

7 Generic setup procedures

7.1 Basic Generic Procedures

7.1.1 UE Test States for Basic Generic Procedures

This clause describes a set of procedures for use by test cases in 3GPP TS 34.123-1 [1]. Describing these procedures in a generic manner allows their use in many test cases. By using these procedures, test case descriptions need not detail signalling that is not relevant to its purpose or understanding.

The procedures are based upon default values that are adapted to the most common usage. Test cases that require values different from the default will, when specifying the Basic Generic Procedure, also specify those parameters that are modified.

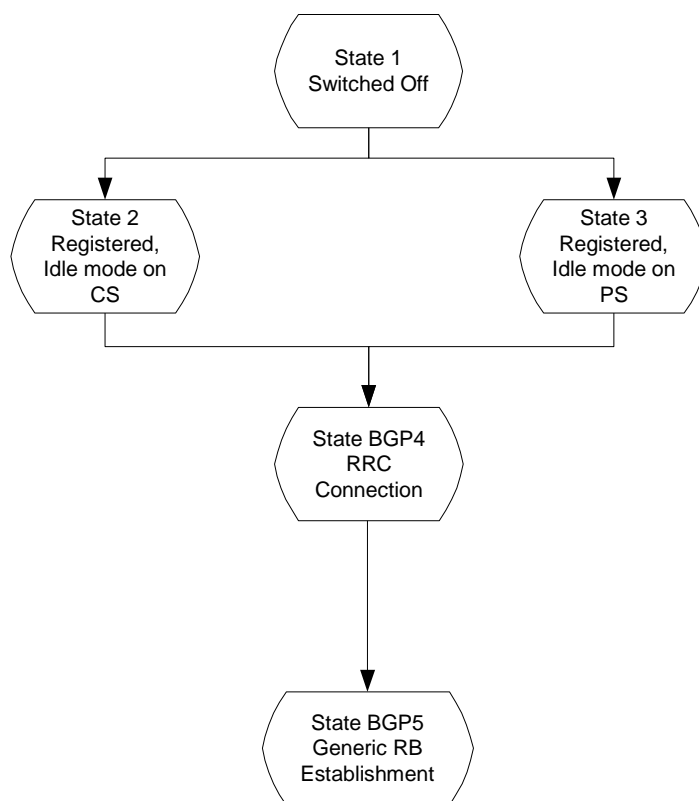


Figure 7.1.1: UE Test States for Basic Generic Procedures

In order that the UE can set up a call in UTRAN, there are a number of procedures to be undertaken in a hierarchical sequence to move between known states. The sequences are shown in figure 7.1.1 and the status of the relevant protocols in the UE in the different states are given in table 7.1.1.

Table 7.1.1: The UE states

		RRC	CC	MM	SM	GMM
State 1	Power OFF	----	null	null	pdp-inactive	GMM-null
State 2	CS Registered Idle Mode	idle	null	idle	pdp-inactive	GMM-deregistered
State 3	PS Registered Idle Mode	idle	null	null	pdp-inactive	GMM-registered
State BGP4	RRC Connection	connected	null	as previous	pdp-inactive	as previous
State BGP5	Generic RB Establishment	connected	null	as previous	pdp-inactive	as previous

7.1.2 Mobile terminated establishment of Radio Resource Connection

7.1.2.1 Initial conditions

System Simulator:

The system simulator will start from the default idle state. Parameters will be the default parameters for a single cell, unless otherwise specified in the test case.

User Equipment:

Unless otherwise specified in the test case, the UE will be in the following state:

- Default test operating conditions.
- The UE shall have followed the generic registration procedure for CS or PS operations, and will be in Idle Mode, Camped-on (State 2 or State 3).

7.1.2.2 Definition of system information messages

The default system information messages are used.

7.1.2.3 Procedure

- The SS sends a PAGING TYPE 1 message to the UE on the appropriate paging block, and with the IE "Paging record" containing the TMSI or P-TMSI of the UUT.
- The SS receives an RRC CONNECTION REQUEST message from the UE.
- On receipt of the RRC CONNECTION REQUEST the SS shall transmit a RRC CONNECTION SETUP message to the UE. The SS shall wait for the receipt of an RRC CONNECTION SETUP COMPLETE message from the UE.
- On receipt of an RRC CONNECTION SETUP COMPLETE message, the procedure is complete.

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION (BCCH)	Default SI messages
2	←		PAGING TYPE 1 (PCCH)	Sent on appropriate cycle
3	→		RRC CONNECTION REQUEST (CCCH)	RRC
4	←		RRC CONNECTION SETUP (CCCH)	RRC
5	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC

7.1.2.4 Specific message contents

7.1.2.4.1 PAGING TYPE 1

This message is sent from the SS to the UE, using the TM RLC SAP, on the PCCH logical channel.

Information Element				Value/Remark
Message Type				PAGING TYPE 1
UE Information elements				
Paging record list	Paging record	CN originator	Paging cause	Terminating Speech Call (note)
			CN domain identity	CS domain (note)
			UE Identity	TMSI (GSM-MAP) As specified during Registration procedure
Other information elements				
BCCH modification info				omit
NOTE: These defaults are applied if no subsequent procedure is to be run. Otherwise, the Paging cause, CN domain identity and UE Identity are selected in accordance with the requirements of the following procedure.				

