRAN message;
- b. transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message and set the IE "Inter-RAT change failure" to "physical channel failure".

8.3.11.5.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

UE: PS-DCCH+DTCH_FACH (State 6-11) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink: 3.4 DL: 3.4 kbps SRBs.
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480,

Test Procedure

The SS starts the UTRAN cell and brings the UE into PS_DCCH+DTCH_FACH (state 6-11). The SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. The UE starts the timer T309. After the UE receives the command it shall configure itself accordingly but cannot complete the cell change, as SS does not respond to the Channel Request message transmitted by UE till the timer T309 expires. The SS checks that the cell change has failed by checking that the UE transmits the CELL CHANGE ORDER FROM UTRAN FAILURE message to the SS in UTRAN cell.

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS bring the UE into PS-DCCH+DTCH_FACH (State
			6-11) in cell 1
2	SS		The SS configures cell 2 as a GSM cell with GPRS
			enabled
3	+	CELL CHANGE ORDER FROM	Send on cell 1 (UTRAN cell) and the message indicates:
		UTRAN	the target cell description for GSM/GPRS.
4	UE		The UE accepts the cell change command and switches
			to the GSWGPRS specified in the CELL CHANGE
			ORDER FROM UTRAN
5	\rightarrow	CHANNEL REQUEST	The SS receives this burst on RACH of cell 2 (GPRS cell)
			to establish temporary block flow
6	\rightarrow		SS does not respond to the channel request.
			UE transmits CHANNEL REQUEST message M+1 times.
			The SS does not transmit a response and wait for T309
			timer to expire.
7	\rightarrow	CELL CHANGE ORDER FROM	The SS receives the message on the old channel of
		UTRAN FAILURE	UTRAN cell.

Specific message contents

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark	
Message Type		
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3	
Integrity check info		
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.	
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.	
Activation time	Now	
Target cell description		
- CHOICE Radio Access Technology		
- GSM		
- BSIC	BSIC of Cell 2 BSIC of Cell 3	
- Band Indicator	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this	
	test. Otherwise set to "GSM/DCS 1800 Band" Set to "GSM/	
	PCS 1900" if GSW PCS 1900 is used in this test. Otherwise	
	set to "GSM/DCS 1800 Band"	
- BCCH ARFCN	Allocated BCCH ARFCN of Cell 2 Allocated BCCH ARFCN	
	of Cell 3	
- NC mode	Not present	

CELL CHANGE ORDER FROM UTRAN FAILURE

Information Element	Value/remark
Message Type	
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink CELL CHANGE ORDER FROM UTRAN message
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Inter-RAT change failure	·
-Inter-RAT change failure cause	physical channel failure

8.3.11.5.5 Test requirement

In step 5 the UE shall transmit a CHANNEL REQUEST message on RACH.

In step 7 the SS shall receive CELL CHANGE ORDER FROM UTRAN FAILURE message on the old channel of the UTRAN cell.

8.3.11.6 Inter-RAT cell change order from UTRAN/To GPRS/CELL_FACH/Failure (Physical channel Failure and Reversion Failure)

8.3.11.6.1 Definition

8.3.11.6.2 Conformance requirement

If:

- timer T309 expires prior to the successful establishment of a connection to the target RAT; or
- if the establishment of the connection to the other RAT failed due to other reasons e.g. (random) access failure, rejection due to lack of resources:

the UE shall:

1> if the UE receives the CELL CHANGE ORDER FROM UTRAN message in CELL_FACH state:

- 2> revert to the cell it was camped on at the reception of the CELL CHANGE ORDER FROM UTRAN message;
- 2> if the UE is unable to return to this cell:
 - 3> select a suitable UTRA cell according to [4];
 - 3> initiate the cell update procedure according to subclause 8.3.1 using the cause "cell re-selection";
 - 3> when the cell update procedure completed successfully:
 - 4> proceed as below.
- 2> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 3> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the CELL CHANGE ORDER FROM UTRAN message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry;
 - 3> set the IE "Inter-RAT change failure" to "physical channel failure".
- 2> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:
 - 3> the procedure ends.

Reference(s)

TS 25.331 clause 8.3.11

8.3.11.6.3 Test purpose

To verify that when UE received CELL CHANGE ORDER FROM UTRAN message in CELL_FACH state and if the establishment of the connection to the other RAT failed due to other reasons e.g. (random) access failure, rejection due to lack of resources:

- a. revert to the cell it was camped on at the reception of the CELL CHANGE ORDER FROM UTRAN message;
- b. if the UE is unable to return to this cell:
 - select a suitable UTRA cell;
- c. initiate the cell update procedure using the cause "cell re-selection";
- d. when the cell update procedure is completed successfully, it transmits the CELL CHANGE ORDER FROM UTRAN FAILURE message and set the IE "Inter-RAT change failure" to "physical channel failure".

8.3.11.6.4 Method of test

Initial conditions

System Simulator: 3 cells - Cell 1, Cell 2 are UTRAN, Cell 3 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 3.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

UE: PS-DCCH+DTCH_FACH (State 6-11) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,

- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink: 3.4 DL: 3.4 kbps SRBs.
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480,

Test Procedure

Table 8.3.11.6

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRARF Channel Number		Mid Range Test Mid Rar		ge Test	
		Frequ	iency	Frequ	iency
CPICH Ec (FDD)	dBm/3.84MHz	-60	Off	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	Off	-75	-60

Table 8.3.11.6 illustrates the downlink power to be applied for the 2 UTRAN cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The SS starts the UTRAN cell and brings the UE into PS-DCCH+DTCH_FACH (state 6-11). The SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. The UE receives the command and configures itself accordingly but cannot complete the cell change and wants to revert to the old configuration, but the UE cannot revert to the old configuration because the SS shall not use the old configuration. The SS configures its downlink transmission power settings according to columns "T1" in table 8.3.11.6. The UE transmits CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. The UE transmits the CELL CHANGE ORDER FAILURE message to the SS in UTRAN cell, on the DCCH using AM RLC, setting the value of IE" Inter-RAT change failure " to " physical channel failure".

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS bring the UE into PS-DCCH+DTCH_FACH (State
			6-11) in cell 1
2	SS		The SS configures cell 3 as a GSM cell with GPRS enabled
3	←	CELL CHANGE ORDER FROM	Send on cell 1 (UTRAN cell) and the message indicates:
		UTRAN	The target cell description for GSM/GPRS.
3a	SS		The SS applies the downlink transmission power settings,
			the values in columns "T1" of table 8.3.11.6.
4	UE		The UE accepts the cell change command and switches to the GSM/GPRS specified in the CELL CHANGE
			ORDER FROM UTRAN
5	\rightarrow	CHANNEL REQUEST	The SS receives this burst on the traffic channel of cell 2
		OTH WINDLE REGULOT	(GPRS cell) to establish temporary block flow It implies
			that the UE has switched to GPRS cell.
6	←	IMMEDIATE ASSIGNMENT	SS rejects the channel request
		REJECT	
7		VOID	
8		VOID	
9	\rightarrow	CELL UPDATE	The value "cell reselection" shall be set in IE "Cell update cause".
10	←	CELL UPDATE CONFIRM	See message content.
11	\rightarrow	CELL CHANGE ORDER FROM	The IE "Inter-RAT failure cause" shall be set to "physical
		UTRAN FAILURE	channel failure"

Specific message contents

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
Target cell description	
- CHOICE Radio Access Technology	
- GSM	
- BSIC	BSIC1
- Band Indicator	DCS 1800 band used
- BCCH ARFCN	1
- NC mode	Not present

CELL UPDATE (Step 8)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in TS 34.108, clause 9,with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 9)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in TS 34.108, clause 9

CELL CHANGE ORDER FROM UTRAN FAILURE

Information Element	Value/remark
Message Type	
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink CELL CHANGE ORDER FROM UTRAN message
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Inter-RAT change failure	·
-Inter-RAT change failure cause	physical channel failure

8.3.11.6.5 Test requirement

In step 5 the UE shall transmit a CHANNEL REQUEST message on RACH.

In step 9 the SS shall receive CELL UPDATE message on the old channel of the UTRAN cell with the IE "Cell update cause" set to cause "cell reselection".

In step 11 the SS shall receive CELL CHANGE ORDER FROM UTRAN FAILURE message with the IE " Inter-RAT change failure cause" set to "physical channel failure".

8.3.11.7 Inter-RAT cell change order from UTRAN/To GPRS/ Failure (Unsupported configuration)

- 8.3.11.7.1 Definition
- 8.3.11.7.2 Conformance requirement

If the UTRAN instructs the UE to perform a non-supported cell change order scenario or to use a non-supported configuration, the UE shall:

- 1> transmit a CELL CHANGE ORDER FROM UTRAN FAILURE message, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "Inter-RAT change failure" to "configuration unacceptable";
 - 2> when the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layers for transmission:
 - 3> resume normal operation as if the CELL CHANGE ORDER FROM UTRAN message has not been received;
 - 3> and the procedure ends.

Reference(s)

TS 25.331 clause 8.3.11

8.3.11.7.3 Test purpose

To verify if the UTRAN instructs the UE to perform a non-supported cell change order or to use a non-supported configuration, the UE shall:

- a. Transmit a CELL CHANGE ORDER FROM UTRAN FAILURE message, setting the IE "Inter-RAT change failure" to "configuration unacceptable";
- b. Resume normal operation

8.3.11.7.4 Method of test

Initial conditions

System Simulator: 1 UTRAN cell

UE: PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, one PS do main RAB is established.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink: 3.4 DL: 3.4 kbps SR Rs
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480,

Test Procedure

The SS starts the UTRAN cell and brings the UE into PS-DCCH+DTCH_DCH (state 6-10). The SS then sends a CELL CHANGE ORDER FROM UTRAN message including a Configuration not Supported by the UE, to the UE through DCCH of the serving UTRAN cell. The UE receives the command and finds that the configuration given in cell change

message is not supported. The SS checks that the cell change is failed by checking that the UE transmits the CELL CHANGE ORDER FROM UTRAN FAILURE message to the SS in UTRAN cell with the IE "Inter-RAT change failure" set to "configuration unsupported".

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS brings the UE into PS-DCCH+DTCH_DCH (State
			6-10) in cell 1
2		CELL CHANGE ORDER FROM UTRAN	Send on cell 1 (UTRAN cell) and the message carries an unsupported configuration. Cell change order to a Band not supported by the UE
3		CELL CHANGE ORDER FROM UTRAN FAILURE	The SS receives the message on the old channel of UTRAN cell.

Specific message contents

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark		
Message Type			
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3		
Integrity check info			
- Message authentication code	SS calculates the value of MAC-I for this message and		
	writes to this IE.		
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.		
Activation time	Now		
Target cell description	Contains a Configuration not supported By the UE (Cell		
	change order to a Band not supported by the UE)		

CELL CHANGE ORDER FROM UTRAN FAILURE

Information Element	Value/remark		
Message Type			
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink CELL CHANGE ORDER FROM UTRAN message		
Integrity check info			
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.		
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.		
Inter-RAT change failure			
-Inter-RAT change failure cause	configuration unsupported		

8.3.11.7.5 Test requirement

In step 3 the SS shall receive CELL CHANGE ORDER FROM UTRAN FAILURE message on the old channel of the UTRAN cell.

8.3.11.8 Inter-RAT cell change order from UTRAN/To GPRS/ Failure (Invalid Inter-RAT message)

8.3.11.8.1 Definition

8.3.11.8.2 Conformance requirement

If the CELL CHANGE ORDER FROM UTRAN message contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

1> set the IE "RRC transaction identifier" in the CELL CHANGE ORDER FROM UTRAN FAILURE message to the value of "RRC transaction identifier" in the entry for the CELL CHANGE ORDER FROM UTRAN message in the table "Rejected transactions" in the variable TRANSACTIONS; and

- 1> clear that entry;
- 1> set the IE "Inter-RAT change failure" to the cause value "protocol error";
- 1> include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION;
- 1> transmit a CELL CHANGE ORDER FROM UTRAN FAILURE message on the uplink DCCH using AM RLC;
- 1> when the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layers for transmission:
 - 2> resume normal operation as if the invalid CELL CHANGE ORDER FROM UTRAN message has not been received;
 - 2> and the procedure ends.

Reference(s)

TS 25.331 clause 8.3.11

8.3.11.8.3 Test purpose

To verify that the UE shall keep its old configuration and transmit a CELL CHANGE ORDER FROM UTRAN FAILURE message, with the "Inter-RAT change failure" set to "protocol error", when it receives a CELL CHANGE ORDER FROM UTRAN message, not including a valid message in accordance with the protocol specifications for the target RAT.

8.3.11.8.4 Method of test

Initial conditions

System Simulator: 1 UTRAN cell

UE: PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink:3.4 DL:3.4 kbps SRBs,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480,

Test Procedure

The SS starts the UTRAN cell and brings the UE into PS-DCCH+DTCH_DCH (state 6-10). The SS then sends a CELL CHANGE ORDER FROM UTRAN message not including a valid cell change order from UTRAN message in accordance with the protocol specifications for the target RAT, to the UE through DCCH of the serving UTRAN cell. The UE receives the command and finds that the cell change order message is Invalid. The SS checks that the cell change is failed by checking that the UE trans mits the CELL CHANGE ORDER FROM UTRAN FAILURE message to the SS in UTRAN cell with the IE "Inter-RAT change failure cause" set to "protocol error".

Step	Direction	on	Message	Comments
	UE S	SS		
1	UE			The SS bring the UE into PS-DCCH+DTCH_DCH (State
				6-10) in cell 1
2	+		CELL CHANGE ORDER FROM	Send on cell 1 (UTRAN cell) and the message carries an
			UTRAN	invalid CELL CHANGE ORDER FROM UTRAN.
3	\rightarrow		CELL CHANGE ORDER FROM UTRAN FAILURE	The SS receives the message on the old channel of UTRAN cell

Specific message contents

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark		
Message Type			
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3		
Integrity check info			
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.		
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.		
Activation time	Now		
Target cell description			
- CHOICE Radio Access Technology	Spare2		

CELL CHANGE ORDER FROM UTRAN FAILURE

Information Element	Value/remark
Message Type	
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink CELL CHANGE ORDER FROM UTRAN message
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Inter-RAT change failure	
-Inter-RAT change failure cause	protocol error

8.3.11.8.5 Test requirement

In step 3 the SS shall receive CELL CHANGE ORDER FROM UTRAN FAILURE message on the old channel of the UTRAN cell.

8.3.11.9 Inter-RAT Cell Change Order from UTRAN to GPRS/CELL_DCH/Success (stop of HS-DSCH reception)

8.3.11.9.1 Definition and applicability

All UEs which support FDD or TDD, HS-PDSCH and GSM.

8.3.11.9.2 Conformance requirement

The purpose of the inter-RAT cell change order procedure is to transfer, under the control of the network, a connection between the UE and UTRAN to another radio access technology (e.g. GSM). This procedure may be used in CELL_DCH and CELL_FACH state. This procedure may be used when no RABs are established or when the established RABs are only from PS domain. This procedure may not be used when there is no PS signalling connection.

The procedure is initiated when UTRAN orders a UE in CELL_DCH or CELL_FACH state, to make a cell change to a radio access technology other than UTRAN, e.g. GSM.

To initiate the procedure, UTRAN sends a CELL CHANGE ORDER FROM UTRAN message.

The UE shall be able to receive a CELL CHANGE ORDER FROM UTRAN message and perform a cell change order to another RAT, even if no prior UE measurements have been performed on the target cell.

If the variable ESTABLISHED_SIGNALLING_CONNECTIONS does not include the CN domain identity "PS domain", or if the variable ESTABLISHED_SIGNALLING_CONNECTIONS includes the CN domain identity "CS domain":

1> the UE shall act as if the message was never received.

The UE shall:

- 1> if HS-DSCH is configured for UTRA:
 - 2> stop any HS-DSCH reception procedures;
 - 2> clear any stored HS-PDSCH configuration;
 - 2> act as if the IE "MAC-hs reset indicator" is received and set to TRUE:
 - 2> release all HARQ resources;
 - 2> remove any H-RNTI stored;
 - 2> clear the variable H_RNTI;
 - 2> set the variable HS_DSCH_RECEPTION to FALSE.
- 1> start timer T309; and
- 1> establish the connection to the other radio access technology, as specified within IE "Target cell description". This IE specifies the target cell identity, in accordance with the specifications for that other RAT. In case the target cell is a GSM/ GPRS cell, IE "Target cell description" may also include IE "NC mode", which specifies the cell selection mode to be applied in the target cell; and
- 1> if IE "NC mode" is not included in the CELL CHANGE ORDER FROM UTRAN:
 - 2> retrieve it from the target cell as specified in [43];
 - 2> act upon IE "NC mode" as specified in [43].
- 1> if the IE "RAB Information List" is included in the CELL CHANGE ORDER FROM UTRAN message:
 - 2> ignore the contents of the IE "RAB Information List".
- NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification. In case of GSM/GPRS proceed according to the procedure Network control cell reselection procedure as specified in [44].
- 1> if the UE supports UTRAN to GERAN Network Assisted Cell Change, the IE "Geran-System Information" is present and the UE is in CELL_DCH state:
 - 2> if according to [44] the IE "GERAN System Information" includes a correct and consistent set of SI or PSI messages:
 - 3> use this information as the system information to begin access on the target GERAN cell.
 - 2> otherwise:
 - 3> ignore the IE "GERAN System Information" and continue the Cell Change Order procedure.

The UE regards the procedure as completed when it has received a successful response from the target RAT, e.g. in case of GSM when it received the response to a (PACKET) CHANNEL REQUEST in the new cell.

Upon successful completion of the cell change order, the UE shall:

- 1> stop timer T309;
- 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.

Upon indication of the UE having successfully completed the cell change order, UTRAN should:

- 1> release the radio connection; and
- 1> remove all context information for the concerned UE.

NOTE: The release of the UMTS radio resources is initiated from another RAT.

Reference(s)

TS 25.331 clause 8.3.11, B.6.

8.3.11.9.3 Test purpose

To test that the UE shall be able to receive a CELL CHANGE ORDER FROM UTRAN message in CELL_DCH state when Radio bearers are mapped to HSDSCH channels and perform a cell change to another RAT, even if no prior UE measurements have been performed on the target cell and HS-PDSCH channels are active. The UE regards the procedure as completed when it has received a successful response from the target RAT, e.g. in case of GSM when it received the response to a (PACKET) CHANNEL REQUEST in the new cell.

8.3.11.9.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

Parameter	Unit	Cell 2 (GSM)
Qsearch_I (TDD)	dBm	15 (never)

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

Cell 1-SIB 1 T309 set to 8 seconds (see specific message contents)

UE: PS-DCCH+DTCH_DCH_HSDCH (State 6-17) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

Related ICS/IXIT statement(s)

- UE supports FDD or TDD
- UE supports HS-PDSCH
- UE supports GSM/GPRS
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS, GSM-850, GSM-710, GSM 750, T_GSM-810

Test Procedure

The UE is in CELL_DCH state and has a radio bearer mapped on HS-DSCH established. The SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel on the target GPRS cell. The SS checks whether the cell change is performed by checking that the UE receives a successful response to the CHANNEL REQUEST message from the SS through GPRS cell. The UE sends a RA UPDATE REQUEST message to indicate that the UTRAN UE context needs to be transferred to GPRS.

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS brings the UE into PS-
			DCCH+DTCH_DCH_HSDSCH in cell 1
2	SS		The SS configures cell 2 as a GSM cell with GPRS
			enabled
3	+	CELL CHANGE ORDER FROM	Send on cell 1 (UTRAN cell) and the message indicates:
		UTRAN	the target cell description for GPRS.
4	UE		The UE accepts the cell change command and switches
			to the GPRS cell specified in the CELL CHANGE ORDER
			FROM UTRAN
5	\rightarrow	CHANNEL REQUEST	The SS receives this burst on the RACH of cell 2 to
			establish temporary block flow (GPRS cell). It implies that
			the UE has switched to GPRS cell.
6	←	IMMEDIATE ASSIGNMENT	Uplink dynamic allocation. Sent on AGCH.
7	\rightarrow	ROUTING AREA UPDATE	
1		REQUEST	

Specific message contents

SYSTEM INFORMATION BLOCK TYPE 1

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark
T309	8 Sec

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark	
Message Type		
RRC transaction identifier Integrity check info	Arbitrarily selects one integer between 0 to 3	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.	
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.	
Activation time	Now	
Target cell description		
- CHOICE Radio Access Technology		
- GSM		
- BSIC	BSIC of Cell2	
- Band Indicator	Set to "GSM/ PCS 1900" if GSW PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band"	
- BCCH ARFCN	Allocated BCCH ARFCN of Cell 2	
- NC mode	NOT PRESENT	

8.3.11.9.5 Test requirements

After step 3 the UE shall transmit a CHANNEL REQUEST message on RACH.

8.3.11.10 Inter-RAT Cell Change Order from UTRAN to GPRS/CELL_DCH/Failure (Physical channel Failure)

8.3.11.10.1 Definition and applicability

All UEs which support FDD or TDD, HS-PDSCH and GSM.

8.3.11.10.2 Conformance requirement

If:

- timer T309 expires prior to the successful establishment of a connection to the target RAT; or
- if the establishment of the connection to the other RAT failed due to other reasons e.g. (random) access failure, rejection due to lack of resources:

the UE shall:

- 1> if it received the CELL CHANGE ORDER FROM UTRAN message in state CELL_DCH:
 - 2> if the CM_PATTERN_ACTIVATION_ABORTED flag is not set to TRUE:
 - 3> revert back to the UTRA configuration;
 - 3> establish the UTRA physical channel(s) (including HS-DSCH related channels) used at the time for reception of CELL CHANGE ORDER FROM UTRAN.
 - 2> perform the physical layer synchronisation procedure A as specified in [29] (FDD only);
 - 2> after the establishment of the uplink physical channel, send DPCCH and no DPDCH according to [26] during the number of frames indicated in the IE "PC preamble" in the variable LATEST_CONFIGURED_SRB_DELAY_AND_PC_PREAMBLE; and
 - 2> then not send any data on signalling radio bearers RB0 to RB4 during the number of frames indicated in the IE "SRB delay" in the variable LATEST_CONFIGURED_SRB_DELAY_AND_PC_PREAMBLE;
 - 2> if the CM_PATTERN_ACTIVATION_ABORTED flag is set to TRUE or if the UE does not succeed in establishing the UTRA physical channel(s):
 - 3> perform a cell update procedure according to subclause 8.3.1 with cause "Radio link failure";
 - 3> when the cell update procedure has completed successfully:
 - 4> proceed as below.
 - 2> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 3> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry;
 - 3> set the IE "Inter-RAT change failure" to "physical channel failure".
 - 2> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission, the procedure ends.
- 1> if the UE receives the CELL CHANGE ORDER FROM UTRAN message in CELL_FACH state:
 - 2> revert to the cell it was camped on at the reception of the CELL CHANGE ORDER FROM UTRAN message;
 - 2> if the UE is unable to return to this cell:

- 3> select a suitable UTRA cell according to [4];
- 3> initiate the cell update procedure according to subclause 8.3.1 using the cause "cell re-selection";
- 3> when the cell update procedure completed successfully:
 - 4> proceed as below.
- 2> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 3> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the CELL CHANGE ORDER FROM UTRAN message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry;
 - 3> set the IE "Inter-RAT change failure" to "physical channel failure".
- 2> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:
 - 3> the procedure ends.

Reference(s)

TS 25.331 clause 8.3.11

8.3.11.10.3 Test purpose

To verify that when UE received CELL CHANGE ORDER FROM UTRAN message in CELL_DCH state and if the establishment of the connection to the other RAT failed due to expiry of timer T309 prior to the successful establishment of a connection to the target RAT:

- a. revert back to the UTRA configuration
- establish the UTRA physical channel(s) used at the time for reception of CELL CHANGE ORDER FROM UTRAN;
- c. transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message and set the IE "Inter-RAT change failure" to "physical channel failure".

8.3.11.10.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

UE: PS-DCCH+DTCH_DCH_HSDSCH (State 6-17) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

NOTE: The 'timer poll' value in the SS RLC transmit entity should be set to 800 ms.

Related ICS/IXIT statement(s)

- UE supports FDD or TDD
- UE supports HS-PDSCH
- UE supports GSM/GPRS
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS, GSM-850, GSM-710, GSM 750, T GSM-810

Test Procedure

The UE is in CELL_DCH state and has a radio bearer mapped on HS-DSCH established. The SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. The UE starts the timer T309. After the UE receives the command it shall configure itself accordingly but cannot complete the cell change, as SS does not respond to the CHANNEL REQUEST message transmitted by UE till the expiry of T309 timer. The SS checks that the cell change has failed by checking that the UE transmits the CELL CHANGE ORDER FROM UTRAN FAILURE message to the SS in UTRAN cell.

Step	Direction	Message	Comments
	UE SS	_	
1	UE		The SS bring the UE into PS-DCCH _DCH_HSDSCH
			(State 6-17) in cell 1
2	SS		The SS configures cell 2 as a GSM cell with GPRS
			enabled
3	←	CELL CHANGE ORDER FROM	Send on cell 1 (UTRAN cell) and the message indicates:
		UTRAN	the target cell description for GSMGPRS.
4	UE		UE starts the timer T309. The UE accepts the cell change
			command and switches to the GPRS specified in the
			CELL CHANGE ORDER FROM UTR AN
5	\rightarrow	CHANNEL REQUEST	The SS receives this burst on RACH of cell 2 (GPRS cell)
			to establish temporary block flow
6	\rightarrow		SS does not respond to the channel request.
			UE sends M+1 CHANNEL REQUEST messages
			The SS does not transmit a response and wait for T309
			timer to expire.
7	\rightarrow	CELL CHANGE ORDER FROM	The SS receives the message on the old channel of
		UTRAN FAILURE	UTRAN cell.
			Note
			The UE may send a ROUTING AREA UPD ATE
			REQUEST to complete the RA Update procedure
			initiated at step 5.

Specific message contents

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark	
Message Type		
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3	
Integrity check info		
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.	
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.	
Activation time	Now	
Target cell description		
- CHOICE Radio Access Technology		
- GSM		
- BSIC	BSIC of Cell 2	
- Band Indicator	Set to "GSM/PCS 1900" if GSW PCS 1900 is used in this test. Otherwise set to "GSWDCS 1800 Band"	
- BCCH ARFCN	Allocated BCCH ARFCN of Cell 2	
- NC mode	Not present	

8.3.11.10.5 Test requirements

In step 5 the UE shall transmit a CHANNEL REQUEST message on RACH.

In step 7 the SS shall receive CELL CHANGE ORDER FROM UTRAN FAILURE message on the old channel of the UTRAN cell.

8.3.11.11 Inter-RAT cell change order from UTRAN/To GPRS/CELL_FACH/No RAB established/Success

8.3.11.11.1 Definition

8.3.11.11.2 Conformance requirement

The purpose of the inter-RAT cell change order procedure is to transfer, under the control of the network, a connection between the UE and UTRAN to another radio access technology (e.g. GSM). This procedure may be used in CELL_DCH and CELL_FACH state. This procedure may be used when no RABs are established or when the established RABs are only from PS domain. This procedure may not be used when there is no PS signalling connection.

The procedure is initiated when UTRAN orders a UE in CELL_DCH or CELL_FACH state, to make a cell change to a radio access technology other than UTRAN, e.g. GSM.

To initiate the procedure, UTRAN sends a CELL CHANGE ORDER FROM UTRAN message.

The UE shall be able to receive a CELL CHANGE ORDER FROM UTRAN message and perform a cell change order to another RAT, even if no prior UE measurements have been performed on the target cell.

If the variable ESTABLISHED_SIGNALLING_CONNECTIONS does not include the CN domain identity "PS domain", or if the variable ESTABLISHED_SIGNALLING_CONNECTIONS includes the CN domain identity "CS domain":

1> the UE shall act as if the message was never received.

The UE shall:

- 1> start timer T309; and
- 1> establish the connection to the other radio access technology, as specified within IE "Target cell description". This IE specifies the target cell identity, in accordance with the specifications for that other RAT. In case the target cell is a GSM/ GPRS cell, IE "Target cell description" may also include IE "NC mode", which specifies the cell selection mode to be applied in the target cell; and
- 1> if IE "NC mode" is not included in the CELL CHANGE ORDER FROM UTRAN:
 - 2> retrieve it from the target cell as specified in [43];
 - 2> act upon IE "NC mode" as specified in [43].
- 1> if the IE "RAB Information List" is included in the CELL CHANGE ORDER FROM UTRAN message:
 - 2> ignore the contents of the IE "RAB Information List".

NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification. In case of GSM/GPRS proceed according to the procedure Network control cell reselection procedure as specified in [44].

The UE regards the procedure as completed when it has received a successful response from the target RAT, e.g. in case of GSM when it received the response to a (PACKET) CHANNEL REQUEST in the new cell.

Upon successful completion of the cell change order, the UE shall:

- 1> stop timer T309;
- 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.

Upon indication of the UE having successfully completed the cell change order, UTRAN should:

- 1> release the radio connection; and
- 1> remove all context information for the concerned UE.

NOTE: The release of the UMTS radio resources is initiated from another RAT.

Reference(s)

TS 25.331 clause 8.3.11

8.3.11.11.3 Test purpose

To test that the UE shall be able to receive a CELL CHANGE ORDER FROM UTRAN message in CELL_FACH state and perform a cell change to another RAT, when no RABs are established.

8.3.11.11.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN and different location area, routing area.

UE: Registered Idle mode on PS in cell 1

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB+ uplink: 3.4 DL: 3.4 kbps SRBs
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Test Procedure

The SS starts the UTRAN cell and the UE is triggered to make an MOPS call. After the SS receives SERVICE REQUEST message, the SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description. After the UE receives the command it shall configure itself accordingly and switch to the new channel on the target GPRS cell. The SS checks whether the cell change is performed by checking that the UE sends a PACKET CHANNEL REQUEST through GPRS cell. The UE sends an RA UPDATE REQUEST message to indicate that the UTRAN UE context needs to be transferred to GPRS.

Step	Direc	tion	Message	Comments
	UE	SS		
1	UE			Trigger the UE to initiate an MO PS call
2	7	>	SERVICE REQUEST	
3	+		CELL CHANGE ORDER FROM UTRAN	Sent on cell 1 (UTRAN cell) and the message indicates: the target cell description for GPRS.
4	UI	E		The UE accepts the cell change command and switches to the GPRS cell specified in the CELL CHANGE ORDER FROM UTRAN
5)	>	PACKET CHANNEL REQUEST	The SS receives this burst on PRACH of cell 2 (GPRS cell) to establish temporary block flow. It implies that the UE has switched to GPRS cell.
6	+	-	PACKET UPLINK ASSIGNMENT	Uplink dynamic allocation Sent on PAGCH.
7	7		ROUTING AREA UPDATE REQUEST	

Specific message contents

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
Target cell description	
- CHOICE Radio Access Technology	
- GSM	
- BSIC	BSIC1BSIC of Cell 2
- Band Indicator	DCS 1800 band used Set to "GSM/ PCS 1900" if GSM/
	PCS 1900 is used in this test. Otherwise set to "GSWDCS
	1800 Band"
- BCCH ARFCN	1Allocated BCCH ARFCN of Cell 2
- NC mode	NOT PRESENT

8.3.11.11.5 Test requirement

After step 4, the UE shall transmit a PACKET CHANNEL REQUEST message on PRACH.

8.3.11.12 Inter-RAT cell change order from UTRAN/To GPRS/CELL_DCH/Network Assisted Cell Change/Success

8.3.11.12.1 Definition

8.3.11.12.2 Conformance requirement

1> if the UE supports UTRAN to GERAN Network Assisted Cell Change, the IE "Geran-System Information" is present and the UE is in CELL_DCH state:

- 2> if according to [44] the IE "GERAN System Information" includes a correct and consistent set of SI or PSI messages:
 - 3> use this information as the system information to begin access on the target GERAN cell.
- 2> otherwise:
 - 3> ignore the IE "GERAN System Information" and continue the Cell Change Order procedure.

NOTE: The IE "GERAN System Information" is constructed in the same way as in 2G to 2G NACC, i.e. the PSI messages are encoded as such, whereas the SI messages exclude 2 octets of headers, see [44].

Reference(s)

TS 25.331 clause 8.3.11.3.

8.3.11.12.3 Test purpose

To test that the UE shall be able to receive a CELL CHANGE ORDER FROM UTRAN message which includes a correct and consistent set of SI or PSI messages in the IE "GERAN System Information" in CELL_DCH state and perform a cell change to another RAT using this as the system information to begin access on the target GERAN cell, even if no prior UE measurements have been performed on the target cell. The UE regards the procedure as completed when it has received a successful response from the target RAT, e.g. in case of GSM when it received the response to a (PACKET) CHANNEL REQUEST in the new cell.

8.3.11.12.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN. Cell 2 is GPRS, no System Information is broadcast on the BCCH. 51.010 clauses 20.22 and 40.1.1 Cell A parameters shall be referenced for the default parameters of cell 2.

Parameter	Unit	Cell 2 (GSM)
Qsearch_I (TDD)	dBm	15 (never)

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

Cell 1-SIB 1 T309 set to 8 seconds (see specific message contents).

UE: PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

Related ICS/IXIT statement

- UE supports UTRAN to GERAN NACC,
- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink:3.4 DL:3.4 kbps SRBs
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-850, GSM-PCS, GSM-710, GSM 750, T_GSM-810

Test Procedure

The SS starts the UTRAN cell and brings the UE into PS-DCCH+DTCH_DCH (State 6-10). The SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, including GERAN system information, to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel on the target GPRS cell. The SS checks whether the cell change is performed by checking that the UE receives a successful response to the CHANNEL REQUEST message from the SS through GPRS cell. The UE sends a RA UPDATE REQUEST message to indicate that the UTRAN UE context needs to be transferred to GPRS.

Step	Direction	Message	Comments
	UE SS	_	
1	UE		The SS brings the UE into PS-DCCH+DTCH_DCH (State 6-10) in cell 1
2	SS		The SS configures cell 2 as a GSM cell with GPRS enabled. No system information is broadcast on the BCCH
3	+	CELL CHANGE ORDER FROM UTRAN	Send on cell 1 (UTRAN cell) and the message indicates: the target cell description for GPRS and includes system information for cell 2.
4	UE		The UE accepts the cell change command and switches to the GPRS cell specified in the CELL CHANGE ORDER FROM UTRAN
5	→	CHANNEL REQUEST	The SS receives this burst on the RACH of cell 2 to establish temporary block flow (GPRS cell). It implies that the UE has switched to GPRS cell.
6	←	IMMEDIATE ASSIGNMENT	Uplink dynamic allocation. Sent on AGCH.
7	→	ROUTING AREA UPDATE REQUEST	

Specific message contents

SYSTEM INFORMATION BLOCK TYPE 1

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark
T309	8 Sec

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
Target cell description	
- CHOICE Radio Access Technology	
- GSM	
- BSIC	BSIC of Cell 2
- Band Indicator	Set to "GSM PCS 1900" if GSM/ PCS 1900 is used in this
	test. Otherwise set to "GSM/DCS 1800 Band"
- BCCH ARFCN	Allocated BCCH ARFCN of Cell 2
- NC mode	NOT PRESENT
- CHOICE geran-SystemInfoType	
-sl	Encoded to contain default GPRS Cell A system information
	with the exception the SI_STATUS_IND bit in System
	Information Type 13 set to "1".

8.3.11.12.5 Test requirement

After step 3 the UE shall transmit a CHANNEL REQUEST message on RACH.

8.3.11.13 Inter-RAT cell change order from UTRAN/To GPRS/CELL_DCH/Network Assisted Cell Change with Invalid SI/Success

8.3.11.13.1 Definition

8.3.11.13.2 Conformance requirement

1> if the UE supports UTRAN to GERAN Network Assisted Cell Change, the IE "Geran-System Information" is present and the UE is in CELL_DCH state:

- 2> if according to [44] the IE "GERAN System Information" includes a correct and consistent set of SI or PSI messages:
 - 3> use this information as the system information to begin access on the target GERAN cell.

2> otherwise:

3> ignore the IE "GERAN System Information" and continue the Cell Change Order procedure.

NOTE: The IE "GERAN System Information" is constructed in the same way as in 2G to 2G NACC, i.e. the PSI messages are encoded as such, whereas the SI messages exclude 2 octets of headers, see [44].

Reference(s)

TS 25.331 clause 8.3.11.3.

8.3.11.13.3 Test purpose

To test that the UE shall be able to receive a CELL CHANGE ORDER FROM UTRAN message which includes an incorrect set of SI or PSI messages in the IE "GERAN System Information" in CELL_DCH state and perform a cell change to another RAT, ignoring the IE "GERAN System Information", even if no prior UE measurements have been performed on the target cell. The UE regards the procedure as completed when it has received a successful response from the target RAT, e.g. in case of GSM when it received the response to a (PACKET) CHANNEL REQUEST in the new cell.

8.3.11.13.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 Cell A parameters shall be referenced for the default parameters of cell 2 with the exception the SI_STATUS_IND bit in System Information Type 13 set to "1".

Parameter	Unit	Cell 2 (GSM)
Qsearch_I (TDD)	dBm	15 (never)

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

Cell 1-SIB 1T309 set to 8 seconds (see specific message contents)

UE: PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, one PS do main RAB is established.

Related ICS/IXIT statement

- UE supports UTRAN to GERAN NACC,
- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink: 3.4 DL: 3.4 kbps SRBs,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-850, GSM-PCS, GSM-710, GSM 750, T GSM-810.

Test Procedure

The SS starts the UTRAN cell and brings the UE into PS-DCCH+DTCH_DCH (State 6-10). The SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, and including a set of GERAN system information which describes a GPRS cell different to the target cell, and replaced SI 3 with all '1's, to the UE through DCCH of the serving UTRAN cell. This is to test that if any of the SI signalled is not correct, all of the IE is ignored. After the UE receives the command it shall configure itself accordingly and switch to the new channel on the target GPRS cell, ignoring the IE "GERAN System Information" and reading this instead from cell 2. The SS checks whether the cell change is performed by checking that the UE receives a successful response to the CHANNEL REQUEST message from the SS through GPRS cell. The UE sends a RA UPDATE REQUEST message to indicate that the UTRAN UE context needs to be transferred to GPRS.

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS brings the UE into PS-DCCH+DTCH_DCH (State
			6-10) in cell 1
2	SS		The SS configures cell 2 as a GSM cell with GPRS
			enabled
3	←	CELL CHANGE ORDER FROM	Send on cell 1 (UTRAN cell) and the message indicates:
		UTRAN	the target cell description for GPRS, including invalid
			GERAN system information.
4	UE		The UE accepts the cell change command and switches
			to the GPRS cell specified in the CELL CHANGE ORDER FROM UTRAN
5	\rightarrow	CHANNEL REQUEST	The SS receives this burst on the RACH of cell 2 to
			establish temporary block flow (GPRS cell). It implies that
			the UE has switched to GPRS cell.
6	←	IMMEDIATE ASSIGNMENT	Uplink dynamic allocation. Sent on AGCH.
7	\rightarrow	ROUTING AREA UPDATE	
		REQUEST	

Specific message contents

SYSTEM INFORMATION BLOCK TYPE 1

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark
T309	8 Sec

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
Target cell description	
- CHOICE Radio Access Technology	
- GSM	
- BSIC	BSIC of Cell 2
- Band Indicator	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this
	test. Otherwise set to "GSM/DCS 1800 Band"
- BCCH ARFCN	Allocated BCCH ARFCN of Cell 2
- NC mode	NOT PRESENT
- CHOICE geran-SystemInfoType	
- sI	Encoded to contain default GPRS Cell B system information with the exception the SI_STATUS_IND bit in System Information Type 13 set to "1". SI 3 encoded PDU is replaced with all '1' bits to test that all of the IE is ignored if any part is incorrect.

8.3.11.13.5 Test requirement

After step 3 the UE shall transmit a CHANNEL REQUEST message on RACH.

8.3.11.14 Inter-RAT Cell Change Order from UTRAN to GPRS/CELL_DCH/Success (stop of E-DCH transmission)

8.3.11.14.1 Definition and applicability

All UEs which support FDD and HS-PDSCH and E-DPDCH and GSM.

8.3.11.14.2 Conformance requirement

The purpose of the inter-RAT cell change order procedure is to transfer, under the control of the network, a connection between the UE and UTRAN to another radio access technology (e.g. GSM). This procedure may be used in CELL_DCH and CELL_FACH state. This procedure may be used when no RABs are established or when the established RABs are only from PS domain. This procedure may not be used when there is no PS signalling connection.

The procedure is initiated when UTRAN orders a UE in CELL_DCH or CELL_FACH state, to make a cell change to a radio access technology other than UTRAN, e.g. GSM.

To initiate the procedure, UTRAN sends a CELL CHANGE ORDER FROM UTRAN message.

. . .

The UE shall be able to receive a CELL CHANGE ORDER FROM UTRAN message and perform a cell change order to another RAT, even if no prior UE measurements have been performed on the target cell.

If the variable ESTABLISHED_SIGNALLING_CONNECTIONS does not include the CN domain identity "PS domain", or if the variable ESTABLISHED_SIGNALLING_CONNECTIONS includes the CN domain identity "CS domain":

1> the UE shall act as if the message was never received.

The UE shall:

1>For FDD:

- 2> if the UE has a pending "TGPS reconfiguration CFN" at the activation time received in the CELL CHANGE ORDER FROM UTRAN message the UE may:
 - 3> abort the pending CM activation;
 - 3> set the CM_PATTERN_ACTIVATION_ABORTED to TRUE.
- 2> otherwise:
 - 3> set the CM_PATTERN_ACTIVATION_ABORTED to FALSE.
- 1> start timer T309; and
- 1> establish the connection to the other radio access technology, as specified within IE "Target cell description". This IE specifies the target cell identity, in accordance with the specifications for that other RAT. In case the target cell is a GSM/ GPRS cell, IE "Target cell description" may also include IE "NC mode", which specifies the cell selection mode to be applied in the target cell; and
- 1> if IE "NC mode" is not included in the CELL CHANGE ORDER FROM UTRAN:
 - 2> retrieve it from the target cell as specified in [43];
 - 2> act upon IE "NC mode" as specified in [43].
- 1> if the IE "RAB Information List" is included in the CELL CHANGE ORDER FROM UTRAN message:
 - 2> ignore the contents of the IE "RAB Information List".

. . .

The UE regards the procedure as completed when it has received a successful response from the target RAT, e.g. in case of GSM when it received the response to a (PACKET) CHANNEL REQUEST in the new cell.

Upon successful completion of the cell change order, the UE shall:

- 1> stop timer T309;
- 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.

Upon indication of the UE having successfully completed the cell change order, UTRAN should:

- 1> release the radio connection; and
- 1> remove all context information for the concerned UE.

NOTE: The release of the UMTS radio resources is initiated from another RAT.

Reference(s)

TS 25.331 clause 8.3.11

8.3.11.14.3 Test purpose

To test that the UE is able to receive a CELL CHANGE ORDER FROM UTRAN message in CELL_DCH state when Radio bearers are mapped to the E-DCH channel and perform a cell change to another RAT, even if no prior UE measurements have been performed on the target cell and E-DPDCH or E-PUCH channels are active.

8.3.11.14.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of Cell 2.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

Cell 1-SIB 1 T309 set to 8 seconds (see specific message contents)

UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-18) under condition A12, as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD or TDD
- UE supports HS-PDSCH
- UE supports E-DPDCH
- UE supports GSM/GPRS or E-PUCH

Test Procedure

The UE is in the CELL_DCH state and has a radio bearer mapped on E-DCH and HS-DSCH established with active E-DCH transmission and HS-DSCH reception. The SS configures the GPRS cell, then sends a CELL CHANGE ORDER FROM UTRAN message indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel on the target GPRS cell. The SS checks whether the cell change is performed by checking that the UE receives a successful response to the CHANNEL REQUEST message from the SS through GPRS cell. The UE sends a ROUTING AREA UPDATE REQUEST message to indicate that the UTRAN UE context needs to be transferred to GPRS.

Expected sequence

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS brings the UE into PS_DCCH+DTCH E_DCH/HS_DSCH in Cell 1
2	SS		The SS configures Cell 2 as a GSM cell with GPRS enabled
3	+	CELL CHANGE ORDER FROM UTRAN	Sent on Cell 1 (UTRAN cell) and the message indicates: the target cell description for GPRS.
4	UE		The UE accepts the cell change command and switches to the GPRS cell specified in the CELL CHANGE ORDER FROM UTRAN
5	→	CHANNEL REQUEST	The SS receives this burst on the RACH of Cell 2 to establish temporary block flow (GPRS cell). It implies that the UE has switched to GPRS cell.
6	+	IMMEDIATE ASSIGNMENT	Uplink dynamic allocation. Sent on AGCH.
7	→	ROUTING AREA UPDATE REQUEST	

Specific message contents

SYSTEM INFORMATION BLOCK TYPE 1

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark
T309	8 Sec

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
Target cell description	
- CHOICE Radio Access Technology	
- GSM	
- BSIC	BSIC of Cell2
- Band Indicator	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band"
- BCCH ARFCN	Allocated BCCH ARFCN of Cell 2
- NC mode	NOT PRESENT

8.3.11.14.5 Test requirements

After step 3 the UE shall transmit a CHANNEL REQUEST message on RACH.

8.3.11.15 Inter-RAT Cell Change Order from UTRAN to GPRS/CELL_DCH/Success (stop of discontinuous uplink transmission)

8.3.11.15.1 Definition

All UEs, which support FDD and UL DTX.

8.3.11.15.2 Conformance requirement

The purpose of the inter-RAT cell change order procedure is to transfer, under the control of the network, a connection between the UE and UTRAN to another radio access technology (e.g. GSM). This procedure may be used in

CELL_DCH and CELL_FACH state. This procedure may be used when no RABs are established or when the established RABs are only from PS domain. This procedure may not be used when there is no PS signalling connection.

The procedure is initiated when UTRAN orders a UE in CELL_DCH or CELL_FACH state, to make a cell change to a radio access technology other than UTRAN, e.g. GSM.

To initiate the procedure, UTRAN sends a CELL CHANGE ORDER FROM UTRAN message.

. . .

The UE shall be able to receive a CELL CHANGE ORDER FROM UTRAN message and perform a cell change order to another RAT, even if no prior UE measurements have been performed on the target cell.

If the variable ESTABLISHED_SIGNALLING_CONNECTIONS does not include the CN domain identity "PS domain", or if the variable ESTABLISHED_SIGNALLING_CONNECTIONS includes the CN domain identity "CS domain":

1> the UE shall act as if the message was never received.

The UE shall:

- 1> if the UE has a pending "TGPS reconfiguration CFN" at the activation time received in the CELL CHANGE ORDER FROM UTRAN message the UE may:
 - 2> abort the pending CM activation;
 - 2> set the CM_PATTERN_ACTIVATION_ABORTED to TRUE.
- 1> otherwise:
 - 2> set the CM_PATTERN_ACTIVATION_ABORTED to FALSE.
- 1> start timer T309; and
- 1> establish the connection to the other radio access technology, as specified within IE "Target cell description". This IE specifies the target cell identity, in accordance with the specifications for that other RAT. In case the target cell is a GSM/ GPRS cell, IE "Target cell description" may also include IE "NC mode", which specifies the cell selection mode to be applied in the target cell; and
- 1> if IE "NC mode" is not included in the CELL CHANGE ORDER FROM UTRAN:
 - 2> retrieve it from the target cell as specified in [43];
 - 2> act upon IE "NC mode" as specified in [43].
- 1> if the IE "RAB Information List" is included in the CELL CHANGE ORDER FROM UTRAN message:
 - 2> ignore the contents of the IE "RAB Information List".

. . .

The UE regards the procedure as completed when it has received a successful response from the target RAT, e.g. in case of GSM when it received the response to a (PACKET) CHANNEL REQUEST in the new cell.

Upon successful completion of the cell change order, the UE shall:

- 1> stop timer T309;
- 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.

Upon indication of the UE having successfully completed the cell change order, UTRAN should:

- 1> release the radio connection; and
- 1> remove all context information for the concerned UE.

NOTE: The release of the UMTS radio resources is initiated from another RAT.

Reference(s)

TS 25.331 clause 8.3.11

8.3.11.15.3 Test purpose

To test that the UE is able to receive a CELL CHANGE ORDER FROM UTRAN message in CELL_DCH state when Radio bearers are mapped to the E-DCH channel with UL DTX and DL DRX (if supported) configured and perform a cell change to another RAT, even if no prior UE measurements have been performed on the target cell and E-DPDCH channels are active.

8.3.11.15.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of Cell 2.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

Cell 1-SIB 1T309 set to 8 seconds (see specific message contents)

UE: PS_DCCH+DTCH E_DCH/HS_DSCH (state 6-18), with UL DTX configured, under condition A20, as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports discontinuous uplink transmission.
- UE supports GSM/GPRS

Test Procedure

The UE is in the CELL_DCH state and has a radio bearer mapped on E-DCH, HS-DSCH established (with DRX enabled if supported) and UL DTX configured with active E-DCH transmission and HS-DSCH reception. The SS configures the GPRS cell, and then sends a CELL CHANGE ORDER FROM UTRAN message indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel on the target GPRS cell. The SS checks whether the cell change is performed by checking that the UE receives a successful response to the CHANNEL REQUEST message from the SS through GPRS cell. The UE sends a ROUTING AREA UPDATE REQUEST message to indicate that the UTRAN UE context needs to be transferred to GPRS.

Expected sequence

Step	Direction	Message	Comments
	UE SS		
1	UE		The SS brings the UE into PS_DCCH+DTCH E_DCH/HS_DSCH (with DRX enabled if supported) with UL DTX configured in Cell 1
3	+	CELL CHANGE ORDER FROM UTRAN	Sent on Cell 1 (UTRAN cell) and the message indicates: the target cell description for GPRS.
4	UE		The UE accepts the cell change command and switches to the GPRS cell specified in the CELL CHANGE ORDER FROM UTRAN
5	→	CHANNEL REQUEST	The SS receives this burst on the RACH of Cell 2 to establish temporary block flow (GPRS cell). It implies that the UE has switched to GPRS cell.
6	←	IMMEDIATE ASSIGNMENT	Uplink dynamic allocation. Sent on AGCH.
7		ROUTING AREA UPDATE REQUEST	

Specific message contents

SYSTEM INFORMATION BLOCK TYPE 1

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark
T309	8 Sec

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
Target cell description	
- CHOICE Radio Access Technology	
- GSM	
- BSIC	BSIC of Cell2
- Band Indicator	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this
	test. Otherwise set to "GSWDCS 1800 Band"
- BCCH ARFCN	Allocated BCCH ARFCN of Cell 2
- NC mode	NOT PRESENT

8.3.11.15.5 Test requirements

At step 4 the UE shall transmit a CHANNEL REQUEST message on RACH.

8.3.11.16 Inter-RAT Cell Change Order from UTRAN to GPRS/ MIMO (Success: with PCI Restrictions and S-CPICH Power Offset)

8.3.11.16.1 Definition and applicability

All UE categories which support MIMO and GSM/GPRS

UE supports FDD and F-DPCH or Enhanced F-DPCH

8.3.11.16.2 Conformance requirement

The purpose of the inter-RAT cell change order procedure is to transfer, under the control of the network, a connection between the UE and UTRAN to another radio access technology (e.g. GSM). This procedure may be used in CELL_DCH and CELL_FACH state. This procedure may be used when no RABs are established or when the established RABs are only from PS domain. This procedure may not be used when there is no PS signalling connection.

The procedure is initiated when UTRAN orders a UE in CELL_DCH or CELL_FACH state, to make a cell change to a radio access technology other than UTRAN, e.g. GSM.

To initiate the procedure, UTRAN sends a CELL CHANGE ORDER FROM UTRAN message.

. . .

The UE shall be able to receive a CELL CHANGE ORDER FROM UTRAN message and perform a cell change order to another RAT, even if no prior UE measurements have been performed on the target cell.

If the variable ESTABLISHED_SIGNALLING_CONNECTIONS does not include the CN domain identity "PS domain", or if the variable ESTABLISHED_SIGNALLING_CONNECTIONS includes the CN domain identity "CS domain":

1> the UE shall act as if the message was never received.

The UE shall:

1>For FDD:

- 2> if the UE has a pending "TGPS reconfiguration CFN" at the activation time received in the CELL CHANGE ORDER FROM UTRAN message the UE may:
 - 3> abort the pending CM activation;
 - 3> set the CM PATTERN ACTIVATION ABORTED to TRUE.
- 2> otherwise:
 - 3> set the CM_PATTERN_ACTIVATION_ABORTED to FALSE.
- 1> start timer T309; and
- 1> establish the connection to the other radio access technology, as specified within IE "Target cell description". This IE specifies the target cell identity, in accordance with the specifications for that other RAT. In case the target cell is a GSM/ GPRS cell, IE "Target cell description" may also include IE "NC mode", which specifies the cell selection mode to be applied in the target cell; and
- 1> if IE "NC mode" is not included in the CELL CHANGE ORDER FROM UTRAN:
 - 2> retrieve it from the target cell as specified in [43];
 - 2> act upon IE "NC mode" as specified in [43].
- 1> if the IE "RAB Information List" is included in the CELL CHANGE ORDER FROM UTRAN message:
 - 2> ignore the contents of the IE "RAB Information List".

. .

The UE regards the procedure as completed when it has received a successful response from the target RAT, e.g. in case of GSM when it received the response to a (PACKET) CHANNEL REQUEST in the new cell.

Upon successful completion of the cell change order, the UE shall:

- 1> stop timer T309;
- 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.

Upon indication of the UE having successfully completed the cell change order, UTRAN should:

- 1> release the radio connection; and
- 1> remove all context information for the concerned UE.

NOTE: The release of the UMTS radio resources is initiated from another RAT.

[...]

If the UE receives an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message:

- 1> if the IE "MIMO parameters" is not included:
 - 2> clear the MIMO_PARAMS variable;
 - 2> trigger lower layers to stop operation in MIMO mode.
- 1> otherwise:
 - 2> for FDD, if the IE "MIMO N_cqi_type A/M_cqi ratio" is included:
 - 3> store the value of the IE "MIMO N_cqi_type A/M_cqi ratio" in the MIMO_PA RAMS variable.
 - 2> for FDD, if the IE "MIMO pilot configuration" is included:
 - 3> store the value of the IE "MIMO pilot configuration" in the MIMO_PARAMS variable.

- 2> for 1.28 Mcps TDD, if the IE "MIMO SF Mode for HS-PDSCH dual stream" is included:
 - 3> store the value of the IE "MIMO SF Mode for HS-PDSCH dual stream" in the MIMO_PARAMS variable.
- 2> if the IE "MIMO operation" is set to "start":
 - 3> for FDD, if the IE "Precoding weight set restriction" is included:
 - 4> store the value of the IE "Precoding weight set restriction" in the MIMO_PARAMS variable. In addition, it shall be indicated to lower layers that precoding weight set restriction is configured.
 - 3> else:
 - 4> clear the value of the IE "Precoding weight set restriction" in the MIMO_PARAMS variable. In addition, it shall be indicated to lower layers that precoding weight set restriction is not configured.
- 2> else if the IE "MIMO operation" is set to "continue":
 - 3> if the IE "Precoding weight set restriction" is included:
 - 4> if the IE "Precoding weight set restriction" is already stored in the variable MIMO_PARAMS before receiving this message:
 - 5> continue using "Precoding weight set restriction" for MIMO operation.
 - 4> else:
 - 5> UE behaviour is undefined.
 - 3> else:
 - 4> if the IE "Precoding weight set restriction" is already stored in the variable MIMO_PARAMS before receiving this message:
 - 5> continue using "Precoding weight set restriction" for MIMO operation.
 - 4> else:
 - 5> continue MIMO operation without using "Precoding weight set restriction".

NOTE: This subclause applies to FDD and 1.28 Mcps TDD only.

[...]

- 1> for FDD, if the IE "Secondary CPICH In fo" is included and if the IE "Channelisation code" in MIMO pilot configuration is different from the IE "Channelisation Code" in Secondary CPICH info:
 - 2> the UE behavior is undefined.
- 1> for FDD, if the IE "Secondary CPICH Info" is included and if the IE "Power Offset For S-CPICH for MIMO" is provided, then pass the offset value received in the IE "Power Offset For S-CPICH for MIMO" to the lower layers.

[...]

If the UE receives an ACTIVE SET UPDATE, CELL UPDATE CONFIRM, or any reconfiguration message, the UE shall:

- 1> take actions related to the MIMO_PARAMS variable as specified in subclause 8.5.32;
- 1> determine the value of the MIMO_STATUS variable.

The MIMO_STATUS variable shall be set to TRUE only when all the following conditions are met:

- 1> The UE is in CELL_DCH state;
- 1> the variable HS_DSCH_RECEPTION is set to TRUE;

- 1> for FDD, the variable MIMO_PARAMS contains a value for the IE "MIMO N_cqi_type A/M_cqi ratio"; and
- 1> for FDD, the variable MIMO_PARAMS contains a value for the IE "MIMO pilot configuration".
- 1> for 1.28 Mcps TDD, the variable MIMO_PARAMS contains a value for the IE "MIMO SF Mode for HS PDSCH dual stream".

If any of the above conditions is not met and the MIMO_STATUS variable is set to TRUE, the UE shall:

- 1> set the MIMO_STATUS variable to FALSE;
- 1> clear the MIMO_PARAMS variable;
- 3> trigger lower layers to stop operation in MIMO mode.

[...]

With the exception of the provisions of subclause 6A.3, the following shall apply when the UE is configured in MIMO mode:

1) The UE derives the PCI value as defined in subclause 6A.4 and either a type A or a type B CQI value as defined in subclause 6A.2.2 depending on which type of CQI shall be reported as defined below.

Reference(s)

3GPP TS 25.331 clause 8.3.11, 8.5.32, 8.5.33, 8.6.6.41

3GPP TS 25.214 clause 6A.1.2.2

8.3.11.16.3 Test purpose

To test that the UE supporting MIMO (when S-CPICH Offset applied and PCI restricted by SS) is able to receive a CELL CHANGE ORDER FROM UTRAN message in CELL_DCH state and perform a cell change to another RAT, even if no prior UE measurements have been performed on the target cell.

8.3.11.16.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of Cell 2.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

Cell 1-SIB 1 T309 set to 8 seconds (see specific message contents)

UE: PS-DCCH DCH (state 6-7) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports MIMO
- UE supports HS-PDSCH
- UE supports E-DPDCH
- UE supports F-DPCH or Enhanced F-DPCH
- UE supports GSM/GPRS or E-PUCH

Test Procedure

The UE is in CELL_DCH state and only signalling radio bearers have been established.

The SS trans mits a RADIO BEARER SETUP message including the RAB Information for setup IE to configure PS domain RAB and perform SRB mapping from DCH to EDCH/HSDPA (with MIMO configured for L1 with PCI restriction and S-CPICH power offset). The UE trans mits a RADIO BEARER SETUP COMPLETE on DCCH. The UE shall configure the lower layers with signalled S-CPICH Power offset. UE sends combined CQI/PCI reports of type A/B continuously every 2 ms. The PCI values reported shall be restricted to 0 or 3 for type A CQIs where one transport block is preferred. For type A CQIs where two transport blocks are preferred, restriction shall not apply.

The SS configures the GPRS cell, and then sends a CELL CHANGE ORDER FROM UTRAN message indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel on the target GPRS cell. The SS checks whether the cell change is performed by checking that the UE receives a successful response to the CHANNEL REQUEST message from the SS through GPRS cell. The UE sends a ROUTING AREA UPDATE REQUEST message to indicate that the UTRAN UE context needs to be transferred to GPRS.