7.1.2.4.2 RRC CONNECTION REQUEST

This message is sent by the UE to the SS using the TM-RLC SAP. It is sent on the CCCH Logical channel.

Information Element			Value/Remark
Message Type			RRC CONNECTION REQUEST
UE information elements			
Initial UE identity	TMSI and LAI	TMSI (GSM-MAP)	As specified during Registration procedure
		LAI (GSM-MAP)	As specified by default 1 cell environment
Initial UE capability	Maximum number of AM entities		As declared in UE ICS
Establishment cause			As appropriate
Protocol error indicator			FALSE
>UE Specific Behaviour Information 1 idle			This IE will not be checked by default behaviour, but in specific test case.
Measurement information elements			
Measured results on RACH			Not checked
NOTE: These defaults are applied if no subsequent procedure is to be run. Otherwise, the UE Identity is selected in accordance with the requirements of the following procedure.			

7.1.2.4.3 RRC CONNECTION SETUP

This message is sent from the SS to the UE using the UM-RLC SAP. The message is sent on the CCCH Logical channel.

The default RRC CONNECTION SETUP message for the transition to connected mode CELL_DCH is used except for the IE fields specified below.

Information Element			Value/Remark
Message Type			RRC CONNECTION SETUP
UE Information Elements			
Initial UE identity	TMSI and LAI	TMSI (GSM-MAP)	As specified during Registration procedure
		LAI (GSM-MAP)	As specified by default 1 cell environment
RB Information Elements			
Use default			
TrCH Information Elements			
Use default			
PhyCH Information Elements			
Frequency info			As specified by default 1 cell environment
Uplink radio resources			
Use default			
Downlink radio resources			
Use default			
NOTE: These defaults are applied if no subsequent procedure is to be run. Otherwise, the UE Identity is selected in accordance with the requirements of the following procedure.			

7.1.2.4.4 RRC CONNECTION SETUP COMPLETE

This message is sent by the UE to the SS using AM-RLC SAP. The message is sent on the DCCH Logical channel.

Information Element			Value/Remark
Message Type			RRC CONNECTION SETUP COMPLETE
UE Information Elements			
Hyper frame number			Not checked
UE radio access capability	Conformance test compliance		R99
	PDCP capability	Support for lossless SRNS relocation	Not checked

Information Element		Value/Remark	
		Supported algorithm types	Not checked
	RLC capability	Total RLC AM buffer size	Not checked
		Maximum number of AM entities	Not checked
	Transport channel capability	Downlink	
		Max no of bits received	Not checked
		Max convolutionally coded bits received	Not checked
		Max turbo coded bits received	Not checked
		Maximum number of simultaneous transport channels	Not checked
		Max no of received transport blocks	Not checked
		Maximum number of TFC in the TFCS	Not checked
		Maximum number of TF	Not checked
		Support for turbo decoding	Not checked
		Uplink	
		Max no of bits transmitted	Not checked
		Max convolutionally coded bits received	Not checked
		Max turbo coded bits received	Not checked
		Maximum number of simultaneous transport channels	Not checked
		Max no of transmitted transport blocks	Not checked
		Maximum number of TFC in the TFCS	Not checked
		Maximum number of TF	Not checked
		Support for turbo encoding	Not checked
	RF capability	UE power class	As declared for UE
		Tx/Rx frequency separation	Not checked
	Physical channel capability	Downlink	
		Maximum number of simultaneous CCTrCH	Not checked
		Max no DPCH/PDSCH codes	Not checked (PDSCH: R99 and Rel-4 only)
		Max no physical channel bits received	Not checked
		Support for SF 512	Not checked
		Support of PDSCH	Not checked (R99 and Rel-4 only)
		Simultaneous reception of SCCPCH and DPCH	Not checked
		Max no of S-CCPCH RL	Not checked
		Uplink	
		Maximum number of DPDCH bits transmitted per 10 ms	Not checked
		Support of PCPCH (R99 and Rel-4 only)	Not checked
	UE multi-mode/multi-RAT capability	Multi-RAT capability	
		Multi-mode capability	FDD or FDD/TDD
	Security capability	Ciphering algorithm capability	Not checked
		Integrity protection algorithm capability	Not checked
	LCS capability	Standalone location method(s) supported	Not checked

Information Element		Value/Remark
	UE based OTDOA supported	Not checked
	Network Assisted GPS support	Not checked
	GPS reference time capable	Not checked
	Support for IPDL	Not checked
Measurement capability	Need for downlink compressed mode	Not checked
	FDD measurements DL	Not checked
	TDD measurements DL	Not checked
	GSM 900 DL	Not checked
	DCS 1800 DL	Not checked
	GSM 1900 DL	Not checked
	Multi-carrier measurement DL	Not checked
	Need for uplink compressed mode	Not checked
	FDD measurements UL	Not checked
	TDD measurements UL	Not checked
	GSM 900 UL	Not checked
	DCS 1800 UL	Not checked
	GSM 1900 UL	Not checked
	Multi-carrier measurement UL	Not checked
UE system specific capability		Not checked

7.1.3 Radio Bearer Setup Procedure

7.1.3.1 Initial conditions

The procedure specified in clause 7.1.2 will be run. This procedure starts from the successful completion of clause 7.1.2.