Expected sequence:

Step	Direction	Message	Comment
	UE SS		
1	←	RADIO BEARER SETUP	Setup PS RAB on EDCH/HSDPA. Reconfiguration of SRB mapping from DCH to EDCH/HSDPA+ S- CPICH Offset and with PCI Restriction.
2	\rightarrow	RADIO BEARER SETUP COMPLETE	
3			UE shall transmit composite CQI/PCI reports of type A or type B. The SS shall check that for 500 consecutive CQI reports, 250 are type A and 250 of type B. PCI values of 0 or 3 shall be used by the UE for type A CQIs where one transport block is preferred. For type A CQIs where two transport blocks are preferred, the restriction does not apply. The UE shall configure the lower layers with signalled S-CPICH Power offset.
4	+	CELL CHANGE ORDER FROM UTRAN	Sent on Cell 1 (UTRAN cell) and the message indicates: the target cell description for GPRS.
5	UE		The UE accepts the cell change command and switches to the GPRS cell specified in the CELL CHANGE ORDER FROMUTRAN
6	→	CHANNEL REQUEST	The SS receives this burst on the RACH of Cell 2 to establish temporary block flow (GPRS cell). It implies that the UE has switched to GPRS cell.
7	+	IMMEDIATE ASSIGNMENT	Uplink dynamic allocation. Sent on AGCH.
8	\rightarrow	ROUTING AREA UPDATE REQUEST	

Specific Message Contents

SYSTEM INFORMATION BLOCK TYPE 1

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark
T309	8 Sec

RADIO BEARER SETUP (Step 1)

Use the same message as specified for "Packet to CELL_DCH / E-DCH / HS-DSCH using one multiple xing option (1/1) and SRBs mapped on E-DCH/HS-DSCH", except for the following

Information Element	Value/remark
- RAB information for setup	
- R AB info	(high-speed AM DTCH for PS domain)
- RAB identity	0000 0101B
·	The first/ leftmost bit of the bit string contains the most significant bit of the RAB identity.
- CN domain identity	PS domain
- NAS Synchronization Indicator	Not Present
- Re-establishment timer	useT315
- RB information to setup	
- RB identity	25

Information Element	Value/remark
- PDCP info	raiuo, i oman
 Support for lossless SRNS relocation 	FALSE
- Max PDCP SN window size	Not present
- PDCP PDU header	Absent
 Header compression information CHOICE RLC info type 	Not present RLC Info
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	AWINEO
- CHOICE SDU discard mode	No Discard
- MAX_DAT	15
- Transmission window size	256
- Timer_RST	500
- Max_RST	4
Polling infoTimer_poll_prohibit	100
- Timer_poli_pionibit - Timer_poli	100
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
 Last retransmission PDU poll 	TRUE
- Poll_Windows	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode - CHOICE Downlink RLC PDU Size	AM RLC Reference to clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	768
- Downlink RLC status info	
 Timer_status_prohibit 	100
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
 RB mapping info Information for each multiplexing option 	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	7
- E-DCH MAC-d flow identity	2
- CHOICE RLC PDU size - DDI	Fixed size
- RLC PDU size list	5 1 RLC PDU size
- RLC PDU size	336 bits
- Include in scheduling info	TRUE
- MAC logical channel priority	8
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	HS-DSCH Not Present
 DL DCH Transport channel identity DL DSCH Transport channel identity 	Not Present
- CHOICE DL MAC header type	Not i resem
- DL HS-DSCH MAC-ehs Queue Id	0
- Logical channel identity	9
- RB information to be affected	
- RB identity	1 (UM DCCH for RRC)
- RB mapping info	1 DDM:wOntion
 Information for each multiplexing option RLC logical channel mapping indicator 	1 RBMuxOption Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	1
- E-DCH MAC-d flow identity	1
- CHOICE RLC PDU size	Fixed size
- DDI	1
- RLC PDU size list - RLC PDU size	1 RLC PDU size 144 bits
- NEC PD0 size - Include in scheduling info	FALSE
- MAC logical channel priority	1
J	

Information Element Value/remark - Downlink RLC logical channel info - Number of RLC logical channels - Downlink transport channel type HS-DSCH - DL DCH Transport channel identity Not Present - DL DSCH Transport channel identity Not Present - CHOICE DL MAC header type - DL HS-DSCH MAC-ehs Queue Id - Logical channel identity - RB identity 2 (AM DCCH for RRC) - RB mapping info - Information for each multiplexing option 1 RBMuxOption - RLC logical channel mapping indicator Not Present - Number of uplink RLC logical channels - Uplink transport channel type E-DCH - Logical channel identity 2 - E-DCH MAC-d flow identity - CHOICE RLC PDU size Fixed size - DDI - RLC PDU size list 1 RLC PDU size - RLC PDU size 144 bits - Include in scheduling info **FALSE** - MAC logical channel priority 2 - Downlink RLC logical channel info - Number of RLC logical channels - Downlink transport channel type **HS-DSCH** - DL DCH Transport channel identity Not Present - DL DSCH Transport channel identity Not Present - CHOICE DL MAC header type - DL HS-DSCH MAC-ehs Queue Id - Logical channel identity - RB identity 3 (AM DCCH for NAS High Priority) - RB mapping info - Information for each multiplexing option 1 RBMuxOption - RLC logical channel mapping indicator Not Present - Number of uplink RLC logical channels - Uplink transport channel type E-DCH - Logical channel identity 3 - E-DCH MAC-d flow identity - CHOICE RLC PDU size Fixed size - DDI - RLC PDU size list 1 RLC PDU size - RLC PDU size 144 bits - Include in scheduling info **FALSE** - MAC logical channel priority 3 - Downlink RLC logical channel info - Number of RLC logical channels - Downlink transport channel type **HS-DSCH** - DL DCH Transport channel identity Not Present - DL DSCH Transport channel identity Not Present - CHOICE DL MAC header type - DL HS-DSCH MAC-ehs Queue Id - Logical channel identity 3 - RB identity 4 (AM DCCH for NAS Low Priority) - RB mapping info - Information for each multiplexing option 1 RBMuxOption - RLC logical channel mapping indicator Not Present - Number of uplink RLC logical channels - Uplink transport channel type E-DCH - Logical channel identity - E-DCH MAC-d flow identity - CHOICE RLC PDU size Fixed size - DDI - RLC PDU size list 1 RLC PDU size - RLC PDU size 144 bits - Include in scheduling info **FALSE** - MAC logical channel priority - Downlink RLC logical channel info

Information Element	Value/remark
- Number of RLC logical channels	1
- Downlink transport channel type	HS-DSCH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- CHOICE DL MAC header type	
- DL HS-DSCH MAC-ehs Queue Id	1
- Logical channel identity	4
Added or Reconfigured DL TrCH information	1 TrCH (HS-DSCH for DTCH and DCCH)
- Downlink transport channel type	HS-DSCH
- DL Transport channel identity	Not Present
- CHOICE DL parameters	HS-DSCH
- HARQ Info	
- Number of Processes	12
- CHOICE Memory Partitioning	Implicit
- CHOICE DL MAC header type	
 Added or reconfigured MAC-d flow 	
 MAC-hs queue to add or reconfigure list 	(two queues)
- MAC-ehs queue ld	0 (for DTCH)
- T1	50
- MAC-hs window size	16
- MAC-ehs queue ld	1 (for DCCH)
- MAC-d Flow Identity	1
- T1	50
- MAC-hs window size	16
- MAC-d PDU size Info	
- MAC-d PDU size index	0
- MAC-hs queue to delete list	Not present
- DCH quality target	Not present
MIMO Parameters	Oterat
- MIMO Operation	Start
- MIMO N_cqi_typeA/M_cqi ratio	1/2
- MIMO pilot configuration	Antonnal C CDICH
- CHOICE Second CPICH pattern - Channelisation code	Antenna1 S-CPICH 13
Downlink HS-PDSCH Information	13
- CHOICE mode	FDD
- DL Scrambling Code	Not Present
- HS-SCCH Channelisation Code Information	Not resem
- HS-SCCH Channelisation Code	7
- Measurement Feedback Info	′
- CHOICE mode	FDD
- Measurement Power Offset	12 (6 dB)
- CQI Feedback cycle, k	2 ms
- CQI repetition factor	1
- A _{CQI}	5
- Downlink 64QAM configured	Not Present
- HS-DSCH TB size table	Octet Aligned
MIMO-PilotConfiguration-v7f0ext	Ootot / tigriou
- s-cpich-PowerOffset-Mimo	-6
MIMO-Parameters-v7g0ext	Ť
-precodingWeightSetRestriction	TRUE
proceding weighteen testiloner	II.OL

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
Target cell description	
- CHOICE Radio Access Technology	
- GSM	
- BSIC	BSIC of Cell2
- Band Indicator	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this
	test. Otherwise set to "GSM/DCS 1800 Band"
- BCCH ARFCN	Allocated BCCH ARFCN of Cell 2
- NC mode	NOT PRESENT

8.3.11.16.5 Test requirements

At step 2, the UE shall transmit a RADIO BEARER SETUP COMPLETE message.

At step 3, UE shall transmit composite CQI/PCI reports of type A or type B. The SS shall check that for 500 consecutive CQI reports, 250 are type A and 250 of type B. PCI values of 0 or 3 shall be used by the UE for type A CQIs where one transport block is preferred. For type A CQIs where two transport blocks are preferred, the restrict ion does not apply. The UE shall configure the lower layers with signalled S-CPICH Power offset.

After step 4 the UE shall transmit a CHANNEL REQUEST message on RACH.

8.3.11.17 Inter-RAT Cell Change Order from UTRAN to GPRS/MIMO for S-CPICH based MIMO with DPCH in STTD (Failure;physical channel failure)

8.3.11.17.1 Definition and applicability

All UE categories which support MIMO

UE supports GSM/GPRS

UE supports FDD and F-DPCH or Enhanced F-DPCH

8.3.11.17.2 Conformance requirement

If:

- Timer T309 expires prior to the successful establishment of a connection to the target RAT; or
- If the establishment of the connection to the other RAT failed due to other reasons e.g. (random) access failure, rejection due to lack of resources:

the UE shall:

- 1> if it received the CELL CHANGE ORDER FROM UTRAN message in state CELL DCH:
 - 2>For TDD or for FDD if the CM_PATTERN_ACTIVATION_ABORTED flag is not set to TRUE:
 - 3> revert back to the UTRA configuration;
 - 3> establish the UTRA physical channel(s) (including HS-DSCH related channels) used at the time for reception of CELL CHANGE ORDER FROM UTRAN.
 - 2> For FDD:
 - 3> perform the physical layer synchronisation procedure A as specified in [29] (FDD only);

- 3> if there exists any DTX or DRX configuration prior to the reception of the CELL CHANGE ORDER FROM UTRAN COMMAND, instruct the physical layer to consider only the HS-SCCH orders which were acknowledged prior to the activation time of the received message;
- 3> if the variable DTX_DRX_STATUS is set to TRUE, re-configure the physical layer to perform discontinuous uplink DPCCH transmission and enable or disable discontinuous downlink reception operations according to the variable DTX_DRX_PARAMS at the CFN corresponding to the frame boundary that is offset by the stored value of the IE "Enabling Delay" from the frame boundary where uplink transmission resumes with the old configuration;
- 3> apply power control preamble according to [26] during the number of frames indicated in the IE "PC preamble" in the variable LATEST_CONFIGURED_SRB_DELAY_AND_PC_PREAMBLE; and
- 3> then not send any data on signalling radio bearers RB0 to RB4 during the number of frames indicated in the IE "SRB delay" in the variable LATEST_CONFIGURED_SRB_DELAY_AND_PC_PREAMBLE or while the physical channel is not considered established;
- 3> if the CM_PATTERN_ACTIVATION_ABORTED flag is set to TRUE or if the UE does not succeed in establishing the UTRA physical channel(s):
 - 4> perform a cell update procedure according to subclause 8.3.1 with cause "Radio link failure";
 - 4> when the cell update procedure has completed successfully:
 - 5> proceed as below.
- 3> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 4> include the IE "RRC transaction identifier"; and
 - 4> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 4> clear that entry;
 - 4> set the IE "Inter-RAT change failure" to "physical channel failure".
- 3> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission, the procedure ends.
- 1> if the UE receives the CELL CHANGE ORDER FROM UTRAN message in CELL_FACH state:
 - 2> revert to the cell it was camped on at the reception of the CELL CHANGE ORDER FROM UTRAN message;
 - 2> if the UE is unable to return to this cell:
 - 3> select a suitable UTRA cell according to [4];
 - 3> initiate the cell update procedure according to subclause 8.3.1 using the cause "cell re-selection";
 - 3> when the cell update procedure completed successfully:
 - 4> proceed as below.
 - 2> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 3> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the CELL CHANGE ORDER FROM UTRAN message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry;
 - 3> set the IE "Inter-RAT change failure" to "physical channel failure".

- 2> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:
- 3> the procedure ends.

[...]

If the IE "Tx Diversity Mode" is included the UE shall:

- 1> if the value of the IE "Tx Diversity Mode" is STTD:
 - 2> configure the Layer 1 to use the Tx diversity mode indicated in the IE "Tx Diversity Mode" for the radio links for which the IE "Closed loop timing adjustment mode" is included, ignoring the actual value of IE "Closed loop timing adjustment mode".
- 1> if the value of the IE "Tx Diversity Mode" is closed loop mode 1:
 - 2> configure the Layer 1 to use the Tx diversity mode indicated in the IE "Tx Diversity Mode" for the radio links for which the IE "Closed loop timing adjustment mode" is included, using the actual value of the IE "Closed loop timing adjustment mode".
- 1> if the value of the IE "Tx Diversity Mode" is "none":
 - 2> configure the Layer 1 not to use Tx diversity for all radio links in the active set.

If the IE "Tx Diversity Mode" is not included, the UE shall:

- 1> continue to use the already configured Tx diversity mode;
- 1> in case no Tx diversity mod e has been configured:
 - 2> do not apply Tx diversity.

For F-DPCH the UE shall:

- 1> if the IE "STTD indication" is included in the IE "Downlink F-DPCH info for each RL":
 - 2> use STTD for F-DPCH on the radio links for which the IE "STTD indication" is set to TRUE

References

3GPP TS 25.331 clause 8.3.11.5, 8.6.6.24

8.3.11.17.3 Test Purpose

To verify that when MIMO configured(S-CPICH based MIMO with F-DPCH in STTD) UE received CELL CHANGE ORDER FROM UTRAN message in CELL_DCH state and if the establishment of the connection to the other RAT failed due to expiry of timer T309 prior to the successful establishment of a connection to the target RAT:

- a. revert back to the UTRA configuration
- b. establish the UTRA physical channel(s) used at the time for reception of CELL CHANGE ORDER FROM UTRAN;
- c. transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message and set the IE "Inter-RAT change failure" to "physical channel failure".
- d. To confirm that the UE configures the radio bearers to start MIMO reception after reverting back to the old config and configures layer 1 to use STTD as Tx diversity mode for F-DPCH

8.3.11.17.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

UE: PS-DCCH DCH (state 6-7) as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

NOTE: The 'timer poll' value in the SS RLC transmit entity should be set to 800 ms.

Related ICS/IXIT statement

- UE supports FDD
- UE supports MIMO
- UE supports HS-PDSCH
- UE supports F-DPCH
- UE supports GSM/GPRS
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS, GSM-850, GSM-710

Test Procedure

The UE is in CELL_DCH state and only signalling radio bearers have been established.

The SS trans mits a RADIO BEARER SETUP message including the RAB Information for setup IE to configure PS domain RAB and perform SRB mapping from DCH to E-DCH/HSDPA (with MIMO configured for L1). The tx-diversity mode for F-DPCH shall be set to STTD. The UE transmits a RADIO BEARER SETUP COMPLETE on DCCH. UE sends combined CQI/PCI reports of type A/B continuously every $2\ ms$.

The SS configures GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. The UE starts the timer T309. After the UE receives the command it shall configure itself accordingly but cannot complete the cell change, as SS does not respond to the CHANNEL REQUEST message transmitted by UE till the expiry of T309 timer. The SS checks that the cell change has failed by checking that the UE transmits the CELL CHANGE ORDER FROM UTRAN FAILURE message to the SS in UTRAN cell. The SS checks that UE configures MIMO for L1 and tx-diversity mode for F-DPCH to be STTD. UE sends combined CQI/PCI reports of type A/B continuously every 2 ms.

Expected Sequence:

Step	Direction		Message	Comments
	UE	SS		
1	←		RADIO BEARER SETUP	Setup PS RAB on E-DCH/HSDPA. Reconfiguration of SRB mapping from DCH to E-DCH/HSDPA. Tx-di versity mode for F-DPCH is set to STTD.
2	\rightarrow		RADIO BEARER SETUP COMPLETE	
3				UE shall transmit composite CQI/PCI reports of type A or type B. The SS shall check that for 500 consecutive CQI reports, 250 are type A and 250 of type B.
4	SS			The SS configures cell 2 as a GSM cell with GPRS enabled
5	+		CELL CHANGE ORDER FROM UTRAN	Send on cell 1 (UTRAN cell) and the message indicates: the target cell description for GSWGPRS.
6	UE			UE starts the timer T309. The UE accepts the cell change command and switches to the GPRS specified in the CELL CHANGE ORDER FROM UTR AN
7	→		CHANNEL REQUEST	The SS receives this burst on RACH of cell 2 (GPRS cell) to establish temporary block flow
8	→			SS does not respond to the channel request. UE sends M+1 CHANNEL REQUEST messages
				The SS does not transmit a response and wait for T309 timer to expire.
9	\rightarrow		CELL CHANGE ORDER FROM UTRAN FAILURE	The SS receives the message on the old channel of UTRAN cell.
				Note: The UE may send a ROUTING AREA UPDATE REQUEST to complete the RA Update procedure initiated at step 7.
10				Tx-diversity mode for F-DPCH is set to STTD. UE shall transmit composite CQI/PCI reports of type A or type B continuously every 2 ms. The SS shall check that for 500 consecutive CQI reports, 250 are type A and 250 of type B.

Specific message contents

RADIO BEARER SETUP (Step 1)

Use the same message as specified for "Packet to CELL_DCH / HS-DSCH with enhanced data rate and RLC AM" and SRBs mapped on E-DCH/HS-DSCH(Mac-ehs) under condition A28a as specified in clause 9 of TS34.108, except for the following

Information Element	Value/remark
Added or Reconfigured DL TrCH information	1 TrCH (HS-DSCH for DTCH and DCCH)
- Downlink transport channel type	HS-DSCH
- DL Transport channel identity	Not Present
- CHOICE DL parameters	HS-DSCH
- HARQ Info	
- Number of Processes	12
- CHOICE Memory Partitioning	Implicit
- CHOICE DL MAC header type	
- Added or reconfigured MAC-d flow	
- MAC-hs queue to add or reconfigure list	(two queues)
- MAC-ehs queue ld	0 (for DTCH)
- T1	50

Information Element	Value/remark
- MAC-hs window size	16
- MAC-ehs queue ld	1 (for DCCH)
- MAC-d Flow Identity	1
- T1	50
- MAC-hs window size	16
- MAC-d PDU size Info	
- MAC-d PDU size	148
- MAC-d PDU size index	0
- MAC-hs queue to delete list	Not present
- DCH quality target	Not present
MIMO Parameters	
- MIMO Operation	Start
- CHOICE mode	FDD
 MIMO N_cqi_type A/M_cqi ratio 	1/2
- MIMO pilot configuration	
- CHOICE Second CPICH pattern	Antenna1 S-CPICH
- Channelisation code	13
Downlink HS-PDSCH Information	
- CHOICE mode	FDD
- DL Scrambling Code	Not Present
- HS-SCCH Channelisation Code Information	
- HS-SCCH Channelis ation Code	7
- Measurement Feedback Info	
- CHOICE mode	FDD
- Measurement Power Offset	12 (6 dB)
- CQI Feedback cycle, k	2 ms
- CQI repetition factor	1
- Δ _{CQI}	5
- Downlink 64QAM configured	Not Present
- HS-DSCH TB size table	Octet Aligned
	3
DL-CommonInformation	
-dl-DPCH-InfoCommon	
-CHOICE mode	FDD
-tx-DiversityMode	STTD
DL-FDPCH-InfoPerRL-r7	
-sttdIndication	TRUE

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
Target cell description	
- CHOICE Radio Access Technology	
- GSM	
- BSIC	BSIC of Cell 2
- Band Indicator	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this
	test. Otherwise set to "GSWDCS 1800 Band"
- BCCH ARFCN	Allocated BCCH ARFCN of Cell 2
- NC mode	Not present

8.3.11.17.5 Test requirements

In step 2 the UE shall transmit a RADIO BEARER SETUP COMPLETE message $\,$

In step 3 the UE shall transmit composite CQI/PCI reports of type A or type B. The SS shall check that for 500 consecutive CQI reports, 250 are type A and 250 of type B. UE configures F-DPCH with Tx-diversity mode set to STTD.

In step 7 the UE shall transmit a CHANNEL REQUEST message on RACH.

In step 9 the UE shall transmit CELL CHANGE ORDER FROM UTRAN FAILURE message on the old channel of the UTRAN cell.

In step 10 the UE shall trans mit composite CQI/PCI reports of type A or type B. The SS shall check that for 500 consecutive CQI reports, 250 are type A and 250 of type B.

8.3.11.18 Inter-RAT Cell Change Order from UTRAN to GPRS/ MIMO (Failure; with PCI Restrictions and S-CPICH Power Offset)

8.3.11.18.1 Definition and applicability

All UE categories which support MIMO and GSM/GPRS.

UE supports FDD and F-DPCH or Enhanced F-DPCH

8.3.11.18.2 Conformance requirement

If:

- Timer T309 expires prior to the successful establishment of a connection to the target RAT; or
- If the establishment of the connection to the other RAT failed due to other reasons e.g. (random) access failure, rejection due to lack of resources:

The UE shall:

- 1> if it received the CELL CHANGE ORDER FROM UTRAN message in state CELL_DCH:
 - 2> if the CM_PATTERN_ACTIVATION_ABORTED flag is not set to TRUE:
 - 3> revert back to the UTRA configuration;
 - 3> establish the UTRA physical channel(s) (including HS-DSCH related channels) used at the time for reception of CELL CHANGE ORDER FROM UTRAN.
 - 2> perform the physical layer synchronisation procedure A as specified in [29] (FDD only);
 - 2> after the establishment of the uplink physical channel, send DPCCH and no DPDCH according to [26] during the number of frames indicated in the IE "PC preamble" in the variable LATEST_CONFIGURED_SRB_DELAY_AND_PC_PREAMBLE; and
 - 2> then not send any data on signalling radio bearers RB0 to RB4 during the number of frames indicated in the IE "SRB delay" in the variable LATEST_CONFIGURED_SRB_DELAY_AND_PC_PREAMBLE;
 - 2> if the CM_PATTERN_ACTIVATION_A BORTED flag is set to TRUE or if the UE does not succeed in establishing the UTRA physical channel(s):
 - 3> perform a cell update procedure according to sub clause 8.3.1 with cause "Radio link failure";
 - 3> when the cell update procedure has completed successfully:
 - 4> proceed as below.
 - 2> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 3> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry;
 - 3> set the IE "Inter-RAT change failure" to "physical channel failure".

- 2> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission, the procedure ends.
- 1> if the UE receives the CELL CHANGE ORDER FROM UTRAN message in CELL_FACH state:
 - 2> revert to the cell it was camped on at the reception of the CELL CHANGE ORDER FROM UTRAN message;
 - 2> if the UE is unable to return to this cell:
 - 3> select a suitable UTRA cell according to [4];
 - 3> initiate the cell update procedure according to sub clause 8.3.1 using the cause "cell re-selection";
 - 3> when the cell update procedure completed successfully:
 - 4> proceed as below.
 - 2> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 3> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the CELL CHANGE ORDER FROM UTRAN message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry;
 - 3> set the IE "Inter-RAT change failure" to "physical channel failure".
 - 2> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:
 - 3> the procedure ends.

References

3GPP TS 25.331 clause 8.3.11, 8.5.32, 8.5.33, 8.6.6.41

3GPP TS 25.214 clause 6A.1.2.2, 6A.2.2

8.3.11.18.3 Test purpose

To verify that when MIMO configured (with PCI Restrictions and S-CPICH Power Offset) UE received CELL CHANGE ORDER FROM UTRAN message in CELL_DCH state and if the establishment of the connection to the other RAT failed due to expiry of timer T309 prior to the successful establishment of a connection to the target RAT:

- a. revert back to the UTRA configuration
- b. establish the UTRA physical channel(s) used at the time for reception of CELL CHANGE ORDER FROM UTRAN:
- c. transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message and set the IE "Inter-RAT change failure" to "physical channel failure".
- d. the UE shall trans mit CQI reports of type A and type B. PCI values of 0 or 3 shall be used by the UE for type A CQIs where one transport block is preferred. For type A CQIs where two transport blocks are preferred, the restriction does not apply. The UE shall configure the lower layers with signalled S-CPICH Power offset."

8.3.11.18.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN. UTRAN and GPRS cells belong to different location area.

UE: PS-DCCH DCH (state 6-7) as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

NOTE: The 'timer poll' value in the SS RLC transmit entity should be set to 800 ms.

Related ICS/IXIT statement

- UE supports FDD
- UE supports MIMO

UE supports HSDSCH

- UE supports F-DPCH or Enhanced F-DPCH
- UE supports GSM/GPRS
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS, GSM-850, GSM-710

Test Procedure

The UE is in CELL_DCH state and only signalling radio bearers have been established.

The SS trans mits a RADIO BEARER SETUP message including the RAB Information for setup IE to configure PS domain RAB and perform SRB mapping from DCH to EDCH/HSDPA (with MIMO configured for L1 with PCI restriction and S-CPICH Power Offset). The UE transmits a RADIO BEARER SETUP COMPLETE on DCCH. The UE shall configure the lower layers with signalled S-CPICH Power offset. UE sends combined CQI/PCI reports of type A/B continuously every 2 ms. The PCI values reported shall be restricted to 0 or 3 for type A CQIs where one transport block is preferred. For type A CQIs where two transport blocks are preferred, restriction shall not apply.

The SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. The UE starts the timer T309. After the UE receives the command it shall configure itself accordingly but cannot complete the cell change, as SS does not respond to the CHANNEL REQUEST message transmitted by UE till the expiry of T309 timer. The SS checks that the cell change has failed by checking that the UE transmits the CELL CHANGE ORDER FROM UTRAN FAILURE message to the SS in UTRAN cell.

Expected Sequence:

Step	Direction	Message	Comments
	UE SS		
1	←	RADIO BEARER SETUP	Setup PS RAB on EDCH/HSDPA. Reconfiguration of SRB mapping from DCH to EDCH/HSDPA (with PCI restriction and S-CPICH Power Offset)
2	\rightarrow	RADIO BEARER SETUP COMPLETE	
3			UE shall transmit composite CQI/PCI reports of type A or type B. The SS shall check that for 500 consecutive CQI reports, 250 are type A and 250 of type B. PCI values of 0 or 3 shall be used by the UE for type A CQIs where one transport block is preferred. For type A CQIs where two transport blocks are preferred, the restriction does not apply. The UE shall configure the lower layers with signalled S-CPICH Power offset.
4	SS		The SS configures cell 2 as a GSM cell with GPRS enabled
5	+	CELL CHANGE ORDER FROM UTRAN	Send on cell 1 (UTRAN cell) and the message indicates: the target cell description for GSWGPRS.
6	UE		UE starts the timer T309. The UE accepts the cell change command and switches to the GPRS specified in the CELL CHANGE ORDER FROM UTR AN
7	\rightarrow	CHANNEL REQUEST	The SS receives this burst on RACH of cell 2 (GPRS cell) to establish temporary block flow
8)		SS does not respond to the channel request. UE sends M+1 CHANNEL REQUEST messages The SS does not transmit a response and wait for T309 timer to expire.
9	\rightarrow	CELL CHANGE ORDER FROM UTRAN FAILURE	The SS receives the message on the old channel of UTRAN cell.
			Note The UE may send a ROUTING AREA UPDATE REQUEST to complete the RA Update procedure initiated at step 7.
10			UE shall transmit composite CQI/PCI reports of type A or type B. The SS shall check that for 500 consecutive CQI reports, 250 are type A and 250 of type B. PCI values of 0 or 3 shall be used by the UE for type A CQIs where one transport block is preferred. For type A CQIs where two transport blocks are preferred, the restriction does not apply. The UE shall configure the lower layers with signalled S-CPICH Power offset.

Specific message contents

RADIO BEARER SETUP (Step 1)

Use the same message as specified for "Packet to CELL_DCH / E-DCH / HS-DSCH using one multiple xing option (1/1) and SRBs mapped on E-DCH/HS-DSCH", except for the following

Information Element	Value/remark
- RAB information for setup	

Information Florida	Malua ha wa ada
Information Element - R AB info	Value/remark (high-speed AM DTCH for PS domain)
- RAB into	0000 0101B
- NAD Identity	The first/ leftmost bit of the bit string contains the most
	significant bit of the RAB identity.
- CN domain identity	PS domain
- NAS Synchronization Indicator	Not Present
- Re-establishment timer	useT315
- RB information to setup	
- RB identity	25
- PDCP info	
 Support for lossless SRNS relocation 	FALSE
 Max PDCP SN window size 	Not present
- PDCP PDU header	Absent
- Header compression information	Not present
- CHOICE RLC info type	RLC Info
- CHOICE Uplink RLC mode	AMRLC
- Transmission RLC discard	No Discoul
- CHOICE SDU discard mode	No Discard
- MAX_DAT - Transmission windowsize	15 256
- Transmission window size - Timer_RST	500
- Max_RST	4
- Polling info	7
- Timer_poll_prohibit	100
- Timer_poll	100
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- CHOICE Downlink RLC PDU Size	Reference to clause 6 Parameter Set
- In-sequence delivery	TRUE
- Receiving window size	768
- Downlink RLC status info	100
- Timer_status_prohibit- Missing PDU indicator	100 TRUE
- Timer_STATUS_periodic	Not Present
- One sided RLC re-establishment	FALSE
- RB mapping info	17202
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink trans port channel type	E-DCH
- Logical channel identity	7
 E-DCH MAC-d flow identity 	2
- CHOICE RLC PDU size	Fixed size
- DDI	5
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	336 bits
- Include in scheduling info	TRUE
- MAC logical channel priority	8
- Downlink RLC logical channel info	1
 Number of downlink RLC logical channels Downlink transport channel type 	1 HS-DSCH
- DL DCH Transport channel identity	Not Present
- DL DCH Transport channel identity - DL DSCH Transport channel identity	Not Present
- CHOICE DL MAC header type	Hoti 1000iit
- DL HS-DSCH MAC-ehs Queue Id	0
- Logical channel identity	9
- RB information to be affected	
- RB identity	1 (UM DCCH for RRC)
- RB mapping info	,
 Information for each multiplexing option 	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
 Number of uplink RLC logical channels 	1

Information Floresus	Walter Irania ali
Information Element	Value/remark
 Uplink transport channel type Logical channel identity 	E-DCH 1
- E-DCH MAC-d flow identity	1
- CHOICE RLC PDU size	Fixed size
- DDI	1
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	1
- Downlink RLC logical channel info	•
- Number of RLC logical channels	1
- Downlink transport channel type	HS-DSCH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- CHOICE DL MAC header type	
- DL HS-DSCH MAC-ehs Queue Id	1
- Logical channel identity	1
- RB identity	2 (AM DCCH for RRC)
- RB mapping info	
 Information for each multiplexing option 	1 RBMuxOption
 RLC logical channel mapping indicator 	Not Present
 Number of uplink RLC logical channels 	1
 Uplink transport channel type 	E-DCH
 Logical channel identity 	2
- E-DCH MAC-d flow identity	1
- CHOICE RLC PDU size	Fixed size
- DDI	2
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
- Include in scheduling info	FALSE
- MAC logical channel priority	2
- Downlink RLC logical channel info	4
- Number of RLC logical channels	1
 Downlink transport channel type DL DCH Transport channel identity 	HS-DSCH Not Present
- DL DSCH Transport channel identity	Not Present
- CHOICE DL MAC header type	Not i lesent
- DL HS-DSCH MAC-ehs Queue Id	1
- Logical channel identity	2
- RB identity	3 (AM DCCH for NAS High Priority)
- RB mapping info	o (rum 2001) for the ring.
- Information for each multiplexing option	1 RBMuxOption
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
- Logical channel identity	3
- E-DCH MAC-d flow identity	1
- CHOICE RLC PDU size	Fixed size
- DDI	3
- RLC PDU size list	1 RLC PDU size
- RLC PDU size	144 bits
 Include in scheduling info 	FALSE
 MAC logical channel priority 	3
 Downlink RLC logical channel info 	
- Number of RLC logical channels	1
- Downlink transport channel type	HS-DSCH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- CHOICE DL MAC header type	1
- DL HS-DSCH MAC-ehs Queue Id	1
- Logical channel identity	3
- RB identity	4 (AM DCCH for NAS Low Priority)
- RB mapping info	1 PRMuyOntion
 Information for each multiplexing option RLC logical channel mapping indicator 	1 RBMuxOption Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	E-DCH
opinik iransport onarmer type	

- Logical channel identity - E-DCH MAC-4 flow identity - CHOICE RIC PDU size - DDI - RIC PDU size ilst - R	Information Element	Value/remark
- E-DCH MAC-d flow identity - CHOICE RLC PDU size - DDI - RLC PDU size list - RLC PDU size - Included in scheduling info - MAC logical channel priority - Downlink RLC logical channels - Downlink RLC logical channels - Downlink RLC logical channels - Downlink RLC logical channels - Downlink RLC logical channels - Dub CH Transport channel spe - DL DCH Transport channel identity - DL DSCH Transport channel identity - DL DSCH Transport channel identity - CHOICE DL MAC header type - DL HS-DSCH MAC-ehs Queue Id - Logical channel identity - DD with transport channel identity - DD with transport channel identity - DD with transport channel identity - CHOICE DL MAC hannel lype - DL Transport channel identity - HARQ Info - Number of Processes - CHOICE DL MAC header type - Added or reconfigured MAC-d flow - MAC-hs queue Id - MAC-hs queue Id - MAC-hs window size - MAC-ehs queue Id - MAC-hs queue Id - MAC-hs window size - MAC-d Flow Identity - T1 - MAC-hs window size - MAC-d Flow Identity - T1 - MAC-hs queue to delete list - DCH quality target - MAC-d Flow Identity - CHOICE Scoond CPICH pattern - Channelisation code - Mond operation - MIMO N. cqi. typeA/M. cqi ratio - MIMO N. cqi. typeA/M.		
- CHOICE RLC PDU size		1
- DDI - RLC PDU size list - RLC PDU size - NAC logical channel priority - NAC logical channel priority - Downlink RLC logical channels - Downlink RLC logical channels - Downlink RLC logical channels - Downlink RLC logical channels - Du Debet Transport channel spe - DL DCH Transport channel identity - DL DSCH Transport channel identity - DL DSCH Transport channel identity - CHOICE DL MAC header vpe - DL HS-DSCH MAC-ehs Queue Id - Logical channel identity - DD wink transport channel identity - DD wink transport channel identity - DD wink transport channel identity - CHOICE DL Mach channel type - DL Transport channel identity - CHOICE DL parameters - HARQ Info - Number of Processes - CHOICE DL Mach Deader vpe - Added or reconfigured MAC-d flow - MAC-hs queue Id - TI - MAC-hs window size - MAC-ehs queue Id - MAC-ehs queue Id - MAC-d Flow identity - TI - MAC-hs window size - MAC-d Flow identity - TI - MAC-hs window size - MAC-d Flow identity - TI - MAC-hs window size - MAC-d Flow latenity - MAC-hs queue to delete list - DCH quality larget - MAC-hs queue to delete list - DCH quality larget - MAC-hs queue to delete list - DCH quality larget - MAC-hs queue to delete list - DCH quality larget - CLOICE Second CPICH pattern - Channelisation code - Procording weight set restriction Downlink HS-PDSCH Information - HS-SCCH Channelisation Code - Measurement Feedback Info - CHOICE mode - CLOICE mode - CLOICE mode - CLOICE feedback cycle, k - CLOICE edeaback cycle, k - CLOICE deaback cycle, k - TI - MAC-Subsument Feedback Info - CHOICE mode - CLOICE feedback cycle, k - TI - TI - MAC-Subsument Feedback Info - CLOICE deaback cycle, k - TI - Company the manuely size - CLOICE deaback cycle, k - TI - TI - TI - TI - TI - TI - TI - TI		Fixed size
RLC PDU size		4
RLC PDU size	- RLC PDU size list	1 RLC PDU size
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- Channelisation code - Power Offset for S-CPICH for MIMO - Precoding weight set restriction - Precoding weight set restriction - CHOICE mode - DL Scrambling Code - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info - CHOICE mode - Measurement Power Offset - Measurement Power Offset - CQI Feedback cycle, k 13 -6dB -7RUE Not Present - Not Present - FDD - 12 (6 dB) - CQI Feedback cycle, k - 2 ms		
- Power Offset for S-CPICH for MIMO - Precoding weight set restriction Downlink HS-PDSCH Information - CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info - CHOICE mode - Measurement Power Offset - Measurement Power Offset - CQI Feedback cycle, k - 6dB TRUE Not Present 7 FDD 7 FDD 12 (6 dB) 2 ms		
- Precoding weight set restriction TRUE Downlink HS-PDSCH Information - CHOICE mode FDD - DL Scrambling Code Not Present - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code 7 - Measurement Feedback Info - CHOICE mode FDD - Measurement Power Offset 12 (6 dB) - CQI Feedback cycle, k 2 ms		-
Downlink HS-PDSCH Information - CHOICE mode FDD - DL Scrambling Code Not Present - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code 7 - Measurement Feedback Info - CHOICE mode FDD - Measurement Power Offset 12 (6 dB) - CQI Feedback cycle, k 2 ms		
- CHOICE mode - DL Scrambling Code - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code - Measurement Feedback Info - CHOICE mode - Measurement Power Offset - CQI Feedback cycle, k FDD - Measurement Power Offset - CQI Feedback cycle, k FDD - Measurement Power Offset - CQI Feedback cycle, k - CQI Feedback cycle, k - DD - Model Table Tab		IRUE
- DL Scrambling Code Not Present - HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code 7 - Measurement Feedback Info - CHOICE mode FDD - Measurement Power Offset 12 (6 dB) - CQI Feedback cycle, k 2 ms		
- HS-SCCH Channelisation Code Information - HS-SCCH Channelisation Code 7 - Measurement Feedback Info - CHOICE mode FDD - Measurement Power Offset 12 (6 dB) - CQI Feedback cycle, k 2 ms		
- HS-SCCH Channelisation Code 7 - Measurement Feedback Info - CHOICE mode FDD - Measurement Power Offset 12 (6 dB) - CQI Feedback cycle, k 2 ms		Not Present
- Measurement Feedback Info - CHOICE mode FDD - Measurement Power Offset 12 (6 dB) - CQI Feedback cycle, k 2 ms		_
- CHOICE mode FDD - Measurement Power Offset 12 (6 dB) - CQI Feedback cycle, k 2 ms		1
- Measurement Power Offset 12 (6 dB) - CQI Feedback cycle, k 2 ms		rnn -
- CQI Feedback cycle, k 2 ms		
1 OOI was a fift on factors		
- CQI repetition factor 1	•	
- Δ _{CQI} 5		
- Downlink 64QAM configured Not Present		
- HS-DSCH TB size table Octet Aligned	- HS-DSCH TB size table	Octet Aligned

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
Target cell description	
- CHOICE Radio Access Technology	
- GSM	
- BSIC	BSIC of Cell 2
- Band Indicator	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this
	test. Otherwise set to "GSM/DCS 1800 Band"
- BCCH ARFCN	Allocated BCCH ARFCN of Cell 2
- NC mode	Not present

8.3.11.18.5 Test requirements

In step 2 the UE shall transmit a RADIO BEARER SETUP COMPLETE message

In step 3 the UE shall transmit composite CQI/PCI reports of type A or type B. The SS shall check that for 500 consecutive CQI reports, 250 are type A and 250 of type B. PCI values of 0 or 3 shall be used by the UE for type A CQIs where one transport block is preferred. For type A CQIs where two transport blocks are preferred, the restriction does not apply. The UE shall configure the lower layers with signalled S-CPICH Power offset.

In step 7 the UE shall transmit a CHANNEL REQUEST message on RACH.

In step 9 the SS shall receive CELL CHANGE ORDER FROM UTRAN FAILURE message on the old channel of the UTRAN cell.

In step 10 the UE shall trans mit composite CQI/PCI reports of type A or type B. The SS shall check that for 500 consecutive CQI reports, 250 are type A and 250 of type B. PCI values of 0 or 3 shall be used by the UE for type A CQIs where one transport block is preferred. For type A CQIs where two transport blocks are preferred, the restriction does not apply. The UE shall configure the lower layers with signalled S-CPICH Power offset.

8.3.12 Handover to CSG/Hybrid Cell

8.3.12.1 Inter-frequency inbound handover to UMTS CSG cell without reporting proximity indication

8.3.12.1.1 Definition

Test to verify the UE can report the Cell Identity, CSG ID and CSG membership indication of inter-frequency member CSG cells without reporting proximity indication.

8.3.12.1.2 Conformance requirement

1: Inter-frequency measurements for CSG/Hybrid cells:

For each cell reported in the IE "Cell measured results" of an inter-frequency Measurement Report, which is also included in the IE "Inter-frequency SI Acquisition" associated with the measurement:

- 1> if the UE managed to acquire the system information of the concerned cell:
 - 2> include the following IEs in the IE "Cell measured results":
 - 3> "Cell Identity" IE;
 - 3> if the concerned cell broadcasts a CSG identity:
 - 4> "CSG Identity" IE.

4> "CSG Member indication" IE and set it to "member" if CSG identity of the concerned cell is present in UE's CSG whitelist.

If the UE needs measurement gaps to read the system information on the non-used frequency, the system information of the reported cell can be acquired by the UE via autonomous measurement gaps when the IE "Inter-frequency SI Acquisition" is received by the UE, i.e., UE is allowed to temporarily abort communication with the serving cell to perform SI acquisition within the limits (detailed value is FFS). UE shall send the measurement report before the maximum provided time specified in IE "Periodical reporting criteria" if the UE is able to acquire SI early.

2: Inter-frequency Measurement Procedure of CSG and Hybrid cells:

- 1) The SRNC configures the UE with a measurement having "CSG Proximity detection" as measurement type.
- 2) The UE sends an "entering" CSG proximity indication when it determines it may be near a cell, (based on UE implementation) whose CSG ID is in the UE's CSG white list. The CSG proximity indication includes the RAT and frequency of the cell.
- 3) The SRNC configures a measurement on the concerned frequency/RAT to measure CSG/hybrid cells. Compressed mode gaps, if required by the UE, are also activated to allow UE to perform measurements on the reported RAT and frequency. The network may also use the proximity indication to minimize the requesting of handover preparation information of CSG/hybrid cells by avoiding requesting such information when the UE is not in the geographical area where cells whose CSG IDs are in the UEs CSG whitelist are located.
- 4) The UE sends a measurement report including the measured PSCs/PCIs.
- 5) The SRNC configures the UE to perform SI acquisition and reporting of a particular PSC/PCI.
- 6) The UE performs SI acquisition using autonomous gaps, i.e., the UE may suspend reception and transmission with the SRNC within the limits (the limit is currently FFS) to acquire the relevant system information from the target HNB/HeNB.
- 7) The UE sends a measurement report including Cell Identity, CSG ID and CSG membership indication.
- 8) SRNC can then proceed with the handover processing. The handover processing for inter-frequency handover to a CSG/Hybrid cell is described in [6].

NOTE: The above steps also apply to inter-RAT mobility from UMTS cell to HeNB.

After sending an "entering" CSG proximity indication (step 2), if the UE determines that it is no longer near any cell (on the reported proximate RAT and frequency) whose CSG ID is in the UE's CSG white list, the UE sends a "leaving" CSG proximity indication to the SRNC. Upon reception of this indication, the SRNC may reconfigure the UE to stop measurements on the reported RAT and frequency.

In the above procedure, step 2 may not be performed in case the UE has not previously visited the HNB, e.g., when the UE first visits a CSG/hybrid cell.

The PSC/PCI confusion is resolved by steps 5, 6 and 7. The SRNC can request SI acquisition and reporting for any PSC/PCI, not limited to PSCs/PCIs of CSG or hybrid cells

3: The CSG SI acquisition delay is defined as the time between any occurrences that will trigger a SI decoding until the UE starts to transmit over the Uu interface. This requirement assumes that the measurement report is not delayed by other RRC signalling on the DCCH. The measurement reporting delay also excludes any RRC procedure delay which is defined in [16] when SI reading is initiated by a measurement control message.

For intra frequency CSG cells, CSG SI decoding is typically triggered when a cell with primary scrambling code in a preconfigured range meets the criteria for measurement reporting. For inter frequency CSG cells, CSG SI decoding is explicitly requested by RRC signalling.

The CSG SI reporting delay shall not be more than T_{CSG-SI-Report} where T_{CSG-SI-Report} in ms is given by

$$T_{CSG-SI-Report} = [630] + 40*SIB3_REP$$

SIB3_REP is the repetition period at which the CSG cell schedules SIB3 blocks in units of frames

This requirement is applicable for CSG target cell configurations where the information required to make the SI report can be determined from the MIB and SIB3 alone, and SIB3 is not segmented into multiple TTI. Additionally, for the

requirement to be applicable, the reception conditions shall be [TBD] such that the system frame number of the target CSG cell, the MIB and SIB3 can each be successfully decoded in no more than four attempts.

Test requirement = RRC Procedure delay + $T_{CSG-SI-Report}$

Reference

1: 3GPP TS 25.331, clause 14.7a.2.

2: 3GPP TS 25.367, clause 8.1.2.

3: 3GPP TS 25.133, clause 5.13.2, A.5.11.2

8.3.12.1.3 Test purpose

- 1. To confirm that the UE can report the PSC of inter-frequency CSG cells and the PSC reported is within the range configured by the SRNC.
- 2. To confirm that the UE can report the Cell Identity, CSG ID and CSG membership indication of inter-frequency member CSG cells.

8.3.12.1.4 Method of test

Initial Condition

System Simulator:

2 cells - Cell 1 and Cell 4 are used.

The CSG id of the Cell4 is 2. Cell 1 does not broadcast CSG ID.

Cell1 is on f1.

Cell 4 is on f2.

The SIB3_REP of cell 4, i.e. SIB3 scheduling is 64.

User Equipment:

The UE Allowed CSG List contains CSG2.

The UE is PS-DCCH+DTCH_DCH (state 6-10) or CS-DCCH+DTCH_DCH (state 6-9) or PS+CS-DCCH+DTCH_DCH (state 6-14) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports Compressed mode.
- UE supports the capability of inter-frequency SI acquisition for HO.

Test Procedure

Table 8.3.12.1-1 illustrates the downlink power to be applied for the 2 cells.

Table 8.3.12.1-1

Parameter	Unit		Cell 1			Cell4	
Test Channel		1					
		T0	T1	T2	T0	T1	T2
CPICH_Ec	dBm/3.84MHz	-55	-78	-75	OFF	OFF	-60

Cell 1 is active. The UE is initially in CELL_DCH and has a radio bearer with the cell 1.

At instant T0, the downlink is changed according to what is shown in table 8.3.12.1 -1. The SS then sets up interfrequency measurements (event 2d), by sending a MEASUREMENT CONTROL message to the UE.

At instant T1, the downlink power is changed according to what is shown in table 8.3.12.1 -1. The UE shall thus send a MEASUREMENT REPORT with 2d event to the SS.

The SS sets up an intra-frequency measurement (event 1c) and an inter-frequency CSG measurement (event 2c), by sending separate MEASUREMENT CONTROL messages to the UE. Configuration of 1c event is to enable construction of CSG VAS active set in the UE.

The SS configures then compressed mode (if required), to prepare the UE for inter-frequency measurements, by sending a PHYSICAL CHANNEL RECONFIGURATION message on DCCH using AM-RLC. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

At instant T2, the downlink power is changed according to what is shown in table 8.3.12.1 -1. The UE shall thus send a MEASUREMENT REPORT with 2c event to the SS.

The SS then sets up SI acquisition of cell 4 by sending a MEASUREMENT CONTROL message to the UE. Compressed mode is started at the same time in that message (if required). And then the UE shall answer the cell identity, CSG ID and CSG membership indication of the cell 4.

Independent of the UE requiring compressed mode, the SS then continues by sending a PHYSICAL CHANNEL RECONFIGURATION message to the UE on DCCH using AM-RLC, to order it to perform timing reinitialised interfrequency handover to cell4.

The UE shall then transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS when the inter-frequency handover has succeeded. In case the initial condition was CS-DCCH+DTCH_DCH, that message shall contain the IEs "COUNT-C activation time" and the IE "START list" (in the IE "Up link counter synchronisation info"), indicating to the SS when and from which value to start incrementing the HFN part of the COUNT-C variable used for ciphering.

Expected sequence

Step	Direction UE SS	Message	Comment
1	02 00		The SS changes the power of the two cells according to column T0 in table 8.3.12.1
2	+	MEASUREMENT CONTROL	The SS configures a measurement to the UE. Event 2d is configured.
3			The SS re-adjusts the downlink transmission power settings of the cell1 according to columns "T1" in table 8.3.12.1-1.
4	\rightarrow	MEASUREMENT REPORT	The UE sends 2d event to the SS.
5	+	MEASUREMENT CONTROL	The SS configures an intra- frequency measurement with 1c event.
6	←	MEASUREMENT CONTROL	The SS configures a CSG inter- frequency measurement with Event 2c. If Compressed Mode is not required (refer ICS/IXIT) go to step 9
7	+	PHYSICAL CHANNELRECONFIGURATION	The SS instructs UE to begin compressed mode operation. (for FDD only)
8	→	PHYSICAL CHANNELRECONFIGURATION COMPLETE	(for FDD only)
9			The SS re-adjusts the downlink transmission power settings of the cells according to columns "T2" in table 8.3.12.1-1.
10	→	MEASUREMENT REPORT	The UE sends a measurement report including the measured PSCs for cell 4 and event 2c.
11	+	MEASUREMENT CONTROL	The SS configures the UE to perform SI acquisition and reporting of cell 4.
12			The UE performs SI acquisition to acquire the relevant system information from the cell4.
13	→	MEASUREMENT REPORT	The UE sends a measurement reporting including the cell identity, CSG ID and CSG membership indication of the cell 4.
14	-	PHYSICAL CHANNEL RECONFIGURATION	The SS orders the UE to perform timing re-initialised inter-frequency handover to cell 4.
15	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	After the UE has succeeded in performing the inter-frequency handover, it shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS using the new configuration
16	←→	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

MEASUREMENT CONTROL (Step 2)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions

Information Element	Value/remark
Measurement identity	1
Measurement command	Setup
Measurement reporting mode	•
- Measurement reporting transfer mode	acknowledged Mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
CHOICE Measurement type	
-Inter-frequency measurement	
- Inter-frequency cell info list	
- Inter-frequency cell removal	Not present
- New inter-frequency info list	Not present
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- Filter Coefficient	4
- Frequency quality estimate quantity	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRAN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- Cell synchronisation information reporting	FALSE
indicator	
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Measurement validity	CELL_DCH state
- UE autonomous update mode	Not present
- CHOICE report criteria	
- Inter-frequency measurement reporting criteria	
- Parameters required for each event	2d
- Inter-frequency event identity	-70dBm
- Threshold used frequency	-70abm 0.0
- W used frequency - Hysteresis	0.0 2(1dB)
- Time to trigger	5000ms
- Reporting cell status	Not present
Additional measurement list	Not present
DPCH compressed mode status info	Not present
Dron complessed mode status inio	Mor biese iir

MEASUREMENT REPORT (Step 4)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured results	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	Inter-frequency measurement event results,
- CHOICE event result	
- Inter-frequency measurement event results	
- Inter-frequency event identity	2d

MEASUREMENT CONTROL (Step 5)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions

Information Element	Value/remark
Measurement identity	2
Measurement command	Setup
Measurement reporting mode	Secup
- Measurement reporting transfer mode	acknowledged Mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
CHOICE measurement type	Intra-frequency measurement
- intra-frequency measurement	
- Intra-frequency measurement objects list	
- Remove all intra-frequency cells - New intra-frequency cells - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN number - CHOICE mode - Primary CPICH info - Primary scrambling code - Primary CPICH Tx power - TX Diversity indicator	0 (0dB) Not Present FALSE FDD 100 Not Present FALSE
- Filter Coefficient - CHOICE mode	0 FDD
- GITOIGE IIIOGE	
	CPICH RSCP
- Measurement quantity - CHOICE report criteria - Intra-frequency measurement reporting criteria - Parameters required for each events	Intra-frequency meas urement reporting criteria
- Intra-frequency event identity	1c
- Hysteresis	4 (2dB)
- Replacement activation threshold	3
- Time to trigger	10 ms
- Amount of reporting	16
- Reporting interval	4000ms
- Reporting cell status	Not present

MEASUREMENT CONTROL (Step 6)

Information Element	Value/remark
Measurement identity	3
Measurement command	Setup
Measurement reporting mode	
- Measurement reporting transfer mode	acknowledged Mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
Additional measurement list	Not present
CHOICE measurement type	Inter-frequency measurement
- inter-frequency measurement	
- Inter-frequency cell info list	
- Inter-frequency cell removal	Not Present
- New inter-frequency cells	
- Inter-frequency cell id	4
- Frequency info	Frequency information of cell 4
- cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN indicator	FALSE
- CHOICE mode	
-FDD	
- Primary CPICH info	
- Primary Scrambling Code	Set to primary scrambling code used for cell 4
- Primary CPICH Tx power	Not present
- TX Diversity Indicator	FALSE
- Cell for measurement	Not present
- CSG Inter-frequency cell info	
- CSG Frequency info	
- Frequency info	Frequency of Cell 4
- CSG Inter-frequency cell info for the frequency	
- CSG cell info list	
- CHOICE mode	FDD
- Start PSC	300
- Number of PSCs	100
- Inter-frequency SI Acquisition	Not present
Inter fraguency magaziroment quantity	
- Inter-frequency measurement quantity	
- Filter Coefficient	4
- Frequency quality estimate quantity	CPICH RSCP
- Inter-frequency reporting quantity	FALCE
- UTR AN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	FALCE
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Measurement validity	CELL_DCH state
- inter-frequency set update	On with no reporting
- UE autonomous update mode	On with no reporting
- CHOICE report criteria	
- Inter-frequency measurement reporting criteria	
- Parameters required for each event	
- Inter-frequency event identity	2c
- Hysteresis	2(1dB)
- Time to trigger	0 mSec
- Reporting cell status	Not present
- Parameters required for each non-used frequency	05.10
- Threshold non used frequency	-85 dBm
- W non used frequency	O Not propert
DPCH compressed mode status info	Not present

PHYSICAL CHANNEL RECONFIGURATION (Step 7)

Use the same message sub-type found in Annex A, which is entitled "(Packet to CELL_DCH from CELL_DCH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/remark	Version
Downlink information common for all radio links		
- Downlink DPCH info common for all RL		
- Timing Indication	Maintain	
- Downlink DPCH power control information		
- DPC mode	0 (Single)	
- CHOICE Mode	FDD '	
- Power offset PPilot-DPDCH	0	
- DL rate matching restriction information	Not present	
- Spreading factor	Refer to the parameter set in TS 34.108	
- Fixed or flexible position	Flexible	
- TFCI existence	TRUE	
- Number of bits for Pilot bits (SF=128, 256)	Not present	
- DPCH compressed mode info	Not present	
- TGPSI	1	
- TGPS status flag	Activate	
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod	
- IGCEN	256	
Transmission and nottorn assumes configuration	250	
- Transmission gap pattern sequence configuration		
parameters - TGMP	FDD Measurement	
- TGMP - TGPRC		
	Infinity	
- TGSN	4	
- TGL1	/ Not Droport	
- TGL2	Not Present	
- TGD	Undefined	
- TGPL1	3	D00 ID I4
- TGPL2	Not Present	R99 and Rel-4
000	Mada 0	only
- RPP	Mode 0	
- ITP	Mode 0	
- CHOICE UL/DL mode	UL and DL or DL only or UL only	
	depending on UE capability	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2 or Not present depending on UE	
5	capability	
- Downlink frame type	A	
- DeltaSIR1	20 (2.0)	
- DeltaSIRAfter1	10 (1.0)	
- DeltaSIR2	Not present	
- DeltaSIRAfter2	Not present	
- N identify abort	Not present	
- T Reconfirm abort	Not present	
- TX diversity mode	None	
- SSDT information	Not present	R99 and Rel-4
		only
- Default DPCH offset value	Not present	

MEASUREMENT REPORT (Step 10)

Information Element	Value/remark
Measurement identity	Check to see if set to 3
Measured results	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	Inter-frequency measurement event results,
- CHOICE event result	
- Inter-frequency measurement event results	
- Inter-frequency event identity	2c
- Inter-frequency cells	
- Frequency info	Set to same frequency as used for cell 4
 Non frequency related measurement event results 	
- CHOICE mode	
- FDD	
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 4

MEASUREMENT CONTROL (Step 11)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Measurement Identity	4
Measurement Command	Setup
CHOICE Measurement type	
- Inter-frequency measurement	
- Inter-frequency measurement objects list	
- Inter-frequency SI Acquisition	
- Frequency info	Set to same frequency as used for cell 4
- CHOICE mode	
- FDD	
- Primary scrambling code	Set to same scrambling code as used for cell 4
- Inter-frequency measurement quantity	, and the second
- Filter Coefficient	4
- Frequency quality estimate quantity	CPICH RSCP
- Inter-frequency reporting quantity	
- UTR AN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- CHOICE report criteria	
- Periodical reporting criteria	
- Amount of reporting	1
- Reporting interval	4000ms Not present
DPCH compressed mode status info	Not present

MEASUREMENT REPORT (Step13)

Information Element	Value/remark
Measurement identity	Check to see if set to 4
Measured Results	
-CHOICE Measurement	
- Inter-frequency measured results list	
 Inter-frequency measurement results 	
- Frequency info	Set to same frequency as used for cell 4
 Inter-frequency cell measurement results 	
- Cell measured results	
- Cell Identity	Set to 28-bit Cell identity as used for cell 4
- CSG Identity	Set to same code as used for cell 4(2)
- CSG Member indication	member
- CHOICE mode	
- FDD	
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 4
- CPICH Ec/N0	Check that this IE is absent
- CPICH RSCP	Check that this IE is present
- Pathloss	Check that this IE is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 14)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/Remark
RRC State indicator	CELL_DCH
Frequency info	
- CHOICE mode	
- FDD	
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to cell4
Downlink information common for all radio links	
- CHOICE DPCH info	
- Downlink DPCH info common for all RL	
- Timing indication	Initialise
Downlink information per radio link list	1 radio link
- Downlink information for each radio link	
- CHOICE mode	FDD
- FDD	
- Primary CPICH info	
- Primary Scrambling Code	Set to same code as used for cell 4

8.3.12.1.5 Test requirement

At step 4, the UE sends 2d event to the cell1.

At step 10, the UE sends 2c event to the cell 1 for Cell 4.

At step 13, The UE sends a measurement reporting including the cell identity, CSG ID and CSG membership indication of the cell 4 within 4000 ms.

At step 15, UE sends Physical Channel Reconfiguration Complete message on uplink DCCH using AM RLC.

8.3.12.2 Inter-frequency inbound handover to UMTS CSG cell

8.3.12.2.1 Definition

Test to verify the UE can report the Cell Identity, CSG ID and CSG membership indication of inter-frequency CSG cells with reporting proximity indication.

8.3.12.2.2 Conformance requirement

1: Inter-frequency measurements for CSG/Hybrid cells:

For each cell reported in the IE "Cell measured results" of an inter-frequency Measurement Report, which is also included in the IE "Inter-frequency SI Acquisition" associated with the measurement:

- 1> if the UE managed to acquire the system information of the concerned cell:
 - 2> include the following IEs in the IE "Cell measured results":
 - 3> "Cell Identity" IE;
 - 3> if the concerned cell broadcasts a CSG identity:
 - 4> "CSG Identity" IE.
 - 4> "CSG Member indication" IE and set it to "member" if CSG identity of the concerned cell is present in UE's CSG whitelist.

If the UE needs measurement gaps to read the system information on the non-used frequency, the system information of the reported cell can be acquired by the UE via autonomous measurement gaps when the IE "Inter-frequency SI Acquisition" is received by the UE, i.e., UE is allowed to temporarily abort communication with the serving cell to perform SI acquisition within the limits (detailed value is FFS). UE shall send the measurement report before the maximum provided time specified in IE "Periodical reporting criteria" if the UE is able to acquire SI early.

- 2: Inter-frequency Measurement Procedure of CSG and Hybrid cells:
 - 1) The SRNC configures the UE with a measurement having "CSG Proximity detection" as measurement type.
 - 2) The UE sends an "entering" CSG proximity indication when it determines it may be near a cell, (based on UE implementation) whose CSG ID is in the UE's CSG white list. The CSG proximity indication includes the RAT and frequency of the cell.
 - 3) The SRNC configures a measurement on the concerned frequency/RAT to measure CSG/hybrid cells. Compressed mode gaps, if required by the UE, are also activated to allow UE to perform measure ments on the reported RAT and frequency. The network may also use the proximity indication to minimize the requesting of handover preparation information of CSG/hybrid cells by avoiding requesting such information when the UE is not in the geographical area where cells whose CSG IDs are in the UEs CSG whitelist are located.
 - 4) The UE sends a measurement report including the measured PSCs/PCIs.
 - 5) The SRNC configures the UE to perform SI acquisition and reporting of a particular PSC/PCI.
 - 6) The UE performs SI acquisition using autonomous gaps, i.e., the UE may suspend reception and transmission with the SRNC within the limits (the limit is currently FFS) to acquire the relevant system information from the target HNB/HeNB.
 - 7) The UE sends a measurement report including Cell Identity, CSG ID and CSG membership indication.
 - 8) SRNC can then proceed with the handover processing. The handover processing for inter-frequency handover to a CSG/Hybrid cell is described in [6].

NOTE: The above steps also apply to inter-RAT mobility from UMTS cell to HeNB.

After sending an "entering" CSG proximity indication (step 2), if the UE determines that it is no longer near any cell (on the reported proximate RAT and frequency) whose CSG ID is in the UE's CSG whitelist, the UE sends a "leaving" CSG proximity indication to the SRNC. Upon reception of this indication, the SRNC may reconfigure the UE to stop measurements on the reported RAT and frequency.

In the above procedure, step 2 may not be performed in case the UE has not previously visited the HNB, e.g., when the UE first visits a CSG/hybrid cell.

The PSC/PCI confusion is resolved by steps 5, 6 and 7. The SRNC can request SI acquisition and reporting for any PSC/PCI, not limited to PSCs/PCIs of CSG or hybrid cells.