7.1.3.2 Definition of system information messages

The default system information messages are used.

7.1.3.3 Procedure

- The SS sends a RADIO BEARER SETUP message to the UE on the DCCH established by the RRC Connection Establishment procedure.
- The SS receives a RADIO BEARER SETUP COMPLETE message from the UE in RLC Acknowledged mode on the DCCH.

On reception of the RADIO BEARER SETUP COMPLETE the procedure is complete.

Step	Direction		Message	Comments
	UE	SS		
1	←		RADIO BEARER SETUP (DCCH)	RRC
2	→		RADIO BEARER SETUP COMPLETE (DCCH)	RRC

7.1.3.4 Specific message contents

7.1.3.4.1 RADIO BEARER SETUP

The RADIO BEARER SETUP message is sent from the System Simulator to the UE, using AM-RLC on the DCCH logical channel.

The default RRC CONNECTION SETUP message for the setup of a speech radio access bearer is used except for the IE fields specified below.

Information Element	Value/Remark
Message Type	RADIO BEARER SETUP
UE Information Elements	
CN Information Elements	
RB Information Elements	
RAB information for setup	Default parameters for 12.2 kbps speech RAB + 3.4 kbps signalling radio bearer according to clause 6.10.2.4.1.4 for FDD, clause 6.10.3.4.1.4 for 3.84 Mcps TDD and 6.11.5.4.1.4 for 1.28 Mcps TDD

7.1.3.4.2 RADIO BEARER SETUP COMPLETE

The RADIO BEARER SETUP COMPLETE message is sent from the UE to the System Simulator, using AM-RLC on the DCCH logical channel.

The default RADIO BEARER SETUP COMPLETE message is used.

Information Element	Value/Remark
Message Type	RADIO BEARER SETUP COMPLETE
Use default	

7.2 Generic setup procedures

7.2.1 UE Test States for Generic setup procedures

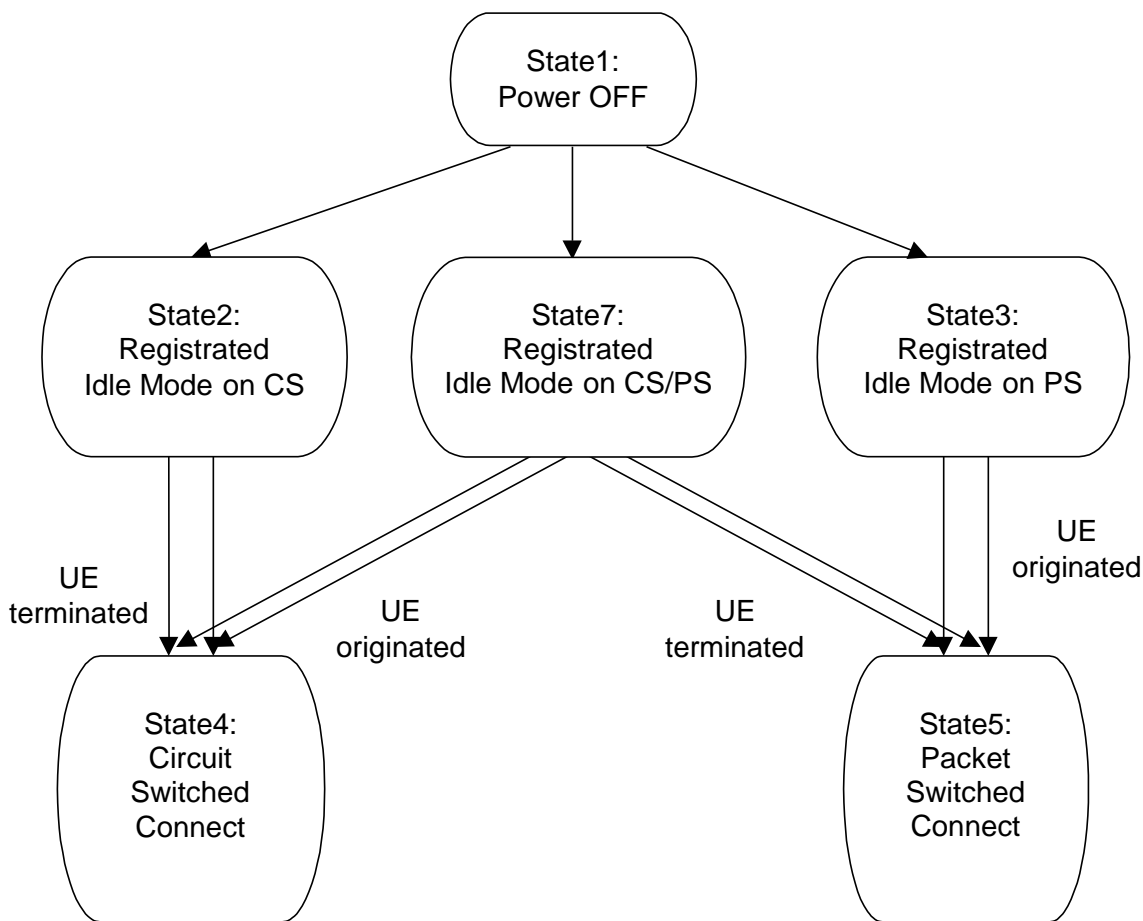


Figure 7.2.1.1: UE Test States for Generic setup procedures

In order that the UE can set up a call in UTRAN, there are a number of procedures to be undertaken in a hierarchical sequence to move between known states. The sequences are shown in figure 7.2.1.1 and the status of the relevant protocols in the UE in the different states are given in table 7.2.1.1.