3: The CSG SI acquisition delay is defined as the time between any occurrences that will trigger a SI decoding until the UE starts to transmit over the Uu interface. This requirement assumes that the measurement report is not delayed by other RRC signalling on the DCCH. The measurement reporting delay also excludes any RRC procedure delay which is defined in [16] when SI reading is initiated by a measurement control message.

For intra frequency CSG cells, CSG SI decoding is typically triggered when a cell with primary scrambling code in a preconfigured range meets the criteria for measurement reporting. For inter frequency CSG cells, CSG SI decoding is explicitly requested by RRC signalling.

The CSG SI reporting delay shall not be more than T_{CSG-SI-Report} where T_{CSG-SI-Report} in ms is given by

$$T_{CSG-SI-Report} = [630] + 40*SIB3_REP$$

SIB3_REP is the repetition period at which the CSG cell schedules SIB3 blocks in units of frames

This requirement is applicable for CSG target cell configurations where the information required to make the SI report can be determined from the MIB and SIB3 alone, and SIB3 is not segmented into multiple TTI. Additionally, for the requirement to be applicable, the reception conditions shall be [TBD] such that the system frame number of the target CSG cell, the MIB and SIB3 can each be successfully decoded in no more than four attempts.

 $Test requirement = RRC Procedure delay + T_{CSG-SI-Report}$

Reference

1: 3GPP TS 25.331 clause 14.7a.2.

2: 3GPP TS 25.367, clause 8.1.2.

3: 3GPP TS 25.133, clause 5.13.2, A.5.11.2.

8.3.12.2.3 Test purpose

- 1. To confirm that the UE can report CSG proximity indication to the SRNC.
- To confirm that the UE can report the Cell Identity, CSG ID and CSG membership indication of inter-frequency CSG cells.

8.3.12.2.4 Method of test

Initial Condition

System Simulator:

3 cells: Cell 1, cell 4 and cell5 are active.

The CSG id of the Cell4 is 2.

Cell 5 does not broadcast CSG ID.

The SIB3_REP of cell 4 SIB3 scheduling is 64.

User Equipment:

The UE Allowed CSG List contains CSG2.

The UE is PS-DCCH+DTCH_DCH (state 6-10) or CS-DCCH+DTCH_DCH (state 6-9) or PS+CS-DCCH+DTCH_DCH (state 6-14) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports Compressed mode.
- UE supports Neighbour Cell SI acquisition capability.
- UE supports the capability of inter-frequency SI acquisition for HO.

Test Procedure

Table 8.3.12.2-1 illustrates the downlink power to be applied for the 3 cells.

Table 8.3.12.2-1

Parameter	Unit	Cell 1		Cell 4		Cell5	
Test Channel		1		2		3	
		T0	T1	T0	T1	T0	T1
CPICH Ec	dBm/3.84 MHz	-60	-70	-60	-55	-60	-80

The three cells are all active. The UE is initially in CELL_DCH and has a radio bearer with the cell1.

At instant T0, the downlink is changed according to what is shown in table 8.3.12.1 -1. The SS then activates the UE to detect the CSG proximity by sending a MEASUREMENT CONTROL message to the UE. The UE shall answer the CSG proximity indication to the cell1.

The SS sends MEASUREMENT CONTROL with 1c event to enable the CSG VAS active set in the UE.

The SS configures then compressed mode (if required), to prepare the UE for inter-frequency measurements, by sending a PHYSICAL CHANNEL RECONFIGURATION message on DCCH using AM-RLC. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS then sets up inter-frequency measurements (event 2b), by sending a MEASUREMENT CONTROL message to the UE. Compressed mode is started at the same time in that message (if required).

At instant T1, the downlink power is changed according to what is shown in table 8.3.12.1 -1. The UE shall thus send a MEASUREMENT REPORT with 2b event to the SS.

The SS then sets up SI acquisition of cell 4 by sending a MEASUREMENT CONTROL message to the UE. Compressed mode is started at the same time in that message (if required). And then the UE shall answer the cell identity, CSG ID and CSG membership indication of the cell 4.

Independent of the UE requiring compressed mode, the SS then continues by sending a PHYSICAL CHANNEL RECONFIGURATION message to the UE on DCCH using AM-RLC, to order it to perform timing reinitialised interfrequency handover to cell4.

The UE shall then transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS when the inter-frequency handover has succeeded. In case the initial condition was CS-DCCH+DTCH_DCH, that message shall contain the IEs "COUNT-C activation time" and the IE "START list" (in the IE "Up link counter synchronisation info"), indicating to the SS when and from which value to start incrementing the HFN part of the COUNT-C variable used for ciphering.

Expected sequence

Step	Direction UE SS	Message	Comment
1			The SS changes the power of the cell1 and cell4 according to column T0 in table 8.3.12.2-1
2	+	MEASUREMENT CONTROL	The SS configures a measurement with detecting the CSG proximity to the UE.
3	→	MEASUREMENT REPORT	UE sends a report with the CSG proximity indication to the SS. The message includes the RAT and frequency of the cell4.
4	+	MEASUREMENT CONTROL	The SS configures a measurement with 1c event. The cell information is set to the same as the cell 1. If Compressed Mode is not required (refer ICS/IXIT) go to step 7
5	+	PHYSICAL CHANNELRECONFIGURATION	SS instructs UE to begin compressed mode operation. (for FDD only)
6	→	PHYSICAL CHANNELRECONFIGURATION COMPLETE	(for FDD only)
7	+	MEASUREMENT CONTROL	The SS configures a measurement to measure cells. The message includes the PSC range, the compressed mode gaps and the parameters of the event 2b.
8			SS re-adjusts the downlink transmission power settings of the cell4 according to columns "T1" in table 8.3.12.2-1.
9	→	MEASUREMENT REPORT	The UE sends a measurement report including the measured PSCs for cell 4 and event 2b.
10	+	MEASUREMENT CONTROL	The SS configures the UE to perform SI acquisition and reporting of cell 4.
11			The UE performs SI acquisition to acquire the relevant system information from the cell4.
12	→	MEASUREMENT REPORT	The UE sends a measurement reporting including the cell identity, CSG ID and CSG membership indication of the cell 4.
13	←	PHYSICAL CHANNEL RECONFIGURATION	The SS orders the UE to perform timing re-initialised inter-frequency handover to cell 4.
14	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	After the UE has succeeded in performing the inter-frequency handover, it shall send a PHYSIC AL CHANNEL RECONFIGURATION COMPLETE message to the SS using the new configuration
15	←→	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

MEASUREMENT CONTROL (Step 2)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
CHOICE Measurement type	
- CSG Proximity detection	enable

MEASUREMENT REPORT (Step 3)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured results	Check to see if it is absent
Additional measured results	Check to see if it is absent
CSG Proximity Indication	
- CSG Proximity Indication - CHOICE Radio Access Technology - UTRA - CSG Frequency info for UTRA - CHOICE mode - FDD	entering
- UARFCN uplink (Nu)	The same as Cell2
 - UARFCN downlink (Nd) 	The same as Cell2

MEASUREMENT CONTROL (Step 4)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions

Information Element	Value/remark
Measurement identity	2
Measurement command	Setup
CHOICE measurement type	Intra-frequency measurement
- intra-frequency measurement	
- Intra-frequency measurement objects list	
- Cells for measurement	
- Intra-frequency cell id	Set to same code as used for cell 1
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Intra-frequency measurement reporting criteria	
- Parameters required for each events	
- Intra-frequency event identity	1c
- Hysteresis	4 (2dB)
- Replacement activation threshold	3
- Time to trigger	10 ms
- Amount of reporting	16
- Reporting interval	4000ms
- Reporting cell status	Not present

PHYSICAL CHANNEL RECONFIGURATION (Step 5)

Use the same message sub-type found in TS 34.108, clause 9.

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 6)

Use the same message sub-type found in TS 34.108, clause 9.

MEASUREMENT CONTROL (Step 7)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions

Information Element	Value/remark
Measurement identity	3
Measurement command	Setup
CHOICE Measurement type	·
- Inter-frequency measurement objects list	
- New inter-frequency cells	
- Inter-frequency cell id	Set to same code as used for cell 4
- Frequency info	Set to same code as used for cell 4
- cell info	
- Cell individual offset	Set to same code as used for cell 4
- Read SFN indicator	Set to same code as used for cell 4
- CHOICE mode	
-FDD	
- Primary CPICH info	
- Primary Scrambling Code	Set to same code as used for cell 4(144)
-Inter-frequency measurement	
- Measurement validity	CELL_DCH state
- CHOICE report criteria	
 Inter-frequency measurement reporting criteria 	
 Parameters required for each event 	
- Inter-frequency event identity	2b
- Threshold used frequency	-65 dBm
- W used frequency	0.0
- Hysteresis	2(1dB)
- Time to trigger	10 ms
- Parameters required for each non-used frequency	
- Threshold non used frequency	-68 dBm
- W non used frequency	0

MEASUREMENT REPORT (Step 9)

Information Element	Value/remark		
Measurement identity	Check to see if set to 3		
Measured results	Check to see if it is absent		
Additional measured results	Check to see if it is absent		
Event results	Inter-frequency measurement event results,		
- CHOICE event result			
- Inter-frequency measurement event results			
- Inter-frequency event identity	2b		
- Inter-frequency cells			
- Frequency info	Set to same code as used for cell 4		
- Non frequency related measurement event results			
- CHOICE mode			
- FDD			
- Primary CPICH info			
- Primary scrambling code	Set to same code as used for cell 4(144)		

MEASUREMENT CONTROL (Step 10)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Measurement Identity	4
Measurement Command	Setup
CHOICE Measurement type	
- Inter-frequency measurement	
- Inter-frequency measurement objects list	
- Cells for measurement	
- Inter-frequency cell id	Set to same code as used for cell 4
- Inter-frequency SI Acquisition	
- Frequency info	Set to same code as used for cell 4
- CHOICE mode	
- FDD	
- Primary scrambling code	Set to same code as used for cell 4(144)
- CHOICE report criteria	
- Periodical reporting criteria	
- Amount of reporting	1
- Reporting interval	4000 ms

MEASUREMENT REPORT (Step12)

Information Element	Value/remark
Measurement identity	Check to see if set to 4
Measured results	Check to see if it is absent
Additional measured results	Check to see if it is absent
Measured Results	
-CHOICE Measurement	
- Inter-frequency measured results list	
- Inter-frequency measurement results	
- Frequency info	Set to the Default
 Inter-frequency cell measurement results 	
- Cell measured results	
- Cell Identity	Set to same code as used for cell 4
- CSG Identity	Set to same code as used for cell 4(2)
- CSG Member indication	member
- CHOICE mode	
- FDD	
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 4(144)

PHYSICAL CHANNEL RECONFIGURATION (Step 13)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/Remark
RRC State indicator	CELL_DCH
Frequency info	
- CHOICE mode	
- FDD	
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to cell4
Downlink information common for all radio links	
- CHOICE DPCH info	
- Downlink DPCH info common for all RL	
- Timing indication	Initialise
Downlink information per radio link list	1 radio link
- Downlink information for each radio link	
- CHOICE mode	
- FDD	
- Primary CPICH info	
- Primary Scrambling Code	Set to same code as used for cell 4(144)

8.3.12.2.5 Test requirement

At step 3, the UE sends CSG proximity indication to the cell1.

At step 9, the UE sends 2b event to the cell1.

At step 12, The UE sends a measurement reporting including the cell identity, CSG ID and CSG membership indication of the cell 4 within 4000ms.

At step 14, UE sends Physical Channel Reconfiguration Complete message on uplink DCCH using AM RLC.

8.3.12.3 Inter-frequency Measurements of UMTS CSG cell by non-member UE

8.3.12.3.1 Definition

Test to verify the UE can report the Cell Identity, CSG ID and CSG membership indication of a non-member CSG cell to the SRNC in the measurement report.

8.3.12.3.2 Conformance requirement

1: Inter-frequency measurements for CSG/Hybrid cells:

For each cell reported in the IE "Cell measured results" of an inter-frequency Measurement Report, which is also included in the IE "Inter-frequency SI Acquisition" associated with the measurement:

- 1> if the UE managed to acquire the system information of the concerned cell:
 - 2> include the following IEs in the IE "Cell measured results":
 - 3> "Cell Identity" IE;
 - 3> if the concerned cell broadcasts a CSG identity:
 - 4> "CSG Identity" IE.
 - 4> "CSG Member indication" IE and set it to "member" if CSG identity of the concerned cell is present in UE's CSG whitelist.

If the UE needs measurement gaps to read the system information on the non-used frequency, the system information of the reported cell can be acquired by the UE via autonomous measurement gaps when the IE "Inter-frequency SI Acquisition" is received by the UE, i.e., UE is allowed to temporarily abort communication with the serving cell to perform SI acquisition within the limits (detailed value is FFS). UE shall send the measurement report before the maximum provided time specified in IE "Periodical reporting criteria" if the UE is able to acquire SI early.

- 2: Inter-frequency Measurement Procedure of CSG and Hybrid cells:
 - 1) The SRNC configures the UE with a measurement having "CSG Proximity detection" as measurement type.
 - 2) The UE sends an "entering" CSG proximity indication when it determines it may be near a cell, (based on UE implementation) whose CSG ID is in the UE's CSG white list. The CSG proximity indication includes the RAT and frequency of the cell.
 - 3) The SRNC configures a measurement on the concerned frequency/RAT to measure CSG/hybrid cells. Compressed mode gaps, if required by the UE, are also activated to allow UE to perform measurements on the reported RAT and frequency. The network may also use the proximity indication to minimize the requesting of handover preparation information of CSG/hybrid cells by avoiding requesting such information when the UE is not in the geographical area where cells whose CSG IDs are in the UEs CSG whitelist are located.
 - 4) The UE sends a measurement report including the measured PSCs/PCIs.
 - 5) The SRNC configures the UE to perform SI acquisition and reporting of a particular PSC/PCI.
 - 6) The UE performs SI acquisition using autonomous gaps, i.e., the UE may suspend reception and transmission with the SRNC within the limits (the limit is currently FFS) to acquire the relevant system information from the target HNB/HeNB.
 - 7) The UE sends a measurement report including Cell Identity, CSG ID and CSG membership indication.
 - 8) SRNC can then proceed with the handover processing. The handover processing for inter-frequency handover to a CSG/Hybrid cell is described in [6].

NOTE: The above steps also apply to inter-RAT mobility from UMTS cell to HeNB.

After sending an "entering" CSG proximity indication (step 2), if the UE determines that it is no longer near any cell (on the reported proximate RAT and frequency) whose CSG ID is in the UE's CSG white list, the UE sends a "leaving" CSG proximity indication to the SRNC. Upon reception of this indication, the SRNC may reconfigure the UE to stop measurements on the reported RAT and frequency.

In the above procedure, step 2 may not be performed in case the UE has not previously visited the HNB, e.g., when the UE first visits a CSG/hybrid cell.

The PSC/PCI confusion is resolved by steps 5, 6 and 7. The SRNC can request SI acquisition and reporting for any PSC/PCI, not limited to PSCs/PCIs of CSG or hybrid cells.

3: The CSG SI acquisition delay is defined as the time between any occurrences that will trigger a SI decoding until the UE starts to transmit over the Uu interface. This requirement assumes that the measurement report is not delayed by other RRC signalling on the DCCH. The measurement reporting delay also excludes any RRC procedure delay which is defined in [16] when SI reading is initiated by a measurement control message.

For intra frequency CSG cells, CSG SI decoding is typically triggered when a cell with primary scrambling code in a preconfigured range meets the criteria for measurement reporting. For inter frequency CSG cells, CSG SI decoding is explicitly requested by RRC signalling.

The CSG SI reporting delay shall not be more than T_{CSG-SI-Report} where T_{CSG-SI-Report} in ms is given by

$$T_{CSG-SI-Report} = [630] + 40*SIB3_REP$$

SIB3_REP is the repetition period at which the CSG cell schedules SIB3 blocks in units of frames

This requirement is applicable for CSG target cell configurations where the information required to make the SI report can be determined from the MIB and SIB3 alone, and SIB3 is not segmented into multiple TTI. Additionally, for the requirement to be applicable, the reception conditions shall be [TBD] such that the system frame number of the target CSG cell, the MIB and SIB3 can each be successfully decoded in no more than four attempts.

Test requirement = RRC Procedure delay + $T_{CSG-SI-Report}$

Reference

1: 3GPP TS 25.331 clause 14.7a.2.

2: 3GPP TS 25.367, clause 8.1.2.

3: 3GPP TS 25.133, clause 5.13.2, A.5.11.2.

8.3.12.3.3 Test purpose

1. To confirm that the UE can report the measurement report with non-member indication of the CSG cells to the SRNC.

8.3.12.3.4 Method of test

Initial Condition

 $System\,Simulator:$

2cells: Cell 1, cell 4 are used.

The CSG id of the Cell4 is 2. Cell 1 does not broadcast CSG ID.

The SIB3_REP of cell 4, i.e., SIB3 scheduling is 64.

User Equipment:

The UE Allowed CSG List does not contain CSG2.

The UE is PS-DCCH+DTCH_DCH (state 6-10) or CS-DCCH+DTCH_DCH (state 6-9) or PS+CS-DCCH+DTCH_DCH (state 6-14) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports Compressed mode.
- UE supports Neighbour Cell SI acquisition capability.
- UE supports the capability of inter-frequency SI acquisition for HO.

Test Procedure

Table 8.3.12.3-1 illustrates the downlink power to be applied for the 2 cells.

Table 8.3.12.3-1

Parameter	Unit	Cell 1		Cell 4	
Test Channel		1		2	
		T0	T1	T0	T1
CPICH Ec	dBm/3.84 MHz	-60	-70	OFF	-55

Cell 1 is active. The UE is initially in CELL_DCH and has a radio bearer with the cell 1.

At instant T0, the downlink is changed according to what is shown in table 8.3.12.1 -1. The SS sends MEASUREMENT CONTROL with 1c event required for construction of the CSG VAS active set in the UE.

The SS configures then compressed mode (if required), to prepare the UE for inter-frequency measurements, by sending a PHYSICAL CHANNEL RECONFIGURATION message on DCCH using AM-RLC. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS then sets up CSG inter-frequency measurements (event 2b), by sending a MEASUREMENT CONTROL message to the UE.

At instant T1, the downlink power is changed according to what is shown in table 8.3.12.1 -1. The UE shall thus send a MEASUREMENT REPORT with 2b event to the SS.

The SS then sets up SI acquisition of cell 4 by sending a MEASUREMENT CONTROL message to the UE. And then the UE shall report the cell identity, CSG ID and CSG membership indication of the cell 4.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1			The SS changes the power of the two cells according to column T0 in table 8.3.12.3-1
2	←	MEASUREMENT CONTROL	Cell1 configures a measurement with 1c event. The cell information is set to the same as the cell1. If Compressed Mode is not required (refer ICS/IXIT) go to step 5
3	+	PHYSICAL CHANNELRECONFIGURATION	SS instructs UE to begin compressed mode operation. (for FDD only)
4	→	PHYSICAL CHANNELRECONFIGURATION COMPLETE	(for FDD only)
5	←	MEASUREMENT CONTROL	The SS configures a measurement to measure cells. The message includes the PSC range the compressed mode gaps and the parameters of the event 2b.
6			SS re-adjusts the downlink transmission power settings of the two cells according to columns "T1" in table 8.3.12.3-1.
7	→	MEASUREMENT REPORT	The UE sends a measurement report including the measured PSCs for cell 4 and event 2b to cell 1.
8	+	MEASUREMENT CONTROL	The SS configures the UE to perform SI acquisition and reporting of cell 4.
9			The UE performs SI acquisition to acquire the relevant system information from the cell4.
10	→	MEASUREMENT REPORT	The UE sends a measurement reporting including the cell identity, CSG ID and CSG membership indication of the cell 4 within 4000ms.
11	←→	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

MEASUREMENT CONTROL (Step 2)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions

Information Element	Value/remark
Measurement identity	1
Measurement command	Setup
Measurement reporting mode	Cottap
- Measurement reporting transfer mode	Acknowledged mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
CHOICE measurement type	Intra-frequency measurement
- intra-frequency measurement	maa noquonoj moao aromom
- Intra-frequency measurement objects list	
- Remove all intra-frequency cells	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0 (0dB)
- Reference time difference to cell	Not Present
- Read SFN number	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	100
- Primary CPICH Tx power	Not Present
- TX Diversity indicator	FALSE
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- CHOICE mode	
- FDD	
- Measurement quantity	CPICH RSCP
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Intra-frequency measurement reporting criteria	
- Parameters required for each events	
- Intra-frequency event identity	1c
- Hysteresis	4 (2dB)
- Replacement activation threshold	3
- Time to trigger	10 ms
- Amount of reporting	16
- Reporting interval	4000ms
- Reporting cell status	Not present

PHYSICAL CHANNEL RECONFIGURATION (Step 3)

Use the same message sub-type found in Annex A, which is entitled "(Packet to CELL_DCH from CELL_DCH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/remark	Version
Downlink information common for all radio links		
- Downlink DPCH info common for all RL		
- Timing Indication	Maintain	
- Downlink DPCH power control information		
- DPC mode	0 (Single)	
- CHOICE Mode	FDD	
- Power offset PPilot-DPDCH	0	
- DL rate matching restriction information	Not present	
- Spreading factor	Refer to the parameter set in TS 34.108	
- Fixed or flexible position	Flexible	
- TFCI existence	TRUE	
- Number of bits for Pilot bits (SF=128, 256)	Not present	
- DPCH compressed mode info		
- TGPSI	1	
- TGPS status flag	Activate	
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod	
100111	256	
- Transmission gap pattern sequence configuration		
parameters		
- TGMP	FDD Measurement	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not Present	
- TGD	Undefined	
- TGPL1	3	
- TGPL2	Not Present	R99 and Rel-4
10122	Trock rooth.	only
- RPP	Mode 0	J,
- ITP	Mode 0	
- CHOICE UL/DL mode	UL and DL or DL only or UL only	
2	depending on UE capability	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2 or Not present depending on UE	
	capability	
- Downlink frame type	A	
- DeltaSIR1	20 (2.0)	
- DeltaSIRAfter1	10 (1.0)	
- DeltaSIR2	Not present	
- DeltaSIRAfter2	Not present	
- N identify abort	Not present	
- T Reconfirm abort	Not present	
- TX diversity mode	None	
- SSDT information	Not present	R99 and Rel-4
		only
- Default DPCH offset value	Not present	,
Doladit Di Oli Oliott valuo	1101 2100 0111	1

MEASUREMENT CONTROL (Step 5)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions

Information Element	Value/remark
Measurement identity	2
Measurement command	Setup
Measurement reporting mode	'
- Measurement reporting transfer mode	Unacknowledged Mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
Additional measurement list	Not present
CHOICE Measurement type	
-Inter-frequency measurement	
- Inter-frequency measurement objects list	
- Inter-frequency cell removal	Not Present
- New inter-frequency cells	
- Inter-frequency cell id	Transcensistant at all 4
- Frequency info - cell info	Frequency information of cell 4
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	
-FDD	
- Primary CPICH info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH Tx power	Not present
- TX Diversity Indicator	FALSE
- Cell for measurement	Not present
- CSG Inter-frequency cell info	
- CSG Frequency info	Francisco Call 4
- Frequency info	Frequency of Cell 4
- CSG Inter-frequency cell info for the frequency - CSG cell info list	
- CHOICE mode	FDD
- Start PSC	300
- Number of PSCs	100
- Inter-frequency SI Acquisition	Not present
,,,	
- Inter-frequency measurement quantity	
- Filter Coefficient	4
- Frequency quality estimate quantity	CPICH RSCP
- Inter-frequency reporting quantity	- N 0-
- UTR AN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	FALSE
- Cell synchronisation information reporting indicator - Cell identity reporting indicator	FALSE FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
	-
- Measurement validity	CELL_DCH state
- Inter-frequency set update	
- UE autonomous update mode	On with no reporting
- CHOICE report criteria	
- Inter-frequency measurement reporting criteria	
- Parameters required for each event	Ol-
- Inter-frequency event identity	2b
- Threshold used frequency	-65dBm
- W used frequency - Hysteresis	0.0 2(1dR)
- Hysteresis - Time to trigger	2(1dB) 0 mSec
- Reporting cell status	Not present
- Parameters required for each non-used frequency	Hotpiooont
- Threshold non used frequency	-68 dBm
- W non used frequency	0
DPCH compressed mode status info	Not present

MEASUREMENT REPORT (Step 7)

Information Element	Value/remark
Measurement identity	Check to see if set to 2
Measured results	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	Inter-frequency measurement event results,
- CHOICE event result	
- Inter-frequency measurement event results	
- Inter-frequency event identity	2b
- Inter-frequency cells	
- Frequency info	Set to same frequency as used for cell 4
 Non frequency related measurement event results 	
- CHOICE mode	
- FDD	
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 4

MEASUREMENT CONTROL (Step 8)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Measurement Identity	3
Measurement Command	Setup
CHOICE Measurement type	
- Inter-frequency measurement	
- Inter-frequency measurement objects list	
- Inter-frequency SI Acquisition	
- Frequency info	Set to same frequency as used for cell 4
- CHOICE mode	·
- FDD	
- Primary scrambling code	Set to same scrambling as used for cell 4
- Inter-frequency measurement quantity	
- Filter Coefficient	4
- Frequency quality estimate quantity	CPICH RSCP
- Inter-frequency reporting quantity	
- UTR AN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	54.05
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- CHOICE report criteria	
- Periodical reporting criteria	1
- Amount of reporting	4000ms
- Reporting interval DPCH compressed mode status info	Not present
DI OTT COMPlessed mode status inio	Not blegelit

MEASUREMENT REPORT (Step10)

Information Element	Value/remark
Measurement identity	Check to see if set to 3
Measured results	Check to see if it is absent
Additional measured results	Check to see if it is absent
Measured Results	
-CHOICE Measurement	
- Inter-frequency measured results list	
- Inter-frequency measurement results	
- Frequency info	Set to the frequency of cell 4
 Inter-frequency cell measurement results 	
- Cell measured results	
- Cell Identity	Set to 28-bit Cell identity as used for cell 4
- CSG Identity	Set to same code as used for cell 4(2)
- CSG Member indication	Not present
- CHOICE mode	
- FDD	
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 4
- CPICH Ec/N0	Check that this IE is absent
- CPICH RSCP	Check that this IE is present
- Pathloss	Check that this IE is absent

8.3.12.3.5 Test requirement

At step 7, the UE sends 2b event for cell 4 to cell1.

At step 10, The UE sends a measurement reporting including the cell identity, CSG ID and CSG membership (non-member) indication (which should be absent) of the cell 4 within 4000ms.

8.3.12.4 Intra-frequency inbound handover to UMTS CSG cell without specifying PSCs for STAcquisition

8.3.12.4.1 Definition

Test to verify the UE can report the PSC, Cell Identity, CSG ID and CSG membership indication of intra-frequency CSG cells.

8.3.12.4.2 Conformance requirement

1.Intra-frequency measurements for CSG/Hybrid cells

For each cell reported in the IE "Cell measured results" of an intra-frequency Measurement Report, which is also included in the IE "Intra-frequency SI Acquisition" associated with the measurement:

- 1> if the UE managed to acquire the valid system information of the concerned cell:
 - 2> include the following IEs in the IE "Cell measured results":
 - 3> "Cell Identity" IE.
 - 3> if the concerned cell broadcasts a CSG identity:
 - 4> "CSG Identity" IE.
 - 4> "CSG Member indication" IE and set it to "member" if the concerned cell is CSG member cell.

The system information of the reported cell(s) can be acquired by the UE without any measurement gaps.

- 2: Intra-frequency Measurement Procedure of CSG and Hybrid cells:
 - 1) The SRNC configures the UE with a measurement having "CSG Proximity detection" as measurement type.
 - 2) The UE sends an "entering" CSG proximity indication when it determines it may be near a cell, (based on UE implementation) whose CSG ID is in the UE's CSG white list.

- 3) If a measurement configuration for CSG/hybrid cells is not present, the SRNC configures the UE with relevant measurement configuration which includes the PSCs that the UE must measure and the PSCs for which SI acquisition should be performed. The network may use the CSG proximity indication for intra-frequency case to minimize the time during which measurements for CSG/hybrid cells are configured.
- 4) The UE sends a measurement report including the measured PSC, Cell Identity, CSG ID and CSG membership indication of the target HNB to the SRNC (e.g., due to a triggered intra-frequency event 1d). The UE can acquire MIB and SIB3/SIB4 of intra-frequency target HNB cells in parallel with reception of the serving cell transmissions in CELL_DCH. No measurement gaps are required for reading MIB and SIB3/SIB4.
- 5) SRNC can then proceeds with the handover processing as described in [6].

After sending an "entering" CSG proximity indication (step 2), if the UE determines that it is no longer near any cell (on the reported proximate RAT and frequency) whose CSG ID is in the UE's CSG white list, the UE sends a "leaving" CSG proximity indication to the SRNC. Upon reception of this indication, the SRNC may reconfigure the UE to stop measurements configured.

The PSC confusion is resolved by steps 3 and 4. The SRNC can request SI acquisition and reporting for any PSC, not limited to PSCs of CSG or hybrid cells.

Reference

1: 3GPP TS 25.331 v9.8, clause 14.7a.1.

2: 3GPP TS 25.367 v9.5, clause 8.1.1.

8.3.12.4.3 Test purpose

- 1. To confirm that the UE can report the PSC of intra-frequency CSG cells.
- 2. To confirm that the UE can report the Cell Identity, CSG ID and CSG membership indication of intra-frequency CSG cells.

8.3.12.4.4 Method of test

Initial Condition

System Simulator:

2 cells: Cell 1 and Cell 2 are used.

Cell 1 is active. Cell 1 does not broadcast CSG ID.

Cell2 is a CSG cell.

The CSG indicator of the cell2 is set to TRUE.

The CSG id of the Cell2 is 2.

The PSC of the cell 2 is 144.

User Equipment:

The UE Allowed CSG List contains CSG2.

The UE is PS-DCCH+DTCH_DCH (state 6-10) or CS-DCCH+DTCH_DCH (state 6-9) or PS+CS-DCCH+DTCH_DCH (state 6-14) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports the capability of intra-frequency SI acquisition for HO.
- UE supports the capability of intra-frequency proximity indication.

Test Procedure

Table 8.3.12.4-1 illustrates the downlink power to be applied for the 2 cells.

Table 8.3.12.4-1

Parameter	Unit	Cell 1		Cell 2			
Test Channel		1		2			
		T0	T1	T2	T0	T1	T2
CPICH Ec	dBm/3.84 MHz	-55	-55	-70	OFF	-70	-55

The UE is initially in cell_DCH state and has a radio bearer with the cell1. The initial condition is set as the instant T0 shown in table 8.3.12.4 -1.

The SS activates the UE to detect the CSG proximity by sending a MEASUREMENT CONTROL message to the UE.

At instant T1, the downlink is changed according to what is shown in table 8.3.12.4 -1. The UE shall answer the CSG proximity indication to the cell1. The SS then sets up intra-frequency measurements (event 1d), by sending a MEASUREMENT CONTROL message to the UE.

At instant T2, the downlink power is changed according to what is shown in table 8.3.12.4 -1. The UE shall thus send a MEASUREMENT REPORT with 1d event to the SS.

The SS sends ACTIVE SET UPDATE to the UE and commands the UE adds cell2 to the active set.

The UE shall then add the cell2 to the active set and handover to the cell2.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1			The initial condition is set as T0 in table8.3.12.4-1.
2	←	MEASUREMENT CONTROL	The SS configures a measurement with detecting the CSG proximity to the UE.
3			The SS re-adjusts the downlink transmission power settings of the cells according to columns "T1" in table 8.3.12.4-1.
4	→	MEASUREMENT REPORT	The UE sends a report with the CSG proximity indication to the SS. The message includes the RAT and frequency of the cell2.
5	+	MEASUREMENT CONTROL	The SS configures a measurement to the UE. Event 1d is configured.
6			The SS re-adjusts the downlink transmission power settings of the cell1 according to columns "T2" in table 8.3.12.4-1.
7	→	MEASUREMENT REPORT	The UE sends 1d event to the SS. The report includes the PSC, the cell identity, CSG ID and CSG membership indication of the cell 2.
8	+	ACTIVE SET UPD ATE	The SS commands the UE to add cell 2 in active set.
9			The UE adds the cell2 to the active set and handover to the cell2.
10	\rightarrow	ACTIVE SET UPDATE COMPLETE	
11	←→	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

MEASUREMENT CONTROL (Step 2)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
CHOICE Measurement type	
- CSG Proximity detection	
- UTR A CSG Proximity detection	enable

MEASUREMENT REPORT (Step 4)

Information Element	Value/remark	
Measurement identity	Check to see if set to 1	
Measured results	Check to see if it is absent	
Additional measured results	Check to see if it is absent	
CSG Proximity Indication		
- CSG Proximity Indication	entering	
- CHOICE Radio Access Technology		
- UTRA		
- CSG Frequency info for UTRA		
- CHOICE mode		
- FDD		
- UARFCN uplink (Nu)	The same as the cell2	
- UARFCN downlink (Nd)	The same as the cell2	

MEASUREMENT CONTROL (Step 5)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Measurement identity	2
Measurement command	Setup
Measurement reporting mode	
- Measurement reporting transfer mode	Acknowledged mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
CHOICE measurement type	3.77.33
- Intra-frequency measurement	
- Intra-frequency cell info list	
- CSG Intra-frequency cell info	
- CSG Intra-frequency cell info	
- CSG cell info list	1
- Choice mode	
- FDD	
- Start PSC	
- Primary scrambling code	144
- Number of PSCs	5
- Intra-frequency SI Acquisition	
- CHOICE mode	
- FDD	For all PSC ranges specified in the "CSG Intra-frequency
	cell info" IE.
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- CHOICE mode	
- FDD	
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	
- FDD	
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
 Cell synchronisation information reporting indicator 	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	
- FDD	
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Measurement validity	CELL_DCH state
- CHOICE report criteria	
- Intra-frequency measurement reporting criteria	
- Parameters required for each event	
- Intra-frequency event identity	1d
- Hysteresis	4(2dB)
- Time to trigger	
- Time to trigger	10 ms

MEASUREMENT REPORT (Step 7)

Information Element	Value/remark
Measurement identity	Check to see if set to 2
Measured Results	
- CHOICE Measurement	
-Intra-frequency measured results list	
-Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	The same as the cell2
- CSG Identity	2
- CSG Member indication	member
- CHOICE mode	
-FDD	
- Primary CPICH info	
- Primary scrambling code	144(The same as the cell2)
Event results	Intra-frequency measurement event results,
- Intra-frequency measurement event results	
- Intra-frequency event identity	
- Intra-frequency event identity	1d
- Cell measurement event results	
- CHOICE mode	
-FDD	
- Primary CPICH info	
- Primary scrambling code	144(The same as the cell2)

ACTIVE SET UPDATE (Step 8)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark			
Radio link addition information				
- Radio link addition information				
- Primary CPICH info				
- Primary scrambling code	144(The same as the cell2)			
- CHOICE DPCH info				
- Downlink DPCH info for each RL				
- CHOICE mode				
- FDD				
- Primary CPICH usage for channel estimation				
- Primary CPICH usage for channel estimation	Primary CPICH may be used			
- DPCH frame offset	Set to value: Default DPCH Offset Value (as currently			
	stored in SS) mod 38 400			
- DL channelisation code				
- Spreading factor	Reference to Parameter Set according to the clause			
	6.10 in TS 34.108			
- Code number	0			
- TPC combination index				
- TPC combination index	0			
- Downlink F-DPCH info for each RL				
- Primary CPICH usage for channel estimation				
- Primary CPICH usage for channel estimation	Primary CPICH may be used			
- F-DPCH frame offset	Set to value: Default DPCH Offset Value (as currently			
	stored in SS) mod 38 400			
- Code number	0			
- TPC combination index				
- TPC combination index	0			
Serving Cell Change Parameters				
- Serving Cell Change MAC reset	TRUE			
- Serving Cell Change Message Type	RadioBearerSetup			
- Serving Cell Change Transaction Id	0			

ACTIVE SET UPDATE COMPLETE (Step 10)

Use the same message sub-type found in TS 34.108, clause 9.

8.3.12.4.5 Test requirement

At step 4, the UE sends CSG proximity indication to the cell1.

At step 7, the UE sends 1d event to the cell 1 including the psc, cell identity, CSG ID and CSG membership indication of the cell 2.

At step 10, the UE sends Active Set Update Complete message on uplink DCCH using AM RLC.

8.3.12.5 Intra-frequency inbound handover to UMTS CSG cell without reporting proximity indication

8.3.12.5.1 Definition

Test to verify the UE can report Cell Identity, CSG ID and CSG membership indication of intra-frequency CSG cells.

8.3.12.5.2 Conformance requirement

1.Intra-frequency measurements for CSG/Hybrid cells

For each cell reported in the IE "Cell measured results" of an intra-frequency Measurement Report, which is also included in the IE "Intra-frequency SI Acquisition" associated with the measurement:

- 1> if the UE managed to acquire the valid system information of the concerned cell:
 - 2> include the following IEs in the IE "Cell measured results":
 - 3> "Cell Identity" IE.
 - 3> if the concerned cell broadcasts a CSG identity:
 - 4> "CSG Identity" IE.
 - 4> "CSG Member indication" IE and set it to "member" if CSG identity of the concerned cell is present in UE's CSG whitelist.

The system information of the reported cell(s) can be acquired by the UE without any measurement gaps.

- 2: Intra-frequency Measurement Procedure of CSG and Hybrid cells:
 - 1) The SRNC configures the UE with a measurement having "CSG Proximity detection" as measurement type.
 - 2) The UE sends an "entering" CSG proximity indication when it determines it may be near a cell, (based on UE implementation) whose CSG ID is in the UE's CSG white list.
 - 3) If a measurement configuration for CSG/hybrid cells is not present, the SRNC configures the UE with relevant measurement configuration which includes the PSCs that the UE must measure and the PSCs for which SI acquisition should be performed. The network may use the CSG proximity indication for intra-frequency case to minimize the time during which measurements for CSG/hybrid cells are configured.
 - 4) The UE sends a measurement report including the measured PSC, Cell Identity, CSG ID and CSG membership indication of the target HNB to the SRNC (e.g., due to a triggered intra-frequency event 1d). The UE can acquire MIB and SIB3/SIB4 of intra-frequency target HNB cells in parallel with reception of the serving cell transmissions in CELL_DCH. No measurement gaps are required for reading MIB and SIB3/SIB4.
 - 5) SRNC can then proceeds with the handover processing as described in [6].

After sending an "entering" CSG proximity indication (step 2), if the UE determines that it is no longer near any cell (on the reported proximate RAT and frequency) whose CSG ID is in the UE's CSG whitelist, the UE sends a "leaving" CSG proximity indication to the SRNC. Upon reception of this indication, the SRNC may reconfigure the UE to stop measurements configured.

The PSC confusion is resolved by steps 3 and 4. The SRNC can request SI acquisition and reporting for any PSC, not limited to PSCs of CSG or hybrid cells.

Reference

1: 3GPP TS 25.331, clause 14.7a.1.

2: 3GPP TS 25.367, clause 8.1.1.

8.3.12.5.3 Test purpose

- 1. To confirm that the UE considers CSG Set as the monitored set for measurement and measurement reporting procedures of intra-frequency CSG cells.
- 2. To confirm that the UE can report the Cell Identity, CSG ID and CSG membership indication of intra-frequency CSG cells.

8.3.12.5.4 Method of test

Initial Condition

System Simulator:

2 cells: Cell 1 and Cell 2 are used.

Cell1 is active. Cell1 does not broadcast CSG ID.

Cell2 is a CSG cell.

The "CSG Indicator" in MIB of the cell2 is set to TRUE.

The "CSG Identity" in SIB3 of the Cell2 is 2. "CSG PSC Split Information" is also included in SIB3 with "Start PSC" set to 144 and "Number of PSCs" set to 10.

The PSC of the cell 2 is 150.

The SIB3_REP of cell 2 SIB3 scheduling is 64.

User Equipment:

The UE Allowed CSG List contains CSG2.

The UE is PS-DCCH+DTCH_DCH (state 6-10) or CS-DCCH+DTCH_DCH (state 6-9) or PS+CS-DCCH+DTCH_DCH (state 6-14) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports the capability "Support of intra-frequency SI acquisition for HO".

Test Procedure

Table 8.3.12.5-1 illustrates the downlink power to be applied for the 2 cells.

Table 8.3.12.5-1

Parameter	Unit	Cell 1		Cell 2	
Test Channel		1		1	
		T0	T1	T0	T1
CPICH Ec	dBm/3.84 MHz	-55	-70	OFF	-55

The UE is initially in cell_DCH state and has a radio bearer with the cell1. The initial condition is set as the instant T0 shown in table 8.3.12.5 -1.

The SS then sets up intra-frequency measurements (event 1d), by sending a MEASUREMENT CONTROL message to the UE.

At instant T1, the downlink is changed according to what is shown in table 8.3.12.5 -1. The UE shall thus send a MEASUREMENT REPORT with 1d event to the SS.

The SS configures the PSC range for SI acquisition to UE. The UE acquires the SI of the cell2 and sends it to the SS with the cell identity, CSG ID and membership indication.

The UE shall handover to the cell2.

Expected sequence

Step	Step Direction		Message	Comment
	UE	SS	7	
1				The initial condition is set as T0 in
				table 8.3.12.5-1.
2	 	_	MEASUREMENT CONTROL	The SS configures a measurement
				to the UE. Event 1d is configured.
3				The SS re-adjusts the downlink
				transmission power settings of the
				cell1 and Cell 2 according to columns "T1" in table 8.3.12.5-1.
4)	ME ACLIDEMENT DEDODT	
4	-)	MEASUREMENT REPORT	The UE sends a 1d event with the PSC of cell2.
5	·	-	MEASUREMENT CONTROL	The SS configures the PSC range
				for SI acquisition.
6				The UE acquires the SI of the
				cell2.
7	-	>	MEASUREMENT REPORT	The UE reports the cell identity,
				CSG ID and CSG membership
				indication of the cell 2.
8	 	_	PHYSICAL CHANNEL	The SS orders the UE to perform
			RECONFIGURATION	timing re-initialised intra-frequency
				handover to cell 2.
9	-	→	PHYSICAL CHANNEL	After the UE has succeeded in
			RECONFIGURATION COMPLETE	performing the intra-frequency
				handover, it shall send a
				PHYSICAL CHANNEL
				RECONFIGURATION COMPLETE
				message to the SS using the new
	<u> </u>			configuration
10	←	\rightarrow	CALL C.3	If the test result of C.3 indicates
				that UE is in CELL_DCH state, the
				test passes, otherwise it fails.

Specific Message Contents

MEASUREMENT CONTROL (Step 2)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Measurement identity	1
Measurement command	Setup
Measurement reporting mode	·
- Measurement reporting transfer mode	Acknowledged mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
CHOICE measurement type	
- Intra-frequency measurement	
- Intra-frequency cell info list	
- Remove all intra-frequency cells	
- New intra-frequency cells	
- Intra-frequency cell-id - Cell info	
- Cell individual offset	1 0 (04P)
- Reference time difference to cell	0 (0dB) Not Present
- Read SFN number	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	100
- Primary CPICH Tx power	Not Present
- TX Diversity indicator	FALSE
- CSG Intra-frequency cell info	
 CSG Intra-frequency cell info 	
- CSG cell info list	1
- Choice mode	
- FDD	
- Start PSC	
- Primary scrambling code	144 10
 Number of PSCs Intra-frequency measurement quantity 	10
- Filter Coefficient	0
- CHOICE mode	
- FDD	
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
 Cell synchronisation information reporting indicator 	FALSE
 Cell identity reporting indicator 	FALSE
- CHOICE mode	
- FDD	
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
 Reporting quantities for monitored set cells Cell synchronisation information reporting indicator 	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	17 LOL
- FDD	
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not Present
- Measurement validity	CELL_DCH state
- CHOICE report criteria	
- Intra-frequency measurement reporting criteria	
- Parameters required for each event	
- Intra-frequency event identity	1d Manitored act calls
- Triggering condition 2	Monitored set cells
- Hysteresis	4(2dB)
- Time to trigger - Time to trigger	10 ms
- Reporting cell status	TO THE
- CHOICE reported cell	Report cells within monitored set cells on used frequency
Maximum number of reported cells	2

MEASUREMENT REPORT (Step 4)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity Measured Results	Check to see if set to 1
- Intra-frequency measured results	Check to see if measurement results for Cell-2 are included and Cell-1 are not included.
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information - Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	Intra-frequency measurement event results,
- Intra-frequency measurement event results	
- Intra-frequency event identity	
- Intra-frequency event identity	1d
- Cell measurement event results	
- CHOICE mode	
-FDD	
- Primary CPICH info	
- Primary scrambling code	150(The same as the cell2)

MEASUREMENT CONTROL (Step 5)

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Setup
CHOICE Measurement type	
- Intra-frequency measurement	
- Intra-frequency cell info list	
- Intra-frequency SI Acquisition	
- CHOICE mode	
- FDD	
- Intra-frequency SI Acquisition info	
- Primary Scrambling code	
- Primary CPICH info	
- Primary Scrambling code	Set to same code as used for cell 2(150)
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- CHOICE mode	
- FDD	
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for detected set cells	
 Cell synchronisation information reporting indicator 	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	
- FDD	
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cells within detected set on used frequency
- Maximum number of reported cells	2
- Measurement validity	Not Present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	1
- Reporting interval	4000 ms

MEASUREMENT REPORT (Step 7)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	Check to see if set to 2
Measured Results	
- CHOICE Measurement	
-Intra-frequency measured results list	
-Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	The same as the cell2
- CSG Identity	2
- CSG Member indication - CHOICE mode	member
-FDD	
- Primary CPICH info	
- Primary scrambling code	150(The same as the cell2)
- CPICH Ec/N0	Check that this IE is absent
- CPICH RSCP	Check that this IE is absent
- Pathloss	Check that this IE is absent
Measured results on RACH	Check that this IE is absent
Additional measured results	Check that this IE is absent
Event results	Check that this IE is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 8)

Use the same contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case as found in TS 34.108, clause 9, with sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" with the following exceptions:

Information Element	Value/Remark
RRC State indicator	CELL_DCH
Frequency info	
- CHOICE mode	
- FDD	
- UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 2
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to cell2
Downlink information common for all radio links	
- CHOICE DPCH info	
 Downlink DPCH info common for all RL 	
- Timing indication	Initialise
Downlink information for each radio links	
- CHOICE mode	FDD
- FDD	
- Primary CPICH info	
- Primary Scrambling Code	Set to same code as used for cell 2(150)

8.3.12.5.5 Test requirement

At step 4, the UE sends event 1d with the information of the cell2.

At step 7, the UE sends cell identity, CSG ID and CSG membership indication of the cell 2 within 4000 ms.

At step 9, the UE sends Physical Channel Reconfiguration Complete on uplink DCCH using AM RLC.

8.3.12.6 Intra-frequency inbound handover to UMTS CSG cell

8.3.12.6.1 Definition

Test to verify the UE can report the Cell Identity, CSG ID and CSG membership indication of intra-frequency CSG cells.

8.3.12.6.2 Conformance requirement

1: Intra-frequency measurements for CSG/Hybrid cells

For each cell reported in the IE "Cell measured results" of an intra-frequency Measurement Report, which is also included in the IE "Intra-frequency SI Acquisition" associated with the measurement:

- 1> if the UE managed to acquire the valid system information of the concerned cell:
 - 2> include the following IEs in the IE "Cell measured results":
 - 3> "Cell Identity" IE.
 - 3> if the concerned cell broadcasts a CSG identity:
 - 4> "CSG Identity" IE.
 - 4> "CSG Member indication" IE and set it to "member" if the concerned cell is CSG member cell.

The system information of the reported cell(s) can be acquired by the UE without any measurement gaps.

- 2: Intra-frequency Measurement Procedure of CSG and Hybrid cells:
 - 1) The SRNC configures the UE with a measurement having "CSG Proximity detection" as measurement type.
 - 2) The UE sends an "entering" CSG proximity indication when it determines it may be near a cell, (based on UE implementation) whose CSG ID is in the UE's CSG white list.

- 3) If a measurement configuration for CSG/hybrid cells is not present, the SRNC configures the UE with relevant measurement configuration which includes the PSCs that the UE must measure and the PSCs for which SI acquisition should be performed. The network may use the CSG proximity indication for intra-frequency case to minimize the time during which measurements for CSG/hybrid cells are configured.
- 4) The UE sends a measurement report including the measured PSC, Cell Identity, CSG ID and CSG membership indication of the target HNB to the SRNC (e.g., due to a triggered intra-frequency event 1d). The UE can acquire MIB and SIB3/SIB4 of intra-frequency target HNB cells in parallel with reception of the serving cell transmissions in CELL_DCH. No measurement gaps are required for reading MIB and SIB3/SIB4.
- 5) SRNC can then proceeds with the handover processing as described in [6].

After sending an "entering" CSG proximity indication (step 2), if the UE determines that it is no longer near any cell (on the reported proximate RAT and frequency) whose CSG ID is in the UE's CSG white list, the UE sends a "leaving" CSG proximity indication to the SRNC. Upon reception of this indication, the SRNC may reconfigure the UE to stop measurements configured.

The PSC confusion is resolved by steps 3 and 4. The SRNC can request SI acquisition and reporting for any PSC, not limited to PSCs of CSG or hybrid cells.

Reference

- 1: 3GPP TS 25.331 v9.8, clause 14.7a.1.
- 2: 3GPP TS 25.367 v.9.5, clause 8.1.1.

8.3.12.6.3 Test purpose

- 1. To confirm that the UE can report an "entering" CSG proximity indication as the SRNC configured
- 2. To confirm that the UE can report the PSC of intra-frequency CSG cells.
- 3. To confirm that the UE can report the Cell Identity, CSG ID and CSG membership indication of intra-frequency CSG cells.

8.3.12.6.4 Method of test

Initial Condition

System Simulator:

2 cells: Cell 1 and Cell 2 are used.

Cell1 is active. Cell1 does not broadcast CSG ID.

Cell2 is a CSG cell.

The CSG indicator of the cell2 is set to TRUE.

The CSG id of the Cell2 is 2.

The PSC of the cell 2 is 144.

User Equipment:

The UE Allowed CSG List contains CSG2.

The UE is PS-DCCH+DTCH_DCH (state 6-10) or CS-DCCH+DTCH_DCH (state 6-9) or PS+CS-DCCH+DTCH_DCH (state 6-14) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports the capability of intra-frequency SI acquisition for HO.

- UE supports the capability of intra-frequency proximity indication.

Test Procedure

Table 8.3.12.6-1 illustrates the downlink power to be applied for the 2 cells.

Table 8.3.12.6-1

Parameter	Unit	(Cell 1			Cell 2	
Test Channel			1			2	
		T0	T1	T2	T0	T1	T2
CPICH Ec	dBm/3.84 MHz	-55	-55	-70	OFF	-60	-55

The UE is initially in cell_DCH state and has a radio bearer with the cell1. The initial condition is set as the instant T0 shown in table 8.3.12.6 -1.

The SS then activates the UE to detect the CSG proximity by sending a MEASUREMENT CONTROL message to the UE.

At instant T1, the downlink is changed according to what is shown in table 8.3.12.6 -1. The UE shall answer the CSG proximity indication to the cell1. The SS then sets up intra-frequency measurements (event 1d), by sending a MEASUREMENT CONTROL message to the UE.

At instant T2, the downlink power is changed according to what is shown in table 8.3.12.6 -1. The UE shall thus send a MEASUREMENT REPORT with 1d event to the SS with the PSC of the cell2.

The SS configures the PSC range for SI acquisition to UE. The UE acquires the SI of the cell2 and sends it to the SS with the cell identity, CSG ID and membership indication.

The SS sends ACTIVE SET UPDATE to the UE and commands the UE adds cell2 to the active set.

The UE shall then add the cell2 to the active set and handover to the cell2.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1	•		The initial condition is set as T0 in
			table 8.3.12.6-1.
2	←	MEASUREMENT CONTROL	The SS configures a measurement
			with detecting the CSG proximity to the UF.
			10 110 0 11
3			The SS re-adjusts the downlink transmission power settings of the
			cell1 according to columns "T1" in
			table 8.3.12.6-1.
4	\rightarrow	MEASUREMENT REPORT	The UE sends a report with the
-		WEAGOREMENT REPORT	CSG proximity indication to the
			SS.
5	+	MEASUREMENT CONTROL	The SS configures a measurement
			to the UE. Event 1d is configured.
6			The SS re-adjusts the downlink
			transmission power settings of the
			cell1 according to columns "T2" in
		ME AGUIDEMENT DEDORT	table 8.3.12.6-1.
7	\rightarrow	MEASUREMENT REPORT	The UE sends a 1d event with the PSC of cell2.
8	←	MEASUREMENT CONTROL	The SS configures the PSC range
0		WEASONEMENT CONTROL	for SI acquisition.
9			The UE acquires the SI of the
			cell2.
10	\rightarrow	MEASUREMENT REPORT	The UE reports the cell identity,
			CSG ID and CSG membership
			indication of the cell 2.
11	+	ACTIVE SET UPDATE	The SS commands the UE to add
			cell 2 in active set and handover.
12			The UE adds the cell2 to the active
40		AOTIVE OFT LIDD ATE OOMBLETE	set and handover to the cell2.
13	→	ACTIVE SET UPDATE COMPLETE	If the stant requit of O.O. in disert
14	$\leftarrow \rightarrow$	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the
			test passes, otherwise it fails.
i	1		toot passes, outerwise it idils.

Specific Message Contents

MEASUREMENT CONTROL (Step 2)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
CHOICE Measurement type	·
- CSG Proximity detection	
- UTR A CSG Proximity detection	enable

MEASUREMENT REPORT (Step 4)

Information Element	Value/remark	
Measurement identity	Check to see if set to 1	
Measured results	Check to see if it is absent	
Additional measured results	Check to see if it is absent	
CSG Proximity Indication		
- CSG Proximity Indication	entering	
- CHOICE Radio Access Technology		
- UTRA		
- CSG Frequency info for UTRA		
- CHOICE mode		
- FDD		
- UARFCN uplink (Nu)	The same as the cell2	
- UARFCN downlink (Nd)	The same as the cell2	

MEASUREMENT CONTROL (Step 5)

Information Element	Value/remark
Measurement identity	2 Value/remark
Measurement command	Setup
Measurement reporting mode	Setup
- Measurement reporting transfer mode	Acknowledged mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
CHOICE measurement type	
- Intra-frequency measurement	
- Intra-frequency cell info list	
- CSG Intra-frequency cell info	
- CSG Intra-frequency cell info	
- CSG cell info list	1
- Choice mode	
- FDD	
- Start PSC	
- Primary scrambling code	144
- Number of PSCs	5
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- CHOICE mode	
- FDD	
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	E44.0E
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	
- FDD	
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	EN 0E
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	
- FDD	EN 0E
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Measurement validity	CELL_DCH state
- CHOICE report criteria	
- Intra-frequency measurement reporting criteria	
- Parameters required for each event	
- Intra-frequency event identity	1d
- Hysteresis	4(2dB)
- Time to trigger	
- Time to trigger	10 mSec

MEASUREMENT REPORT (Step 7)

Information Element	Value/remark	
Measurement identity	Check to see if set to 2	
Event results	Intra-frequency measurement event results,	
- Intra-frequency measurement event results		
- Intra-frequency event identity		
- Intra-frequency event identity	1d	
- Cell measurement event results		
- CHOICE mode		
-FDD		
- Primary CPICH info		
- Primary scrambling code	144(The same as the cell2)	

MEASUREMENT CONTROL (Step 8)

Information Element	Value/remark
Measurement Identity	3
Measurement Command	Setup
CHOICE Measurement type	
- Intra-frequency measurement	
- Intra-frequency measurement objects list	
- Intra-frequency SI Acquisition	
- CHOICE mode	
- FDD	
- Inter-frequency SI Acquisition info	
- Primary Scrambling code	
- Primary Scrambling code	Set to same code as used for cell 2(144)

MEASUREMENT REPORT (Step 10)

Information Element	Value/remark	
Measurement identity	Check to see if set to 3	
Measured Results		
- CHOICE Measurement		
-Intra-frequency measured results list		
-Intra-frequency measurement results		
- Cell measured results		
- Cell Identity	The same as the cell2	
- CSG Identity	2	
- CSG Member indication	member	
- CHOICE mode		
-FDD		
- Primary CPICH info		
- Primary scrambling code	144(The same as the cell2)	

ACTIVE SET UPDATE (Step 11)

Information Element	Value/remark
Radio link addition information	
- Radio link addition information	
- Primary CPICH info	
- Primary scrambling code	144(The same as the cell2)
- CHOICE DPCH info	
- Downlink DPCH info for each RL	
- CHOICE mode	
- FDD	
- Primary CPICH usage for channel estimation	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	Set to value: Default DPCH Offset Value (as currently
	stored in SS) mod 38 400
- DL channelisation code	
- Spreading factor	Reference to Parameter Set according to the clause
	6.10 in TS 34.108
- Code number	0
- TPC combination index	
- TPC combination index	0
- Downlink F-DPCH info for each RL	
- Primary CPICH usage for channel estimation	Drimary CDICH may be used
- Primary CPICH usage for channel estimation - F-DPCH frame offset	Primary CPICH may be used
- F-DPCH flame diset	Set to value: Default DPCH Offset Value (as currently
- Code number	stored in SS) mod 38 400
- TPC combination index	0
- TPC combination index	0
Serving Cell Change Parameters	
- Serving Cell Change MAC reset	TRUE
- Serving Cell Change Message Type	RadioBearerSetup
- Serving Cell Change Transaction Id	0

ACTIVE SET UPDATE COMPLETE (Step 13)

Use the same message sub-type found in TS 34.108, clause 9.

8.3.12.6.6 Test requirement

At step 4, the UE sends CSG proximity indication to the SS.

At step 7, the UE sends 1d event to the SS including the PSC of the cell 2.

At step 10, the UE sends the cell identity, CSG ID and CSG membership indication of the cell 2 to the SS.

At step 13, the UE sends Active Set Update Complete message on uplink DCCH using AM RLC.

8.3.12.7 Intra-frequency Measurements for UMTS CSG Cell for Non-member UE

8.3.12.7.1 Definition

Test to verify that the UE can report the CSG ID and Cell Identity of the not-allowed intra-frequency CSG cell.

8.3.12.7.2 Conformance requirement

1. Intra-frequency measurements for CSG/Hybrid cells

For each cell reported in the IE "Cell measured results" of an intra-frequency Measurement Report, which is also included in the IE "Intra-frequency SI Acquisition" associated with the measurement:

- 1> if the UE managed to acquire the valid system information of the concerned cell:
 - 2> include the following IEs in the IE "Cell measured results":
 - 3> "Cell Identity" IE.
 - 3> if the concerned cell broadcasts a CSG identity:
 - 4> "CSG Identity" IE.
 - 4> "CSG Member indication" IE and set it to "member" if CSG identity of the concerned cell is present in UE's CSG whitelist.
- 2. CSG/Hybrid Cell Intra-frequency Measurement Procedure
 - 1) The SRNC configures the UE with a measurement having "CSG Proximity detection" as measurement type.
 - 2) The UE sends an "entering" CSG proximity indication when it determines it may be near a cell, (based on UE implementation) whose CSG ID is in the UE's CSG white list.
 - 3) If a measurement configuration for CSG/hybrid cells is not present, the SRNC configures the UE with relevant measurement configuration which includes the PSCs that the UE must measure and the PSCs for which SI acquisition should be performed. The network may use the CSG proximity indication for intra-frequency case to minimize the time during which measurements for CSG/hybrid cells are configured.
 - 4) The UE sends a measurement report including the measured PSC, Cell Identity, CSG ID and CSG membership indication of the target HNB to the SRNC (e.g., due to a triggered intra-frequency event 1d). The UE can acquire MIB and SIB3/SIB4 of intra-frequency target HNB cells in parallel with reception of the serving cell transmissions in CELL_DCH. No measurement gaps are required for reading MIB and SIB3/SIB4.
 - 5) SRNC can then proceeds with the handover processing as described in [6].

After sending an "entering" CSG proximity indication (step 2), if the UE determines that it is no longer near any cell (on the reported proximate RAT and frequency) whose CSG ID is in the UE's CSG white list, the UE sends a "leaving" CSG proximity indication to the SRNC. Upon reception of this indication, the SRNC may reconfigure the UE to stop measurements configured.

The PSC confusion is resolved by steps 3 and 4. The SRNC can request SI acquisition and reporting for any PSC, not limited to PSCs of CSG or hybrid cells.

Reference

- 1. TS 25.331 clause 14.7a.1
- 2. TS 25.367 clause 8.1.1

8.3.12.7.3 Test purpose

- 1. To confirm that the UE considers CSG Set as the monitored set for measurement and measurement reporting procedures of intra-frequency CSG cells.
- 2. To verify that the UE could report the Cell Identity and CSG ID of the not-allowed intra-frequency CSG cell.

8.3.12.7.4 Method of test

Initial conditions

System Simulator

2 cells: Cell 1 and 2 are active.

Cell 1 does not broadcast CSG ID.

Cell2 is a CSG cell.

The "CSG Indicator" in MIB of the cell2 is set to TRUE.

Cell 2 is a CSG HNB cell with the CSG ID of CSG 1. "CSG PSC Split Information" is also included in SIB3 with "Start PSC" set to 144 and "Number of PSCs" set to 10.