Table 7.2.1.1: The UE states

		RRC	CC	MM	SM	GMM
State1	Power OFF	-----	null	null	pdp-inactive	GMM-null
State2	Registered Idle Mode on CS	idle	null	MM idle	pdp-inactive	GMM-deregistered
State3	Registered Idle Mode on PS	idle	null	null	pdp-inactive	GMM-registered
State4	Circuit Switched Connect	connected	active	MM connection active	pdp-inactive	same as previous state
State5	Packet Switched Connect	connected	null	same as previous state	pdp-active	GMM-registered
State7	Registered Idle Mode on CS/PS	idle	null	MM idle	pdp-inactive	GMM-registered

7.2.2 Registration of UE

The default procedures required to achieve the changes of state between State 1, in clause 7.2.1, and States 2, 3 and 7 are illustrated in the following clauses.

The choice of which procedure to use given a UE supporting packet services is influenced by the Network Mode of Operation being simulated by the SS and by the Operation Mode of the UE, as described in 3GPP TS 24.008 [32] clause 1.7.2.2. Table 7.2.2 shows the appropriate clause number for each combination of these two modes of operation.

Table 7.2.2: Registration Procedures for UEs Supporting Packet Services

Network Mode		NMO I	NMO II
UE Mode	PS/CS	7.2.2.3	7.2.2.4
	PS	7.2.2.2	7.2.2.2

7.2.2.1 Registration on CS

7.2.2.1.1 Initial condition

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.2.1.2 Definition of system information messages

The default system information messages are used.

7.2.2.1.3 Procedure

Registration of UE for SS shall be established under ideal radio conditions as defined in clause 5.

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION (BCCH)	NW Broadcast
2		→	RRC CONNECTION REQUEST (CCCH)	RRC
3		←	RRC CONNECTION SETUP (CCCH)	RRC
4		→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
5		→	LOCATION UPDATING REQUEST	MM
6		←	AUTHENTICATION REQUEST	MM
7		→	AUTHENTICATION RESPONSE	MM
8		←	SECURITY MODE COMMAND	RRC
9		→	SECURITY MODE COMPLETE	RRC
10		←	LOCATION UPDATING ACCEPT	MM
11		→	TMSI REALLOCATION COMPLETE	MM
12		←	RRC CONNECTION RELEASE	RRC
13		→	RRC CONNECTION RELEASE COMPLETE	RRC

7.2.2.1.4 Specific message contents

All Specific message contents shall be referred to clause 9.

7.2.2.2 Registration on PS

7.2.2.2.1 Initial condition

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.2.2.2 Definition of system information messages

The default system information messages are used.

7.2.2.2.3 Procedure

Registration of UE for SS shall be established under ideal radio conditions as defined in clause 5.

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION (BCCH)	NW Broadcast
2		→	RRC CONNECTION REQUEST (CCCH)	RRC
3		←	RRC CONNECTION SETUP (CCCH)	RRC
4		→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
5		→	ATTACH REQUEST	GMM
6		←	AUTHENTICATION AND CIPHERING REQUEST	GMM
7		→	AUTHENTICATION AND CIPHERING RESPONSE	GMM
8		←	SECURITY MODE COMMAND	RRC
9		→	SECURITY MODE COMPLETE	RRC
10		←	ATTACH ACCEPT	GMM
11		→	ATTACH COMPLETE	GMM
12		←	RRC CONNECTION RELEASE	RRC
13		→	RRC CONNECTION RELEASE COMPLETE	RRC

7.2.2.2.4 Specific message contents

All Specific message contents shall be referred to clause 9.

7.2.2.3 Registration on CS / PS combined environment

7.2.2.3.1 Initial condition

System Simulator:

- 1 cell operating in network operation mode I, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.2.3.2 Definition of system information messages

The default system information messages are used.

7.2.2.3.3 Procedure UE establish PS registration immediately after the UE has been switched on

Registration of UE for SS shall be established under ideal radio conditions as defined in clause 5.

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION (BCCH)	NW Broadcast
2		→	RRC CONNECTION REQUEST (CCCH)	RRC
3		←	RRC CONNECTION SETUP (CCCH)	RRC
4		→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
5		→	ATTACH REQUEST	GMM
6		←	AUTHENTICATION AND CIPHERING REQUEST	GMM
7		→	AUTHENTICATION AND CIPHERING RESPONSE	GMM
8		←	SECURITY MODE COMMAND	RRC
9		→	SECURITY MODE COMPLETE	RRC
10		←	ATTACH ACCEPT	GMM
11		→	ATTACH COMPLETE	GMM
12		←	RRC CONNECTION RELEASE	RRC
13		→	RRC CONNECTION RELEASE COMPLETE	RRC

7.2.2.3.3a Procedure UE establish PS registration later the user decides to use the PS services

CS registration has been successfully completed and RRC connection is released, see clause 7.2.2.1. Registration of UE for SS shall be established under ideal radio conditions as defined in clause 5.