The Primary Scrambling Code of Cell 2 is 150.

The SIB3_REP of cell 2 SIB3 scheduling is 64.

UE: CS-DCCH+DTCH_DCH (State 6-9) or PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

The UE's Allowed CSG List and the Operator CSG List are empty.

Related ICS/IXIT statement(s)

- UE supports FDD and CSG.
- UE supports the capability "Support of intra-frequency SI acquisition for HO".

Test Procedure

Table 8.3.12.7-1 illustrates the downlink power to be applied for the 3 cells.

Table 8.3.12.7-1

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
Test Channel		1 1			
CPICH Ec	dBm/3.84MHz	-60	-85	-90	-55

The two cells are all active. The UE is initially in CELL_DCH and has a radio bearer with the cell1.

SS configures its downlink transmission power settings according to columns "T0" in table 8.3.12.7-1. The SS configures the UE the PSC range of the intra-frequency HNB cells with a MEASUREMENT CONTROL message configuring event 1D "Change of best cell".

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.12.7-1. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2.

After the MEASUREMENT REPORT message is received, the SS transmits to the UE a MEASUREMENT CONTROL message to configure the UE to read the SI of the cell 2. When the UE receives this message, the UE shall perform the SI acquisition of the cell 2 and transmits a MEASUREMENT REPORT message.

SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction	Message	Comment
	UE SS]	
1	SS		The SS actives the cell 1and cell 2 according to column T0 in table 8.3.12.7-1
2	+	MEASUREMENT CONTROL	The SS configures a measurement with 1d event and CSG Intra-frequency cell info.
3	SS		SS configures its downlink transmission power settings according to columns "T1" in table 8.3.12.7-1.
4	→	MEASUREMENT REPORT	The UE sends a measurement report including the measured PSC for cell 2 and event 1D.
5	+	MEASUREMENT CONTROL	The SS instructs the UE to perform SI acquisition of cell 2.
6)	MEASUREMENT REPORT	The UE sends a measurement reporting including the Cell identity and CSG ID, not including the CSG membership indication of the cell 2.
7	←→	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement identity	1
Measurement command	Setup
Measurement reporting mode	·
- Measurement reporting transfer mode	Acknowledged mode RLC
Periodic reporting / Event trigger reporting mode	Event trigger
- CHOICE measurement type	Intra-frequency measurement
- Intra-frequency measurement	initia inoquonoj modo di omoni
- Intra-frequency cell info list	
- Intra-frequency cell removal	Not present
- New inter-frequency info list	Troc processing
- Intra-frequency cell-id	
- Cell info	1
- Cell individual offset	0 (0dB)
- Reference time difference to cell	Not Present
- Read SFN number	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	100
- Primary CPICH Tx power	Not Present
- TX Diversity indicator	FALSE
- CSG Intra-frequency cell info	FALSE
- CSG cell info list	4
- Choice mode	FDD
- FDD	FDD
- Start PSC	144
- Number of PSCs	10
Intra-frequency measurement quantity Filter Coefficient	0
- Measurement quantity	CPICH RSCP
	CFICIT NOCF
Intra-frequency reporting quantity Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH ECNOTEPORING Indicator - CPICH RSCP reporting indicator	TRUE
Pathloss reporting indicator Reporting quantities for active set cells	FALSE
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE FALSE
- Pathloss reporting indicator	
Reporting cell status Measurement validity	Not present CELL_DCH state
- CHOICE report criteria	
- Intra-frequency measurement reporting criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	
- Intra-frequency event identity	1D
- Triggering condition 2	Monitored set cells
- Hysteresis - Time to trigger	4(2dB)
- Time to trigger - Reporting cell status	10 mSec
	Papart calls within manitared act calls an used fragues as
- CHOICE reported cell	Report cells within monitored set cells on used frequency
 Maximum number of reported cells 	2

MEASUREMENT REPORT (Step 4)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	Check to see if set to 1
Measured results	
- Intra-frequency measured results	Check to see if measurement results for Cell-2 are included and Cell-1 are not included.
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information - Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional Measured results	Check to see if this IE is absent
Event results	Check to see if set to "Intra-frequency event results"
- Intra-frequency event identity	Check to see if set to "1D"
- Cell measurement event results	
- Primary scrambling code	Check to see if set to "Primary scrambling code of Cell 2"

MEASUREMENT CONTROL (Step 5)

Information Element	Value/remark
Measurement identity	2
Measurement command	Setup
- CHOICE measurement type	Intra-frequency measurement
- Intra-frequency measurement	
- Intra-frequency cell info list	
- Intra-frequency cell removal	Not present
- New inter-frequency info list	Not present
- Intra-frequency SI Acquisition	
- Choice mode	FDD
- FDD	
 Intra-frequency SI acquisition Info 	
- Primary Scrambling Code	Set to same code as used for cell 2(150)
 Intra-frequency measurement quantity 	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
 Intra-frequency reporting quantity 	
 Reporting quantities for detected set cells 	
 Cell synchronisation information reporting indicator 	FALSE
 Cell identity reporting indicator 	FALSE
 CPICH Ec/No reporting indicator 	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cells within detected set on used frequency
 Maximum number of reported cells 	2
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	1
- Reporting interval	4000 msec

MEASUREMENT REPORT (Step 6)

Use the same message in TS 34.108, clause 9, with the following exceptions

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	Check to see if set to 2
Measured results	
- Intra-frequency measured results list	
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if set to "Cell Identity of Cell 2"
- CSG Identity	Check to see if set to "CSG Identity of Cell 2 (CSG 1)"
- CSG Member indication	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	FDD
- FDD	
- Primary CPICH Info - Primary scrambling code	Primary scrambling code for cell 2
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured results on RACH	Check to see if this IE is absent
Additional Measured results	Check to see if this IE is absent
Event results	Check that this IE is absent

8.3.12.7.5 Test Requirements

At step 4, the UE shall send a MEASUREMENT REPORT message including the measured PSC for cell 2 and event 1D.

At step 6, the UE shall send a MEASUREMENT REPORT message including the cell identity and CSG ID of the cell 2 within 4000 msec.

8.3.12.8 Intra-frequency Inbound Handover to UMTS Hybrid Cell

8.3.12.8.1 Definition

Test to verify that the UE can report the CSG ID, Cell Identity and CSG membership indication of the intra-frequency hybrid cell.

8.3.12.8.2 Conformance requirement

1. Intra-frequency measurements for CSG/Hybrid cells

For each cell reported in the IE "Cell measured results" of an intra-frequency Measurement Report, which is also included in the IE "Intra-frequency SI Acquisition" associated with the measurement:

- 1> if the UE managed to acquire the valid system information of the concerned cell:
 - 2> include the following IEs in the IE "Cell measured results":
 - 3> "Cell Identity" IE.
 - 3> if the concerned cell broadcasts a CSG identity:
 - 4> "CSG Identity" IE.
 - 4> "CSG Member indication" IE and set it to "member" if CSG identity of the concerned cell is present in UE's CSG whitelist.

- 2. CSG/Hybrid Cell Intra-frequency Measurement Procedure
 - 1) The SRNC configures the UE with a measurement having "CSG Proximity detection" as measurement type.
 - 2) The UE sends an "entering" CSG proximity indication when it determines it may be near a cell, (based on UE implementation) whose CSG ID is in the UE's CSG white list.
 - 3) If a measurement configuration for CSG/hybrid cells is not present, the SRNC configures the UE with relevant measurement configuration which includes the PSCs that the UE must measure and the PSCs for which SI acquisition should be performed. The network may use the CSG proximity indication for intra-frequency case to minimize the time during which measurements for CSG/hybrid cells are configured.
 - 4) The UE sends a measurement report including the measured PSC, Cell Identity, CSG ID and CSG membership indication of the target HNB to the SRNC (e.g., due to a triggered intra-frequency event 1d). The UE can acquire MIB and SIB3/SIB4 of intra-frequency target HNB cells in parallel with reception of the serving cell transmissions in CELL_DCH. No measurement gaps are required for reading MIB and SIB3/SIB4.
 - 5) SRNC can then proceeds with the handover processing as described in [6].

After sending an "entering" CSG proximity indication (step 2), if the UE determines that it is no longer near any cell (on the reported proximate RAT and frequency) whose CSG ID is in the UE's CSG whitelist, the UE sends a "leaving" CSG proximity indication to the SRNC. Upon reception of this indication, the SRNC may reconfigure the UE to stop measurements configured.

The PSC confusion is resolved by steps 3 and 4. The SRNC can request SI acquisition and reporting for any PSC, not limited to PSCs of CSG or hybrid cells.

Reference

- 1. TS 25.331 clause 14.7a.1
- 2. TS 25.367 clause 8.1.1

8.3.12.8.3 Test purpose

- 1. To confirm that the UE considers CSG Set as the monitored set for measurement and measurement reporting procedures of intra-frequency CSG cells.
- 2. To verify that the member UE could report the Cell Identity, CSG ID and CSG membership indication of the intra-frequency hybrid cell and handover to it.

8.3.12.8.4 Method of test

Initial conditions

System Simulator

2 cells: Cell 1 and 2 are active.

Cell 1 does not broadcast CSG ID.

Cell 2 is a hybrid cell with the CSG ID of CSG 2. "CSG PSC Split Information" is also included in SIB3 with "Start PSC" set to 144 and "Number of PSCs" set to 10.

The Primary Scrambling Code of Cell 2 is 150.

The SIB3_REP of cell 2 SIB3 scheduling is 64.

UE: CS-DCCH+DTCH_DCH (State 6-9) or PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

The UE's Allowed CSG List and the Operator CSG List contain CSG2.

Related ICS/IXIT statement(s)

- UE supports FDD and CSG.

- UE supports the capability "Support of intra-frequency SI acquisition for HO".

Test Procedure

Same test procedure as in clause 8.3.12.5.

Expected sequence

Same expected sequence as in clause 8.3.12.5.

Specific Message Contents

Same specific message content as in clause 8.3.12.5.

8.3.12.8.5 Test Requirements

Same test requirement as in clause 8.3.12.5.

8.3.12.9 Intra-frequency Inbound Handover to UMTS Hybrid Cell for Non-member UE

8.3.12.9.1 Definition

Test to verify that the non-member UE can report the CSG ID and Cell Identity of the intra-frequency hybrid cell.

8.3.12.9.2 Conformance requirement

1. Intra-frequency measurements for CSG/Hybrid cells

For each cell reported in the IE "Cell measured results" of an intra-frequency Measurement Report, which is also included in the IE "Intra-frequency SI Acquisition" associated with the measurement:

- 1> if the UE managed to acquire the valid system information of the concerned cell:
 - 2> include the following IEs in the IE "Cell measured results":
 - 3> "Cell Identity" IE.
 - 3> if the concerned cell broadcasts a CSG identity:
 - 4> "CSG Identity" IE.
 - 4> "CSG Member indication" IE and set it to "member" if CSG identity of the concerned cell is present in UE's CSG whitelist.
- 2. CSG/Hybrid Cell Intra-frequency Measurement Procedure
 - 1) The SRNC configures the UE with a measurement having "CSG Proximity detection" as measurement type.
 - 2) The UE sends an "entering" CSG proximity indication when it determines it may be near a cell, (based on UE implementation) whose CSG ID is in the UE's CSG white list.
 - 3) If a measurement configuration for CSG/hybrid cells is not present, the SRNC configures the UE with relevant measurement configuration which includes the PSCs that the UE must measure and the PSCs for which SI acquisition should be performed. The network may use the CSG proximity indication for intra-frequency case to minimize the time during which measurements for CSG/hybrid cells are configured.
 - 4) The UE sends a measurement report including the measured PSC, Cell Identity, CSG ID and CSG membership indication of the target HNB to the SRNC (e.g., due to a triggered intra-frequency event 1d). The UE can acquire MIB and SIB3/SIB4 of intra-frequency target HNB cells in parallel with reception of the serving cell transmissions in CELL DCH. No measurement gaps are required for reading MIB and SIB3/SIB4.
 - 5) SRNC can then proceeds with the handover processing as described in [6].

After sending an "entering" CSG proximity indication (step 2), if the UE determines that it is no longer near any cell (on the reported proximate RAT and frequency) whose CSG ID is in the UE's CSG whitelist, the UE sends a "leaving" CSG proximity indication to the SRNC. Upon reception of this indication, the SRNC may reconfigure the UE to stop measurements configured.

The PSC confusion is resolved by steps 3 and 4. The SRNC can request SI acquisition and reporting for any PSC, not limited to PSCs of CSG or hybrid cells.

Reference

- 1. TS 25.331 clause 14.7a.1
- 2. TS 25.367 clause 8.1.1

8.3.12.9.3 Test purpose

- 1. To confirm that the UE considers CSG Set as the monitored set for measurement and measurement reporting procedures of intra-frequency CSG cells.
- 2. To verify that the non-member UE could report the Cell Identity and CSG ID of the intra-frequency hybrid cell and handover to it..

8.3.12.9.4 Method of test

Initial conditions

System Simulator

2 cells: Cell 1 and 2 are active.

Cell 1 does not broadcast CSG ID.

Cell 2 is a hybrid cell with the CSG ID of CSG 1. "CSG PSC Split Information" is also included in SIB3 with "Start PSC" set to 144 and "Number of PSCs" set to 10.

The Primary Scrambling Code of Cell 2 is 150.

The Cell 2 is not in the neighbour cell list of Cell 1.

The SIB3_REP of cell 2 SIB3 scheduling is 64.

UE: CS-DCCH+DTCH_DCH (State 6-9) or PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

The UE's Allowed CSG List and the Operator CSG List are empty.

Related ICS/IXIT statement(s)

- UE supports FDD and CSG.
- UE supports the capability "Support of intra-frequency SI acquisition for HO".

Test Procedure

Table 8.3.12.9-1 illustrates the downlink power to be applied for the 2 cells.

Table 8.3.12.9-1

Parameter	Unit	Cell 1		Unit Cell 1 Cell 2		2
		T0	T1	T0	T1	
Test Channel		,	1	1		
CPICH Ec	dBm/3.84MHz	-60	-85	-90	-55	

The two cells are all active. The UE is initially in CELL_DCH and has a radio bearer with the cell 1.

SS configures its downlink transmission power settings according to columns "T0" in table 8.3.12.7-1. The SS configures the UE the PSC range of the intra-frequency HNB cells with a MEASUREMENT CONTROL message configuring event 1D "Change of best cell".

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.12.9-1. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2.

After the MEASUREMENT REPORT message is received, the SS transmits to the UE a MEASUREMENT CONTROL message to configure the UE to read the system information of the cell 2. When the UE receives this message, the UE shall perform the SI acquisition of the cell 2 and transmits a MEASUREMENT REPORT message.

The SS trans mits a PHYSICAL CHANNEL RECONFIGURATION message to the UE on DCCH using AM-RLC, to order it to perform intra-frequency handover to cell 4. The UE shall then transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS when the intra-frequency handover has succeeded.

SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1	SS		The SS actives the cell 1and cell 2 according to column T0 in table 8.3.12.9-1
2	+	MEASUREMENT CONTROL	The SS configures a measurement with 1d event and CSG Intra-frequency cell info.
3	SS		SS configures its downlink transmission power settings according to columns "T1" in table 8.3.12.9-1.
4	→	MEASUREMENT REPORT	The UE sends a measurement report including the measured PSC for cell 2 and event 1D.
5	+	MEASUREMENT CONTROL	The SS instructs the UE to perform SI acquisition of cell 2.
6	→	MEASUREMENT REPORT	The UE sends a measurement reporting including the Cell identity and CSG ID, not including CSG members hip indication of the cell 2.
7	+	PHYSICAL CHANNEL RECONFIGURATION	The SS orders the UE to perform intra- frequency handover to cell 2.
8	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	After the UE has succeeded in performing the intra-frequency handover, it shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS using the new configuration
9	←→	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement identity	1
Measurement command	Setup
Measurement reporting mode	Scrup
- Measurement reporting transfer mode	Acknowledged mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
- CHOICE measurement type	Intra-frequency measurement
- Intra-frequency measurement	initia inequents, ineae are inem
- Intra-frequency cell info list	
- Intra-frequency cell removal	Not present
- New intra-frequency info list	'
- Intra-frequency cell-id	
- Cell info	1
- Cell individual offset	0 (0dB)
- Reference time difference to cell	Not Present
- Read SFN number	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	100
- Primary CPICH Tx power	Not Present
- TX Diversity indicator	FALSE
- CSG Intra-frequency cell info	
- CSG cell info list	1
- Choice mode	FDD
- FDD	
- Start PSC	144
- Number of PSCs	10
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
Intra-frequency reporting quantity Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	.,
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	CELL_DCH state
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Intra-frequency measurement reporting criteria	
- Parameters required for each events	
- Intra-frequency event identity	1D
- Triggering condition 2	Monitored set cells
- Hysteresis	4(2dB)
- Time to trigger	10 mSec
- Reporting cell status	
- CHOICE reported cell	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	2

MEASUREMENT REPORT (Step 4)

Information Element	Value/remark
Managara Timo	
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	Check to see if set to 1
Measured results	
- Intra-frequency measured results	Check to see if measurement results for Cell-2 are
	included and Cell-1 are not included.
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information - Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional Measured results	Check to see if this IE is absent
Event results	Check to see if set to "Intra-frequency event results"
- Intra-frequency event identity	Check to see if set to "1D"
- Cell measurement event results	
- Primary scrambling code	Check to see if set to "Primary scrambling code of Cell 2"

MEASUREMENT CONTROL (Step 5)

Information Element	Value/remark
Measurement identity	2
Measurement command	Setup
- CHOICE measurement type	Intra-frequency measurement
- Intra-frequency measurement	
- Intra-frequency cell info list	
- Intra-frequency cell removal	Not present
- New intra-frequency info list	Not present
- Intra-frequency SI Acquisition	
- Choice mode	FDD
- FDD	
 Intra-frequency SI acquisition Info 	
- Primary Scrambling Code	Set to same code as used for cell 2(150)
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for detected set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cells within detected set on used frequency
- Maximum number of reported cells	2
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	1
- Reporting interval	4000 msec

MEASUREMENT REPORT (Step 6)

Use the same message in TS 34.108, clause 9, with the following exceptions

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	Check to see if set to 2
Measured results	
- Intra-frequency measured results list	
- Intra-frequency measurement results	1
- Cell measured results	
- Cell Identity	Check to see if set to "Cell Identity of Cell 2"
- CSG Identity	Check to see if set to "CSG Identity of Cell 2 (CSG 1)"
- CSG Member indication	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	FDD
- FDD	
- Primary CPICH Info	D: 15 16 16
- Primary scrambling code	Primary scrambling code for cell 2
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured results on RACH	Check to see if this IE is absent
Additional Measured results	Check to see if this IE is absent
Event results	Check that this IE is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 7)

Use the same contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case as found in TS 34.108, clause 9, with sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
Frequency info	
- CHOICE mode	FDD
- FDD	
- UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 2
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to cell2
Downlink information common for all radio links	
- CHOICE DPCH info	
- Downlink DPCH info common for all RL	
- Timing indication	Maintain
- Downlink information for each radio links	
- CHOICE mode	
- FDD	
- Primary CPICH info	
- Primary Scrambling Code	Set to same code as used for cell 2

8.3.12.9.5 Test Requirements

At step 4, the UE shall send a MEASUREMENT REPORT message including the measured PSC for cell 2 and event 1D.

At step 6, the UE shall send a MEASUREMENT REPORT message including the cell identity and CSG ID of the cell 2 within $4000~\rm msec$.

At step 8, the UE shall send Physical Channel Reconfiguration Complete message on uplink DCCH using AM RLC.

8.3.12.10 Intra-frequency inbound handover to UMTS non-CSG cell

8.3.12.10.1 Definition

Test to verify the UE can report the Cell Identity of the non-CSG cell, but "CSG Identity" and "CSG Member Indication" IEs are not included.

8.3.12.10.2 Conformance requirement

1. Intra-frequency measurements for CSG/Hybrid cells

For each cell reported in the IE "Cell measured results" of an intra-frequency Measurement Report, which is also included in the IE "Intra-frequency SI Acquisition" associated with the measurement:

- 1> if the UE managed to acquire the valid system information of the concerned cell:
 - 2> include the following IEs in the IE "Cell measured results":
 - 3> "Cell Identity" IE.
 - 3> if the concerned cell broadcasts a CSG identity:
 - 4> "CSG Identity" IE.
 - 4> "CSG Member indication" IE and set it to "member" if CSG identity of the concerned cell is present in UE's CSG whitelist.

The system information of the reported cell(s) can be acquired by the UE without any measurement gaps.

2. CSG/Hybrid Cell Intra-frequency Measurement Procedure

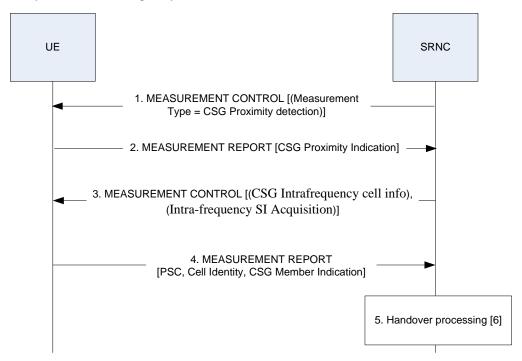


Figure 8.1.1-1: Intra-frequency Measurement Procedure of CSG and Hybrid cells

- 1) The SRNC configures the UE with a measurement having "CSG Proximity detection" as measurement type.
- 2) The UE sends an "entering" CSG proximity indication when it determines it may be near a cell, (based on UE implementation) whose CSG ID is in the UE's CSG white list.
- 3) If a measurement configuration for CSG/hybrid cells is not present, the SRNC configures the UE with relevant measurement configuration which includes the PSCs that the UE must measure and the PSCs for which SI

acquisition should be performed. The network may use the CSG proximity indication for intra-frequency case to minimize the time during which measurements for CSG/hybrid cells are configured.

- 4) The UE sends a measurement report including the measured PSC, Cell Identity, CSG ID and CSG membership indication of the target HNB to the SRNC (e.g., due to a triggered intra-frequency event 1d). The UE can acquire MIB and SIB3/SIB4 of intra-frequency target HNB cells in parallel with reception of the serving cell transmissions in CELL_DCH. No measurement gaps are required for reading MIB and SIB3/SIB4.
- 5) SRNC can then proceeds with the handover processing as described in [6].

After sending an "entering" CSG proximity indication (step 2), if the UE determines that it is no longer near any cell (on the reported proximate RAT and frequency) whose CSG ID is in the UE's CSG whitelist, the UE sends a "leaving" CSG proximity indication to the SRNC. Upon reception of this indication, the SRNC may reconfigure the UE to stop measurements configured.

The PSC confusion is resolved by steps 3 and 4. The SRNC can request SI acquisition and reporting for any PSC, not limited to PSCs of CSG or hybrid cells.

Reference

- 1. 3GPP TS 25.331 v970 clause 14.7a.1
- 2. 3GPP TS 25.367 v 950 clause 8.1.1

8.3.12.10.3 Test purpose

- 1. To confirm that the UE can measure and report the Cell Identity of the non-CSG cell. The CSG Identity and CSG Member indication are not included in the measurement report.
- 2. To confirm that the SRNC can request SI acquisition and reporting for non-CSG cell.

8.3.12.10.4 Method of test

Initial Condition

System Simulator:

2 cells: Cell 1 and Cell 2 are on f1.

Cell1 and Cell2 does not broadcast CSG ID..

User Equipment:

The UE is PS-DCCH+DTCH_DCH (state 6-10) or CS-DCCH+DTCH_DCH (state 6-9) or PS+CS-DCCH+DTCH_DCH (state 6-14) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports the capability "Support of intra-frequency SI acquisition for HO".

Test Procedure

Table 8.3.12.10-1 illustrates the downlink power to be applied for the 2 cells.

Table 8.3.12.10-1

Parameter	Unit	Cell 1		Cell 2	
		T0 T1		T0	T1
UTRARF Channel Number		1		1	
CPICH Ec	dBm/3.84MHz	-55	-70	Off	-55

The instant T0, the Cell 1 is active and the UE is initially in CELL_DCH and has a radio bearer with the Cell 1. The Cell 2 (non-CSG cell) is inactive. The SS sends MEASUREMENT CONTROL with event 1d configured to the UE. The PSC of the Cell 2 (144) shall be within the scope of the PSC range in the MEASUREMENT CONTROL.

At instant T1, the downlink is changed according to what is shown in table 8.3.12.10-1. The UE shall thus send a MEASUREMENT REPORT with 1d event to the SS. The UE sends the PSC of the Cell 2.

The SS configures the PSC for SI acquisition to UE. The UE acquires the SI of the Cell 2 and sends it to the SS with the cell identity.

The SS sends a PHYSICAL CHANNEL RECONFIGURATION message on DCCH using AM-RLC to trigger the handover to the Cell 2. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1			The initial condition is set as T0 in
_			table 8.3.12.10-1.
2	←	MEASUREMENT CONTROL	The SS configures a measurement
			to the UE. Event 1d is configured.
3			The SS re-adjusts the downlink
			transmission power settings of the
			Cell 1 and Cell 2 according to
		ME ACUDEMENT DEDODE	columns "T1" in table 8.3.12.10-1.
4	\rightarrow	MEASUREMENT REPORT	The UE sends a 1d event with the
5	←	MEASUREMENT CONTROL	PSC of Cell 2.
5	_	INEASUREINENT CONTROL	The SS configures the PSC for SI acquisition.
6			
0			The UE acquires the SI of the Cell 2.
7	\rightarrow	MEASUREMENT REPORT	The UE reports the cell identity of
'	7	INLASOREMENT REPORT	the Cell 2.
8	←	PHYSIC AL CHANNEL	The SS orders the UE to perform
	`	RECONFIGURATION	timing re-initialised intra-frequency
		REGOINIGORATION	handover to Cell 2.
9	\rightarrow	PHYSIC AL CHANNEL	After the UE has succeeded in
		RECONFIGURATION COMPLETE	performing the intra-frequency
			handover, it shall send a
			PHYSICAL CHANNEL
			RECONFIGURATION COMPLETE
			message to the SS using the new
			configuration.
10	←→	CALL C.3	If the test result of C.3 indicates
			that UE is in CELL_DCH state, the
			test passes, otherwise it fails.

Specific Message Contents

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement identity	1
Measurement command	Setup
Measurement reporting mode	55.04
- Measurement reporting transfer mode	Acknowledged mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
CHOICE measurement type	Event ungger
- Intra-frequency measurement	
- Intra-frequency measurement objects list	
- CSG Intrafrequency cell info	
- CSG Intra-frequency cell info	
- CSG cell info list	
- Choice mode	
- FDD	
- Start PSC	
- Start PSC - Primary scrambling code	144
- Number of PSCs	8
- Intra-frequency measurement quantity	0
- Filter Coefficient	
- CHOICE mode	0
- CHOICE mode	
	CDICLI DCCD
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for detected set cells	ENIOE
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	
- FDD	
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Measurement validity	
- UE state	CELL_DCH state
- CHOICE report criteria	
- Intra-frequency measurement reporting criteria	
- Parameters required for each event	
- Intra-frequency event identity	1d
- Triggering condition 2	Monitored set cells
- Hysteresis	4(2dB)
- Time to trigger	10 mSec
- Reporting cell status	
- CHOICE reported cell	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	2

MEASUREMENT REPORT (Step 4)

Information Element	Value/remark
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	Check to see if set to 1
Event results	
-CHOICE event result	
- Intra-frequency measurement event results	
- Intra-frequency event identity	1d
- Cell measurement event results	
- CHOICE mode	
-FDD	
- Primary CPICH info	
- Primary scrambling code	150(The same as the cell2)

MEASUREMENT CONTROL (Step 5)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Setup
CHOICE Measurement type	
- Intra-frequency measurement	
- Intra-frequency cell info list	
- Intra-frequency SI Acquisition	
- CHOICE mode	
- FDD	
- Intra-frequency SI Acquisition info	
- Primary Scrambling code	Set to same code as used for cell 2(150)
- Intra-frequency reporting quantity	
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cells within monitored set on used frequency
- Maximum number of reported cells	2
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	1
- Reporting interval	4000 msec

MEASUREMENT REPORT (Step 7)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	Check to see if set to 2
Measured Results	
- CHOICE Measurement	
-Intra-frequency measured results list	
-Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	The same as the cell2
- CSG Identity	Check that this IE is absent
- CSG Member indication	Check that this IE is absent
- CHOICE mode	
-FDD	
- Primary CPICH info	
- Primary scrambling code	150(The same as the cell2)
- CPICH Ec/N0	Check that this IE is absent
- CPICH RSCP	Check that this IE is present
- Pathloss	Check that this IE is absent
Measured results on RACH	Check that this IE is absent
Additional measured results	Check that this IE is absent
Event results	Check that this IE is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 8)

Use the same contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case as found in TS 34.108, clause 9, with sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" with the following exceptions:

Information Element	Value/Remark
RRC State indicator	CELL_DCH
Frequency info	
- CHOICE mode	
- FDD	
- UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 2
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to cell2
Downlink information common for all radio links	
- CHOICE DPCH info	
- Downlink DPCH info common for all RL	
- Timing indication	Initialise
Downlink information for each radio links	
- CHOICE mode	FDD
- FDD	
- Primary CPICH info	
- Primary Scrambling Code	Set to same code as used for cell 2(150)

8.3.12.10.5 Test requirement

- 1. At step 4, the UE reports the PSC of the cell2.
- 2. At step 7, the UE reports the Cell Identity of the cell2 within 4000msec.
- 3. At step 9, the UE sends Physical Channel Reconfiguration Complete message on uplink DCCH using AM RLC.

8.3.12.11 Inter-frequency Measurement of UMTS non-CSG cell

8.3.12.11.1 Definition

Test to verify the UE can report the Cell Identity and does not report CSG ID and CSG Member indication of a non-CSG cell to the SRNC in the measurement report.

8.3.12.11.2 Conformance requirement

1: Inter-frequency measurements for CSG/Hybrid cells:

For each cell reported in the IE "Cell measured results" of an inter-frequency Measurement Report, which is also included in the IE "Inter-frequency SI Acquisition" associated with the measurement:

- 1> if the UE managed to acquire the system information of the concerned cell:
 - $2\!\!>$ include the following IEs in the IE "Cell measured results":
 - 3> "Cell Identity" IE;
 - 3> if the concerned cell broadcasts a CSG identity:
 - 4> "CSG Identity" IE.
 - 4> "CSG Member indication" IE and set it to "member" if CSG identity of the concerned cell is present in UE's CSG whitelist.

If the UE needs measurement gaps to read the system information on the non-used frequency, the system information of the reported cell can be acquired by the UE via autonomous measurement gaps when the IE "Inter-frequency SI Acquisition" is received by the UE, i.e., UE is allowed to temporarily abort communication with the serving cell to perform SI acquisition within the limits (detailed value is FFS). UE shall send the measurement report before the maximum provided time specified in IE "Periodical reporting criteria" if the UE is able to acquire SI early.

2: Inter-frequency Measurement Procedure of CSG and Hybrid cells:

- 1) The SRNC configures the UE with a measurement having "CSG Proximity detection" as measurement type.
- 2) The UE sends an "entering" CSG proximity indication when it determines it may be near a cell, (based on UE implementation) whose CSG ID is in the UE's CSG white list. The CSG proximity indication includes the RAT and frequency of the cell.
- 3) The SRNC configures a measurement on the concerned frequency/RAT to measure CSG/hybrid cells. Compressed mode gaps, if required by the UE, are also activated to allow UE to perform measurements on the reported RAT and frequency. The network may also use the proximity indication to minimize the requesting of handover preparation information of CSG/hybrid cells by avoiding requesting such information when the UE is not in the geographical area where cells whose CSG IDs are in the UEs CSG whitelist are located.
- 4) The UE sends a measurement report including the measured PSCs/PCIs.
- 5) The SRNC configures the UE to perform SI acquisition and reporting of a particular PSC/PCI.
- 6) The UE performs SI acquisition using autonomous gaps, i.e., the UE may suspend reception and transmission with the SRNC within the limits (the limit is currently FFS) to acquire the relevant system information from the target HNB/HeNB.
- 7) The UE sends a measurement report including Cell Identity, CSG ID and CSG membership indication.
- 8) SRNC can then proceed with the handover processing. The handover processing for inter-frequency handover to a CSG/Hybrid cell is described in [6].

NOTE: The above steps also apply to inter-RAT mobility from UMTS cell to HeNB.

After sending an "entering" CSG proximity indication (step 2), if the UE determines that it is no longer near any cell (on the reported proximate RAT and frequency) whose CSG ID is in the UE's CSG white list, the UE sends a "leaving" CSG proximity indication to the SRNC. Upon reception of this indication, the SRNC may reconfigure the UE to stop measurements on the reported RAT and frequency.

In the above procedure, step 2 may not be performed in case the UE has not previously visited the HNB, e.g., when the UE first visits a CSG/hybrid cell.

The PSC/PCI confusion is resolved by steps 5, 6 and 7. The SRNC can request SI acquisition and reporting for any PSC/PCI, not limited to PSCs/PCIs of CSG or hybrid cells.

3: The CSG SI acquisition delay is defined as the time between any occurrences that will trigger a SI decoding until the UE starts to transmit over the Uu interface. This requirement assumes that the measurement report is not delayed by other RRC signalling on the DCCH. The measurement reporting delay also excludes any RRC procedure delay which is defined in [16] when SI reading is initiated by a measurement control message.

For intra frequency CSG cells, CSG SI decoding is typically triggered when a cell with primary scrambling code in a preconfigured range meets the criteria for measurement reporting. For inter frequency CSG cells, CSG SI decoding is explicitly requested by RRC signalling.

The CSG SI reporting delay shall not be more than $T_{CSG-SI-Report}$ where $T_{CSG-SI-Report}$ in ms is given by

$$T_{CSG\text{-}SI\text{-}Report} = [630] + 40*SIB3_REP$$

SIB3_REP is the repetition period at which the CSG cell schedules SIB3 blocks in units of frames

This requirement is applicable for CSG target cell configurations where the information required to make the SI report can be determined from the MIB and SIB3 alone, and SIB3 is not segmented into multiple TTI. Additionally, for the requirement to be applicable, the reception conditions shall be [TBD] such that the system frame number of the target CSG cell, the MIB and SIB3 can each be successfully decoded in no more than four attempts.

Test requirement = RRC Procedure delay + $T_{CSG-SI-Report}$

Reference

1: 3GPP TS 25.331 clause 14.7a.2.

2: 3GPP TS 25.367, clause 8.1.2.

3: 3GPP TS 25.133, clause 5.13.2, A.5.11.2.

8.3.12.11.3 Test purpose

1. To confirm that the UE can read and report system information of a non-CSG cell to the SRNC.

8.3.12.11.4 Method of test

Initial Condition

System Simulator:

2 cells: Cell 1, cell 4 are used.

Cell4 and Cell 1 do not broadcast CSG ID.

Cell1 is on f1.

Cell 4 is on f2

The SIB3_REP of cell 4, i.e., SIB3 scheduling is 64.

User Equipment:

The UE Allowed CSG List is empty.

The UE is PS-DCCH+DTCH_DCH (state 6-10) or CS-DCCH+DTCH_DCH (state 6-9) or PS+CS-DCCH+DTCH_DCH (state 6-14) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports Compressed mode.
- UE supports the capability "Support of inter-frequency SI acquisition for HO".
- UE supports the capability "Support of CSG".

Test Procedure

Table 8.3.12.11-1 illustrates the downlink power to be applied for the 2 cells.

Table 8.3.12.11-1

Parameter	Unit	Ce	ell 1	Ce	II 4
Test Channel			1	2	2
		T0	T1	T0	T1
CPICH Ec	dBm/3.84 MHz	-60	-70	OFF	-55

Cell 1 is active. The UE is initially in CELL_DCH and has a radio bearer with the cell 1.

At instant T0, the downlink is changed according to what is shown in table 8.3.12.11 -1.

The SS sends MEASUREMENT CONTROL with 1c event required for construction of the CSG VAS active set in the UE.

The SS configures then compressed mode (if required), to prepare the UE for inter-frequency measurements, by sending a PHYSICAL CHANNEL RECONFIGURATION message on DCCH using AM-RLC. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS then sets up CSG inter-frequency measurements (event 2b), by sending a MEASUREMENT CONTROL message to the UE.

At instant T1, the downlink power is changed according to what is shown in table 8.3.12.11 -1. The UE shall thus send a MEASUREMENT REPORT with 2b event to the SS.

The SS then sets up SI acquisition of cell 4 by sending a MEASUREMENT CONTROL message to the UE. And then the UE shall report the cell identity of the cell 4.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1			The SS changes the power of the
			two cells according to column T0 in
			table 8.3.12.11-1
2	+	MEASUREMENT CONTROL	Cell1 configures a measurement
			with 1c event. The cell information
			is set to the same as the cell1.
3	←	PHYSICAL	SS instructs UE to begin
		CHANNELRECONFIGURATION	compressed mode operation.
			(for FDD only)
4	\rightarrow	PHYSICAL	(for FDD only)
		CHANNELRECONFIGURATION	
	,	COMPLETE	TI 00 6
5	+	MEASUREMENT CONTROL	The SS configures a measurement
			to measure cells. The message
			includes the PSC range the
			compressed mode gaps and the parameters of the event 2b.
6			SS re-adjusts the downlink
			transmission power settings of the two cells according to columns
			"T1" in table 8.3.12.11-1.
7	\rightarrow	MEASUREMENT REPORT	The UE sends a measurement
,	/	MEASOREMENT REPORT	report including the measured
			PSCs for cell 4 and event 2b to cell
			1.
8	+	MEASUREMENT CONTROL	The SS configures the UE to
	-		perform SI acquisition and
			reporting of cell 4.
9			The UE performs SI acquisition to
			acquire the relevant system
			information from the cell4.
10	→	MEASUREMENT REPORT	The UE sends a measurement
			reporting including the cell identity
			of the cell 4 within 4000msec
11	$\leftarrow \rightarrow$	CALL C.3	If the test result of C.3 indicates
			that UE is in CELL_DCH state, the
			test passes, otherwise it fails.

Specific Message Contents

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement identity	1
Measurement command	Setup
Measurement reporting mode	·
- Measurement reporting transfer mode	Acknowledged mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
CHOICE measurement type	Intra-frequency measurement
- intra-frequency measurement	
- Intra-frequency measurement objects list	
- Remove all intra-frequency cells	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0 (0dB)
- Reference time difference to cell	Not Present
- Read SFN number	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	100
- Primary CPICH Tx power	Not Present
- TX Diversity indicator	FALSE
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- CHOICE mode	
- FDD	
- Measurement quantity	CPICH RSCP
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Intra-frequency measurement reporting criteria	
- Parameters required for each events	
- Intra-frequency event identity	1c
- Hysteresis	4 (2dB)
- Replacement activation threshold	3
- Time to trigger	10 ms
- Amount of reporting	16
- Reporting interval	4000ms
- Reporting cell status	Not present

PHYSICAL CHANNEL RECONFIGURATION (Step 3)

Use the same message sub-type found in Annex A, which is entitled "(Packet to CELL_DCH from CELL_DCH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/remark	Version
Downlink information common for all radio links		
- Downlink DPCH info common for all RL		
- Timing Indication	Maintain	
- Downlink DPCH power control information		
- DPC mode	0 (Single)	
- CHOICE Mode	FDD	
- Power offset PPilot-DPDCH	0	
- DL rate matching restriction information	Not present	
- Spreading factor	Refer to the parameter set in TS 34.108	
- Fixed or flexible position	Flexible	
- TFCI existence	TRUE	
- Number of bits for Pilot bits (SF=128, 256)	Not present	
	Not present	
- DPCH compressed mode info - TGPSI	1	
	1.	
- TGPS status flag	Activate	
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod	
	256	
- Transmission gap pattern sequence configuration		
parameters		
- TGMP	FDD Measurement	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not Present	
- TGD	Undefined	
- TGPL1	3	
- TGPL2	Not Present	R99 and Rel-4
		only
- RPP	Mode 0	
- ITP	Mode 0	
- CHOICE UL/DL mode	UL and DL or DL only or UL only	
	depending on UE capability	
 Downlink compressed mode method 	SF/2	
- Uplink compressed mode method	SF/2 or Not present depending on UE	
	capability	
- Downlink frame type	A	
- DeltaSIR1	20 (2.0)	
- DeltaSIRAfter1	10 (1.0)	
- DeltaSIR2	Not present	
- DeltaSIRAfter2	Not present	
- N identify abort	Not present	
- T Reconfirm abort	Not present	
- TX diversity mode	None	
- SSDT information	Not present	R99 and Rel-4
		only
- Default DPCH offset value	Not present	J,
2 Static Dr Strong value	1.101 2.1000111	I

MEASUREMENT CONTROL (Step 5)

Information Element	Value/remark
Measurement identity	2
Measurement command	Setup
Measurement reporting mode	'
- Measurement reporting transfer mode	acknowledged Mode RLC
 Periodic reporting / Event trigger reporting mode 	Event trigger
Additional measurement list	Not present
CHOICE Measurement type	
-Inter-frequency measurement	
- Inter-frequency measurement objects list	Not Decoupt
- Inter-frequency cell removal - New inter-frequency cells	Not Present
- Inter-frequency cell id	1
- Frequency info	Frequency information of cell 4
- cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	
-FDD	
- Primary CPICH info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH Tx power - TX Diversity Indicator	Not present FALSE
- TADIVEISITY INdicator	FALSE
- Cell for measurement	Not present
- CSG Inter-frequency cell info	Not present
- CSG Frequency info	
- Frequency info	Frequency of Cell 4
- CSG Inter-frequency cell info for the frequency	' ,
- CSG cell info list	
- CHOICE mode	FDD
- Start PSC	300
- Number of PSCs	100
- Inter-frequency SI Acquisition	Not present
- Inter-frequency measurement quantity	
- Filter Coefficient	4
- Frequency quality estimate quantity	CPICH RSCP
- Inter-frequency reporting quantity	
- UTR AN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	FALCE
- Cell synchronisation information reporting indicator - Cell identity reporting indicator	FALSE FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Measurement validity	CELL_DCH state
- inter-frequency set update	On with no reporting
- UE autonomous update mode	On with no reporting
- CHOICE report criteria - Inter-frequency measurement reporting criteria	
- Inter-frequency measurement reporting chiefla - Parameters required for each event	
- Inter-frequency event identity	2b
- Threshold used frequency	-65dBm
- W used frequency	0.0
- Hysteresis	2(1dB)
- Time to trigger	0 mSec
- Reporting cell status	Not present
- Parameters required for each non-used frequency	00 ID
- Threshold non used frequency	-68 dBm
- W non used frequency	0 Not propert
DPCH compressed mode status info	Not present

MEASUREMENT REPORT (Step 7)

Information Element	Value/remark
Measurement identity	Check to see if set to 2
Measured results	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	Inter-frequency measurement event results,
- CHOICE event result	
- Inter-frequency measurement event results	
- Inter-frequency event identity	2b
- Inter-frequency cells	
- Frequency info	Set to same frequency as used for cell 4
- Non frequency related measurement event results	
- CHOICE mode	
- FDD	
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 4

MEASUREMENT CONTROL (Step 8)

Information Element	Value/remark
Measurement Identity	3
Measurement Command	Setup
CHOICE Measurement type	
- Inter-frequency measurement	
- Inter-frequency measurement objects list	
- Inter-frequency SI Acquisition	
- Frequency info	Set to same frequency as used for cell 4
- CHOICE mode	
- FDD	
- Primary scrambling code	Set to same scrambling code as used for cell 4
- Inter-frequency measurement quantity	ŭ
- Filter Coefficient	4
- Frequency quality estimate quantity	CPICH RSCP
- Inter-frequency reporting quantity	
- UTR AN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- CHOICE report criteria	
- Periodical reporting criteria	
- Amount of reporting	1
- Reporting interval	4000ms
DPCH compressed mode status info	Not present

MEASUREMENT REPORT (Step10)

Information Element	Value/remark
Measurement identity	Check to see if set to 3
Measured results	Check to see if it is absent
Additional measured results	Check to see if it is absent
Measured Results	
-CHOICE Measurement	
- Inter-frequency measured results list	
- Inter-frequency measurement results	
- Frequency info	Set to the frequency of cell 4
 Inter-frequency cell measurement results 	
- Cell measured results	
- Cell Identity	Set to 28-bit Cell identity as used for cell 4
- CSG Identity	Not present
- CSG Member indication	Not present
- CHOICE mode	
- FDD	
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 4
- CPICH Ec/N0	Check that this IE is absent
- CPICH RSCP	Check that this IE is present
- Pathloss	Check that this IE is absent

8.3.12.11.5 Test requirement

At step 7, the UE sends 2b event for cell 4 to the cell1.

At step 10, The UE sends a measurement reporting including the cell identity but not including CSG ID and CSG membership indication of the cell 4 within 4000ms.

8.3.12.12 Membership checking for handover to the CSG Cell

8.3.12.12.1 Definition

Test to verify the UE can check whether a Cell is a CSG member Cell according to the CSG id and ePLMN identity and to verify the UE can report the Cell Identity, CSG ID and CSG members hip indication to the SRNC.

8.3.12.12.2 Conformance requirement

1: Definitions

For the purposes of the present document, the terms and definitions given in [1] apply, together as:

Activated uplink frequency (FDD only): For a specific UE, an uplink frequency is said to be activated if the UE is allowed to transmit on that frequency. The primary uplink frequency is always activated when configured while a secondary uplink frequency has to be activated by means of an HS-SCCH order in order to become activated.

Adjacent Frequency: A frequency whose centre is within 5 MHz of the centre of the currently used frequency and belongs to the same frequency band as that of the currently used frequency.

Common E-DCH resource: In FDD, common E-DCH resources are under direct control of the Node B and are shared by UEs in CELL_FA CH state and IDLE mode. In 1.28 Mcps TDD, common E-DCH resources used by UEs in CELL_FA CH and IDLE mode are under direct control of Node B and are shared by UEs in the CELL_DCH state.

Configured Uplink Frequency (FDD only): For a specific UE, an uplink frequency is said to be configured if the UE has received all relevant information from RRC in order to perform transmission on that frequency.

CSG member Cell: for a UE in RRC_CONNECTED, a Cell broadcasting the identity of the Registered PLMN or Equivalent PLMN and for which CSG white list of the UE includes an entry comprising of Cell's CSG ID and the respective PLMN identity.

Current Frequency (FDD only): The frequency that is currently used by the UE. In case of dual Cell or dual band configured, the serving HS-DSCH Cell frequency is treated as current frequency.

2. Intra-frequency measurements for CSG/Hybrid Cells

For each Cell reported in the IE "Cell measured results" of an intra-frequency Measurement Report, which is also included in the IE "Intra-frequency SI Acquisition" associated with the measurement:

- 1> if the UE managed to acquire the valid system information of the concerned Cell:
 - 2> include the following IEs in the IE "Cell measured results":
 - 3> "Cell Identity" IE.
 - 3> if the concerned Cell broadcasts a CSG identity:
 - 4> "CSG Identity" IE.
 - 4> "CSG Member indication" IE and set it to "member" if the concerned Cell is CSG member Cell.

The system information of the reported Cell(s) can be acquired by the UE without any measurement gaps.

Reference

- 1: 3GPP TS 25.331 clause 3.1 v9.8
- 2. 3GPP TS 25.331 clause 14.7a.1 v9.8

8.3.12.12.3 Test purpose

- 1. To confirm that the UE is considered as "member" when the CSG whitelist of the UE includes an entry comprising of Cell's CSG ID and the EPLMN identity.
- 2. To verify that the member UE could report the Cell Identity, CSG ID and CSG membership indication of the CSG member Cell and handover to it.

8.3.12.12.4 Method of test

Initial conditions

2 Cells: Cell 1 and Cell 2.

Cell 1 does not broadcast CSG ID.

Cell 1 belongs to PLMN 1

Cell 2 is a CSG Cell with the CSG ID of CSG 2. "CSG PSC Split Information" is also included in SIB3 with "Start PSC" set to 144 and "Number of PSCs" set to 10.

The Primary Scrambling Code of Cell 2 is 150.

Cell 2 belongs to PLMN 2

UE's whitelist is set as below:

Table 8.3.12.12-1

CSG ID	PLMN ID
2	2

Related ICS/IXIT statement(s)

- UE supports FDD and CSG.
- UE supports the capability "Support of intra-frequency SI acquisition for HO".

Test Procedure

Table 8.3.12.12 -2 illustrates the downlink power to be applied for the 2 Cells

Table 8.3.12.12-2

Parameter	Unit		Cell 1		Cell 2
Test Channel			1		2
		T0	T1	T0	T1
CPICH Ec	dBm/3.84 MHz	-60	-75	-80	-55

The initial condition is set as the instant T0 shown in table 8.3.12.12-2 and The UE is switched off.

The UE is switched on. The SS waits for random access requests from the UE. A complete Location Update is done. SS specifies PLMN 2 Equivalent to PLMN 1 in Location Update Accept Message.

The UE initiates a PS/CS services with the Cell 1 and keeps in CELL_DCH state and has a radio bearer with the Cell 1.

The SS then sets up intra-frequency measurements (event 1d), by sending a MEASUREMENT CONTROL message to the UE.

At instant T1, the downlink is changed according to what is shown in table 8.3.12.12-2. The UE shall thus send a MEASUREMENT REPORT with 1d (for Cell 2) event to the SS.

The SS configures the PSC range for SI acquisition to UE. The UE acquires the SI of the Cell2 and sends it to the SS with the Cell identity, CSG ID and membership indication.

The UE shall handover to the Cell 2.

Expected sequence

Step	Direc	tion	Message	Comment
0.00	UE	SS		
1				The UE is switched on. A complete Location Update is done. SS specifies PLMN 2 Equivalent to PLMN 1 in Location Update Accept Message. The UE initiates a PS/CS services with the Cell 1 and keeps in Cell_DCH state.
2	+	-	MEASUREMENT CONTROL	The SS configures a measurement to the UE. Event 1d is configured.
3				SS adjusts the downlink transmission power settings of the Cells according to columns "T1" in table 8.3.12.12-2.
4)	>	MEASUREMENT REPORT	The UE sends a 1d event with the PSC of Cell 2.
5	+	-	MEASUREMENT CONTROL	The SS configures the PSC range for SI acquisition.
6				The UE acquires the SI of the Cell2.
7	-)	•	MEASUREMENT REPORT	The UE reports the Cell identity, CSG ID and CSG membership indication of the Cell 2.
8	+	-	PHYSICAL CHANNEL RECONFIGURATION	The SS orders the UE to perform timing re-initialised intra-frequency handover to Cell 2.
9	-)		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	After the UE has succeeded in performing the intra-frequency handover to Cell 2, it shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS using the new configuration
10	← ·	\rightarrow	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement identity	1
Measurement command	Setup
Measurement reporting mode	Octup
- Measurement reporting transfer mode	Acknowledged mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
CHOICE measurement type	Lventuigger
- Intra-frequency measurement	
- Intra-frequency Cell info list	
- Remove all intra-frequency Cells	
- New intra-frequency Cells	
- Intra-frequency Cell-id	
- Cell info	1
- Cell individual offset	0 (0dB)
- Reference time difference to Cell	Not Present
- Read SFN number	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	100
- Primary CPICH Tx power	Not Present
- TX Diversity indicator	FALSE
- CSG Intra-frequency Cell info	
- CSG Intra-frequency Cell info	
- CSG Cell info list	1
- Choice mode	
- FDD	
- Start PSC	
- Primary scrambling code	144
- Number of PSCs	10
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- CHOICE mode	
- FDD	
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
 Reporting quantities for active set Cells 	
 Cell synchronisation information reporting indicator 	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	
- FDD	
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set Cells	EAL OF
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode - FDD	
	FALSE
- CPICH BSCP reporting indicator	TRUE
 CPICH RSCP reporting indicator Pathloss reporting indicator 	FALSE
- Reporting Cell status	Not Present
Measurement validity	CELL_DCH state
- CHOICE report criteria	0222_D01101010
Intra-frequency measurement reporting criteria	
- Parameters required for each event	
- Intra-frequency event identity	1d
- Triggering condition 2	Monitored set Cells
- Hysteresis	4(2dB)
- Time to trigger	\/
- Time to trigger	10 mSec
- Reporting Cell status	
- CHOICE reported Cell	Report Cells within monitored set Cells on used
•	frequency
- Maximum number of reported Cells	2

MEASUREMENT REPORT (Step 4)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity Measured Results	Check to see if set to 1
- Intra-frequency measured results	Check to see if measurement results for Cell-2 are included and Cell-1 are not included.
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information - Primary CPICH info	Checked that this IE is absent
- Primary scrambling code	Refer to clause titled "Default settings for Cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	Intra-frequency measurement event results,
- Intra-frequency measurement event results	
- Intra-frequency event identity	
- Intra-frequency event identity	1d
- Cell measurement event results	
- CHOICE mode	
-FDD	
- Primary CPICH info	
- Primary scrambling code	150(The same as the Cell2)

MEASUREMENT CONTROL (Step 5)

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Setup
CHOICE Measurement type	
- Intra-frequency measurement	
- Intra-frequency Cell info list	
- Intra-frequency SI Acquisition	
- CHOICE mode	
- FDD	
- Intra-frequency SI Acquisition info	
- Primary Scrambling code	
- Primary CPICH info	
- Primary Scrambling code	Set to same code as used for Cell 2(150)
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- CHOICE mode	
- FDD	
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for detected set Cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	
- FDD	
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting Cell status	
- CHOICE reported Cell	Report Cells within detected set on used frequency
- Maximum number of reported Cells	Not Property
- Measurement validity	Not Present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	1
- Reporting interval	4000 msec

MEASUREMENT REPORT (Step 7)

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	Check to see if set to 2
Measured Results	
- CHOICE Measurement	
-Intra-frequency measured results list	
-Intra-frequency measurement results	
- Cell measured results	TI 11 0 110
- Cell Identity	The same as the Cell2
- CSG Identity - CSG Member indication	2
- CSG Wember Indication - CHOICE mode	member
-FDD	
- Primary CPICH info	
- Primary scrambling code	150(The same as the Cell2)
- CPICH Ec/N0	Check that this IE is absent
- CPICH RSCP	Check that this IE is present
- Pathloss	Check that this IE is absent
Measured results on RACH	Check that this IE is absent
Additional measured results	Check that this IE is absent
Event results	Check that this IE is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 8)

Use the same contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case as found in TS 34.108, clause 9, with sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" with the following exceptions:

Information Element	Value/Remark
RRC State indicator	CELL_DCH
Frequency info	
- CHOICE mode	
- FDD	
- UARFCN uplink(Nu)	Same uplink UARFCN as used for Cell 2
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to Cell2
Downlink information common for all radio links	
- CHOICE DPCH info	
 Downlink DPCH info common for all RL 	
- Timing indication	Initialise
Downlink information for each radio links	
- CHOICE mode	FDD
- FDD	
- Primary CPICH info	
- Primary Scrambling Code	Set to same code as used for Cell 2(150)

8.3.12.12.5 Test requirement

At step 1, The SS waits for random access requests from the UE. A complete Location Update is done.

At step 4, the UE sends event 1d with the information of the Cell2.

At step 7, the UE sends Cell identity, CSG ID and CSG membership indication of the Cell 2 within 4000 msec.

At step 9, the UE sends Physical Channel Reconfiguration Complete message on uplink DCCH using AM RLC.

8.3.12.13 Void

8.3.12.14 Inter-frequency CSG proximity indication

8.3.12.14.1 Definition

Test to verify the UE properly indicates that the UE is entering or leaving the proximity of one or more CSG member cells based on proximity detection with an autonomous search function.

8.3.12.14.2 Conformance requirement

1: The UE shall initiate transmission of the *ProximityIndication* message with "entering" according to [16] within [6] minutes after entering the proximity of one or more CSG member cell(s) on a UTRA or E-UTRA frequency.

The UE shall initiate transmission of the *ProximityIndication* message with "leaving" according to [16] within [6] minutes after leaving the proximity of all CSG member cell(s) on a UTRA or E-UTRA frequency.

There is no need for statistical testing of this requirement.

NOTE: Entering the proximity of one or more CSG member cell(s) means that the UE is near a cell whose CSG ID is in the UE's CSG whitelist (as determined based on autonomous search procedures). Leaving the proximity of one or more CSG member cell(s) means that the UE is no longer near any cell whose CSG ID is in the UE's CSG whitelist.

Reference

1: 3GPP TS 25.133, clause 6.7.2

8.3.12.14.3 Test purpose

 To confirm that the UE can transmit ProximityIndication message with "entering" after entering the proximity of CSG member cell. 2. To confirm that the UE can transmit ProximityIndication message with "leaving" after leaving the proximity of CSG member cell.

8.3.12.14.4 Method of test

Initial Condition

System Simulator:

3 cells - Cell 1, Cell 2 and Cell 4 are used.

The CSG id of the Cell 4 is 2. Cell 1 and 2 do not broadcast CSG ID.

Cell 1 and Cell 2 are on f1.

Cell 4 is on f2.

The SIB3_REP of cell 4 i.e. SIB3 scheduling is 32.

User Equipment:

The UE Allowed CSG List shall be empty.

The UE memory shall be cleaned up the to be free from previously stored cell information for proximity detection [method how to achieve this is TBD].

The UE is PS-DCCH+DTCH_DCH (state 6-10) or CS-DCCH+DTCH_DCH (state 6-9) or PS+CS-DCCH+DTCH_DCH (state 6-14) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Related ICS/IXIT statement(s)

- UE supports FDD
- UE supports inter-frequency CSG Proximity Indication.

Test Procedure

Table 8.3.12.14-1 illustrates the downlink power to be applied for the 2 cells.

Table 8.3.12.14-1

Parameter	Unit	Cell 1			Cell 4			Cell 2					
Test Channel		1			2			1					
LAC		0001			0002			0003					
		T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4
CPICH_Ec	dBm/3.84MHz	-70	-70	-70	-90	-70	OFF	-70	OFF	OFF	OFF	OFF	-70

Cell 1 is active. At instant T1, the downlink power is changed according to what is shown in table 8.3.12.14 -1. The UE performs manual CSG selection towards Cell 4. The UE shall store the necessary information for later proximity detection.

At instant T2, the UE is switched off and the downlink power is changed according to what is shown in table 8.3.12.14 - 1.

At instant T3, the downlink power is changed according to what is shown in table 8.3.12.14 -1. The UE is configured with proximity indication control by sending the Measurement Control message to enable CSG Proximity detection. The UE shall report "entering" proximity of a CSG member cell.

At instant T4, the downlink power is changed according to what is shown in table 8.3.12.14 -1. The UE performs handover to Cell 2 to simulate the condition that the UE is not in the vicinity of the CSG cell. The UE shall report "leaving" proximity of a CSG member cell.

Expected sequence

Step	Direction	Message	Comment
	UE SS		
1			The SS changes the power of the
			two cells according to column T1 in
			table 8.3.12.14-1
2			The UE is made to perform manual
			CSG selection and select Cell 4. A
			complete Location Update is done.
3			The UE is switched off. The SS
			changes the power of the two cells
			according to column T2 in table
			8.3.12.14-1
4			The UE is switched on and shall
			reselect Cell 1. The UE performs a
			registration procedure described in
			TS 34.108 subclause 7.2.2
			according to the CN domain under test.
5			The SS changes the power of the
3			two cells according to column T3 in
			table 8.3.12.14-1
6	+	MEASUREMENT CONTROL	The SS configures a measurement
	`	WIE / GOTT GOTT TOE	to the UE to enable CSG proximity
			detection.
7	\rightarrow	MEASUREMENT REPORT	The UE sends a measurement
			report with the CSG proximity
			indication to the SS. The message
			includes the frequency of the Cell
			4 and "entering" proximity of a
			CSG member cell.
8			The SS changes the power of the
			two cells according to column T4 in
			table 8.3.12.14-1
9			The UE is made to perform
			handover to Cell 2.
10	\rightarrow	MEASUREMENT REPORT	The UE sends a measurement
			report with the CSG proximity
			indication to the SS. The message
			includes the frequency of the Cell
			4 and "leaving" proximity of a CSG
			member cell.

Specific Message Contents

MEASUREMENT CONTROL (Step 6)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
CHOICE Measurement type	
- CSG Proximity detection	
- UTR A CSG Proximity detection	enable

MEASUREMENT REPORT (Step 7)

Information Element	Value/remark	
Measurement identity	Check to see if set to 1	
CSG Proximity Indication		
- CSG Proximity Indication	entering	
- CHOICE Radio Access Technology		
- UTRA		
- CSG Frequency info for UTRA		
- CHOICE mode		
- FDD		
- UARFCN uplink (Nu)	The same as the Cell 4	
- UARFCN downlink (Nd)	The same as the Cell 4	

MEASUREMENT REPORT (Step 10)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
CSG Proximity Indication	
- CSG Proximity Indication	leaving
- CHOICE Radio Access Technology	
- UTRA	
- CSG Frequency info for UTRA	
- CHOICE mode	
- FDD	
- UARFCN uplink (Nu)	The same as the Cell 4
- UARFCN downlink (Nd)	The same as the Cell 4

8.3.12.14.5 Test requirement

At step 7, the UE sends a measurement report including "entering" proximity of a CSG member cell within [360]s.

At step 10, the UE sends a measurement report including "leaving" proximity of a CSG member cell within [360]s.