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION (BCCH)	NW Broadcast
1a				The UE initiates an attach by MMI or by AT command.
2		→	RRC CONNECTION REQUEST (CCCH)	RRC
3		←	RRC CONNECTION SETUP (CCCH)	RRC
4		→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
5		→	ATTACH REQUEST	GMM
6		←	AUTHENTICATION AND CIPHERING REQUEST	GMM
7		→	AUTHENTICATION AND CIPHERING RESPONSE	GMM
8		←	SECURITY MODE COMMAND	RRC
9		→	SECURITY MODE COMPLETE	RRC
10		←	ATTACH ACCEPT	GMM
11		→	ATTACH COMPLETE	GMM
12		←	RRC CONNECTION RELEASE	RRC
13		→	RRC CONNECTION RELEASE COMPLETE	RRC

7.2.2.3.4 Specific message contents

All Specific message contents shall be referred to clause 9.

7.2.2.4 Registration on CS / PS non-combined environment

7.2.2.4.1 Initial condition

System Simulator:

- 1 cell operating in network operation mode II, default parameters.

User Equipment:

- The UE set to Operation mode A
- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.2.4.2 Definition of system information messages

The default system information messages are used.

7.2.2.4.3 Procedure

Registration of UE for SS shall be established under ideal radio conditions as defined in clause 5.

Registrations in the CS domain and in the PS domain shall execute independently. The separate registration procedures may occur sequentially or in parallel. If the procedures occur sequentially PS domain registration can be started immediately after power on or the UE can initiate PS registration by MMI or by AT command. If MMI or AT commands are used, registrations are done with two separate RRC connections. The procedures for CS and PS registration shall be as defined in clauses 7.2.2.1 and 7.2.2.2.

7.2.2.4.4 Specific message contents

All Specific message contents shall be referred to clause 9.

7.2.3 Call setup

7.2.3.1 Generic call set up procedure for mobile terminating circuit switched calls

7.2.3.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.3.1.2 Definition of system information messages

The default system information messages are used.

7.2.3.1.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5.

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION (BCCH)	Broadcast
2	←		PAGING (PCCH)	Paging

Step	Direction		Message	Comments
	UE	SS		
3	→		RRC CONNECTION REQUEST (CCCH)	RRC
4	←		RRC CONNECTION SETUP (CCCH)	RRC
5	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6	→		PAGING RESPONSE	RR
7	←		AUTHENTICATION REQUEST	MM
8	→		AUTHENTICATION RESPONSE	MM
9	←		SECURITY MODE COMMAND	RRC
10	→		SECURITY MODE COMPLETE	RRC
11	←		SET UP	CC (see note)
12	→		CALL CONFIRMED	CC
13	←		RADIO BEARER SETUP	RRC RAB SETUP
14	→		RADIO BEARER SETUP COMPLETE	RRC
15	→		ALERTING	CC (this message is optional)
16	→		CONNECT	CC
17	←		CONNECT ACKNOWLEDGE	CC

NOTE: The "Signal" information element is not included in the SETUP message.

7.2.3.1.4 Specific message contents

All Specific message contents shall be referred to clause 9.

7.2.3.2 Generic call set-up procedure for mobile originating circuit switched calls

7.2.3.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.3.2.2 Definition of system information messages

The default system information messages are used.

7.2.3.2.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5.

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION (BCCH)	Broadcast
2	→		RRC CONNECTION REQUEST (CCCH)	RRC
3	←		RRC CONNECTION SETUP (CCCH)	RRC
4	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
5	→		CM SERVICE REQUEST	MM
6	←		AUTHENTICATION REQUEST	MM
7	→		AUTHENTICATION RESPONSE	MM
8	←		SECURITY MODE COMMAND	RRC
9	→		SECURITY MODE COMPLETE	RRC
10	→		SET UP	CC
11	←		CALL PROCEEDING	CC
12	←		RADIO BEARER SETUP	RRC RAB SETUP
13	→		RADIO BEARER SETUP COMPLETE	RRC
14	←		ALERTING	CC
15	←		CONNECT	CC
16	→		CONNECT ACKNOWLEDGE	CC

7.2.3.2.4 Specific message contents

All Specific message contents shall be referred to clause 9.

7.2.4 Session setup

7.2.4.1 Generic session set up procedure for mobile terminating packet switched sessions

7.2.4.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.4.1.2 Definition of system information messages

The default system information messages are used.

7.2.4.1.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5.

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION (BCCH)	Broadcast
2		←	PAGING TYPE1 (PCCH)	Paging
3		→	RRC CONNECTION REQUEST (CCCH)	RRC
4		←	RRC CONNECTION SETUP (CCCH)	RRC
5		→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6		→	SERVICE REQUEST	GMM
7		←	AUTHENTICATION AND CIPHERING REQUEST	GMM
8		→	AUTHENTICATION AND CIPHERING RESPONSE	GMM
9		←	SECURITY MODE COMMAND	RRC
10		→	SECURITY MODE COMPLETE	RRC
11		←	REQUEST PDP CONTEXT ACTIVATION	SM
12		→	ACTIVATE PDP CONTEXT REQUEST	SM (NOTE 1, NOTE 2)
13		←	RADIO BEARER SETUP	RRC RAB SETUP
14		→	RADIO BEARER SETUP COMPLETE	RRC
15		←	ACTIVATE PDP CONTEXT ACCEPT	SM

NOTE 1: The UE implemented according to the Rel-7 and earlier versions of the specification may include static PDP address. The UE implemented according to the Rel-8 and later versions of the specification shall not include the PDP address but the PDP address allocation is dynamic and shall be handled by the SS by including the IPv4 PDP address (set as per PIXIT) in the ACTIVATE PDP CONTEXT ACCEPT message. In UTRA-EUTRA test cases IPv4 and/or IPv6 address (set as per PIXIT) is included in the ACTIVATE PDP CONTEXT ACCEPT message.

NOTE 2: UEs supporting S1 mode shall indicate subscribed, interactive or background traffic class in the QoS requested. UEs not supporting S1 mode should indicate subscribed, interactive or background traffic class in the QoS requested.

7.2.4.1.4 Specific message contents

All Specific message contents shall be referred to clause 9.

7.2.4.2 Generic session set up procedure for mobile originating packet switched sessions

7.2.4.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.4.2.2 Definition of system information messages

The default system information messages are used.

7.2.4.2.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5.

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION (BCCH)	Broadcast
2	→		RRC CONNECTION REQUEST (CCCH)	RRC
3	←		RRC CONNECTION SETUP (CCCH)	RRC
4	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
5	→		SERVICE REQUEST	GMM
6	←		AUTHENTICATION AND CIPHERING REQUEST	GMM
7	→		AUTHENTICATION AND CIPHERING RESPONSE	GMM
8	←		SECURITY MODE COMMAND	RRC
9	→		SECURITY MODE COMPLETE	RRC
10	→		ACTIVATE PDP CONTEXT REQUEST	SM (NOTE 1, NOTE 2)
11	←		RADIO BEARER SETUP	RRC RAB SETUP
12	→		RADIO BEARER SETUP COMPLETE	RRC
13	←		ACTIVATE PDP CONTEXT ACCEPT	SM

NOTE 1: The UE implemented according to the Rel-7 and earlier versions of the specification may include static PDP address. The UE implemented according to the Rel-8 and later versions of the specification shall not include the PDP address but the PDP address allocation is dynamic and shall be handled by the SS by including the IPv4 PDP address (set as per PIXIT) in the ACTIVATE PDP CONTEXT ACCEPT message. In UTRA-EUTRA test cases IPv4 and/or IPv6 address (set as per PIXIT) in the ACTIVATE PDP CONTEXT ACCEPT message.

NOTE 2: UEs supporting S1 mode shall indicate subscribed, interactive or background traffic class in the QoS requested. UEs not supporting S1 mode should indicate subscribed, interactive or background traffic class in the QoS requested.

7.2.4.2.4 Specific message contents

All Specific message contents shall be referred to clause 9.

7.2.5 IMS Emergency Call setup

7.2.5.1 Generic IMS Emergency call set up procedure for mobile originating packet switched sessions – Normal Service

7.2.5.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in Registered, Idle Mode state (State 7).
- The Test-USIM shall be inserted and is capable of making Emergency Call.

7.2.5.1.2 Definition of system information messages

The default system information messages are used.

7.2.5.1.3 Procedure

The Emergency IMS Call Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5.

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION (BCCH)	Broadcast
2		←	Make the UE attempt an IMS Emergency call	
3		→	RRC CONNECTION REQUEST (CCCH) with 'establishmentCause' set to 'emergency'	NOTE 1
4		←	RRC CONNECTION SETUP (CCCH)	RRC
5		→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6		→	SERVICE REQUEST	GMM
7		←	SECURITY MODE COMMAND	RRC
8		→	SECURITY MODE COMPLETE	RRC
9		→	ACTIVATE PDP CONTEXT REQUEST with 'Request Type' set to 'Emergency'	SM (NOTE 2, NOTE 3)
10		←	RADIO BEARER SETUP	The SS establishes the AM RAB for IMS signalling
11		→	RADIO BEARER SETUP COMPLETE	
12				EXCEPTION: In parallel to the events described in steps 15 to 21 below, the behaviour in steps 13 and 14 occurs
13				Steps 1-4 defined in annex C.20 in TS 34.229-1 [46]
14				Steps defined in annex C22 in TS 34.229-1[46]
15		←	ACTIVATE PDP CONTEXT ACCEPT	The SS accepts the PDP context
16		←	REQUEST SECONDARY PDP CONTEXT ACTIVATION	The SS requests a Secondary PDP context activation and starts timer T3385 (NOTE 4)
17		→	ACTIVATE SECONDARY PDP CONTEXT REQUEST	The UE requests a Secondary PDP context activation, enters the state PDP-ACTIVE-PENDING and starts timer T3380.(NOTE 4)
18				The SS stops timer T3385
19		←	RADIO BEARER SETUP	The SS establishes the UM RAB for IMS voice
20		→	RADIO BEARER SETUP COMPLETE	

21	←	ACTIVATE SECONDARY PDP CONTEXT ACCEPT	The SS accepts the Secondary PDP context activation with the requested QoS
----	---	---------------------------------------	--

NOTE 1: The RRC establishment cause will be set to "Emergency".

NOTE 2: The UE shall not include the PDP address but the PDP address allocation is dynamic and shall be handled by the SS by including the IPv4 PDP and/or IPv6 address (set as per PIXIT) in the ACTIVATE PDP CONTEXT ACCEPT message.

NOTE 3: The UEs supporting S1 mode shall include interactive or background traffic class in the QoS requested. The UEs not supporting S1 mode should include interactive or background traffic class in the QoS requested.

NOTE 4: 'Conversational' is included in the QoS in the REQUEST SECONDARY PDP CONTEXT ACTIVATION and in the ACTIVATE SECONDARY PDP CONTEXT REQUEST message sent by the UE.

7.2.5.1.4 Specific message contents

All Specific message contents shall be referred to clause 9.

Step 5: The UE transmits an *RRCConnectionSetupComplete* message to confirm the successful completion of the connection establishment and

Step 6: The UE transmits the *SERVICE REQUEST* message.

Step 7: The SS transmits a *SecurityModeCommand* message to activate AS security.

Step 8: The UE transmits a *SecurityModeComplete* message and establishes the initial security configuration.

Step 9: UE transmits a Activate PDP Context Request message with Request Type set to Emergency with a PDP type number "IPv4v6 address" in the Requested PDP address information element. See TS 34.229 Annex C.17

Step 10: SS sends Radio Bearer Setup message - Use the same message as specified for "Packet to CELL_DCH / E-DCH / HS-DSCH using one multiplexing option (1/1) and SRBs mapped on E-DCH/HS-DSCH", condition A17c.

Step 19: Use the following specific message content:

RADIO BEARER SETUP

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects an integer between 0 and 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.
Integrity protection mode info	Not Present
Ciphering mode info	Not Present
Activation time	$(256 + \text{CFN} - (\text{CFN} \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
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
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present

RNC support for change of UE capability	Not Present
CHOICE Specification mode	Complete specification
- Signalling RB information to setup	Not Present
- RAB information for setup	(Conversational UMDTCH for PS domain)
- RAB info	0000 0110B
- RAB 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	useT314
- RB information to setup	
- RB identity	27
- PDCP info	
- Support for lossless SRNS relocation	FALSE
- Max PDCP SN window size	Not present
- PDCP PDU header	Present
- Header compression information	
- CHOICE algorithm type	
- RFC3095	
- Profiles	2 profiles
- Profile instance	1
- Profile instance	2
- Uplink	
- Max_CID	15
- Downlink	
- Max_CID	15
- Reverse-Decompression_Depth	0
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	UMRLC
- Transmission RLC discard	Not present
- CHOICE Downlink RLC mode	UMRLC
- DL UM RLC LI size	7
- DL Reception Window Size	32
- One sided RLC re-establishment	FALSE
- Alternative E-bit interpretation	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	9
- E-DCH MAC-d flow identity	4
- CHOICE RLC PDU size	Fixed size
- DDI	7
- RLC PDU size list	12 RLC PDU sizes
- RLC PDU size	96 bits
- RLC PDU size	112 bits
- RLC PDU size	144 bits
- RLC PDU size	160 bits
- RLC PDU size	176 bits
- RLC PDU size	192 bits
- RLC PDU size	208 bits
- RLC PDU size	224 bits
- RLC PDU size	288 bits
- RLC PDU size	296 bits
- RLC PDU size	312 bits
- 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	3
- Logical channel identity	Not Present
RB information to reconfigure list	Not Present
RB information to be affected	Not Present

Downlink counter synchronization info	Not Present
PDCP ROHC target mode	
- Target Mode	O-mode
UL Transport channel information for all transport channels	Not Present
Deleted UL TrCH information	Not Present
Added or Reconfigured UL TrCH information	1 E-DCH with one DCCH MAC-d flow and two DTCH MAC-d flows
- Uplink transport channel type	E-DCH
- CHOICE UL parameters	E-DCH
- UL MAC header type	Not present
- UL MAC header type	MAC-e/es
- CHOICE mode	FDD
- E-DCH Transmission Time Interval	set to 2ms if supported by the UE E-DCH category, or 10ms if the UE E-DCH category does not support 2ms TTI
- HARQ info for E-DCH	
- HARQ RV Configuration	rvtable
- Added or reconfigured E-DCH MAC-d flow	(for DCCH)
- E-DCH MAC-d flow identity	1
- E-DCH MAC-d flow power offset	0
- E-DCH MAC-d flow maximum number of retransmissions	7
- E-DCH MAC-d flow multiplexing list	Not Present
- CHOICE transmission grant type	Non-scheduled grant info
- Max MAC-e PDU contents size	168 bits
- 2 ms non-scheduled transmission grant	Not Present
HARQ process allocation	
- Added or reconfigured E-DCH MAC-d flow	(for first DTCH)
- E-DCH MAC-d flow identity	2
- E-DCH MAC-d flow power offset	0
- E-DCH MAC-d flow maximum number of retransmissions	7
- E-DCH MAC-d flow multiplexing list	Not Present
- CHOICE transmission grant type	Scheduled grant info
- Added or reconfigured E-DCH MAC-d flow	(for second DTCH)
- E-DCH MAC-d flow identity	3
- E-DCH MAC-d flow power offset	0
- E-DCH MAC-d flow maximum number of retransmissions	7
- CHOICE transmission grant type	Scheduled grant info
DL Transport channel information common for all transport channel	Not Present
Deleted DL TrCH information	Not Present
Added or Reconfigured DL TrCH information	DCH for DCCH and HS-DSCH for 3 DTCHs
- Downlink transport channel type	DCH
- DL Transport channel identity	10
- CHOICE DL parameters	Explicit
- TFS	
- CHOICE Transport channel type	Dedicated transport channels
- Dynamic Transport format information	
- RLC Size	Reference to clause 6.10 Parameter Set
- Number of TBs and TTI List	(This IE is repeated for TFI number.)
- Transmission Time Interval	Not Present
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Logical channel list	All
- Semi-static Transport Format information	
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	-20 (-2.0)
- Downlink transport channel type	HS-DSCH
- DL Transport channel identity	Not Present
- CHOICE DL parameters	HS-DSCH

- HARQ Info	Reference to clause 6.10.2.4.5 Parameter Set
- Number of Processes	Implicit
- CHOICE <i>Memory Partitioning</i>	MAC-ehs
- CHOICE <i>DL MAC header type</i>	
- Added or reconfigured MAC-ehs reordering	
queue	(three queues)
- MAC-ehs queue to add or reconfigure list	
- MAC-ehs queue Id	2 (for first DTCH)
- T1	50
- MAC-ehs window size	16
- MAC-ehs queue Id	3 (for second DTCH)
- T1	50
- MAC-ehs window size	16
- DCH quality target	Not present
Frequency info	
- UARFCN uplink (Nu)	Reference to clause 5.1 Test frequencies. This IE should be present, if the default duplex distance defined for the operating frequency band is not used and frequency is different from the current frequency, otherwise set to Not Present.
- UARFCN downlink (Nd)	Reference to clause 5.1 Test frequencies if frequency is different from the current frequency otherwise set to Not Present.
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-40 (-80dB)
- PC Preamble	1 frame
- SRB delay	7 frames
- Power Control Algorithm	Algorithm1
- TPC step size	0 (1dB)
- Δ_{ACK}	3
- Δ_{NACK}	3
- Ack-Nack repetition factor	1
- HARQ_preamble_mode	0
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	0
- spreading factor	Not Present
- TFCI existence	FALSE
- Number of FBI bit	Not Present
- Puncturing Limit	Not Present
- Number of TPC bits	Not Present
E-DCH info	
- MAC-es/e reset indicator	TRUE
- E-DPCCH info	
- E-DPCCH/DPCCH power offset	0
- 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	0
- E-DCH minimum set E-TFCI	9
- Reference E-TFCIs	2 E-TFCIs
- Reference E-TFCI	11
- Reference E-TFCI PO	4
- Reference E-TFCI	83
- Reference E-TFCI PO	16
- Maximum channelisation codes	2sf4
- 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 allocation	Not present
- Serving Grant	Not present
-UL 16QAM settings	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
- 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	TRUE
- HS-DSCH TB size table	Not present
Downlink information common for all radio links	
- Downlink F-DPCH info common for all RL	
- Timing Indication	Maintain
- Timing maintained Synchronization indicator	FALSE
- 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	Not Present
- 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	Ref. to the Default setting in clause 6.1 (FDD)
- Serving HS-DSCH radio link indicator	TRUE
- Serving E-DCH radio link indicator	TRUE
- Downlink DPCH info for each RL	Not Present
- 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 DPCH Offset Value (as currently stored in SS) mod 38 400
- 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
- E-AGCH Info	
- E-AGCH Channelisation Code	10
- CHOICE E-HICH Information	
- E-HICH Information	
- Channelisation code	4
- Signature sequence	1
- CHOICE E-RGCH Information	Not Present
MBMS PL Service Restriction Information	Not Present

7.2.5.2 Generic IMS Emergency call set up procedure for mobile originating packet switched sessions – Limited Service

7.2.5.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE is in GMM-DEREGISTERED.LIMITED-SERVICE state. .
- The Test-USIM shall be inserted and is capable of making Emergency Call.

7.2.5.2.2 Definition of system information messages

The default system information messages are used, except the SIB3 contents specified in 7.2.5.2.4.

7.2.5.2.3 Procedure

The establishment of Emergency IMS Call Set-up procedure is assumed to be mobile originated.

Step	Direction		Message	Comments
	UE	SS		
1			Make the UE attempt an IMS Emergency call	
2	→		RRC CONNECTION REQUEST (CCCH) with 'establishmentCause' set to 'emergency'	
3	←		RRC CONNECTION SETUP (CCCH)	RRC
4	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
5	→		ATTACH REQUEST with Attach Type set to "Emergency Attach"	GMM
6	←		AUTHENTICATION AND CIPHERING REQUEST	GMM
7	→		AUTHENTICATION AND CIPHERING RESPONSE	GMM
8	←		SECURITY MODE COMMAND	RRC
9	→		SECURITY MODE COMPLETE	RRC
10	←		ATTACH ACCEPT	GMM
11	→		ATTACH COMPLETE	GMM
12	→		ACTIVATE PDP CONTEXT REQUEST with 'Request Type' set to 'Emergency'	SM (NOTE 1, NOTE 2)
13	←		RADIO BEARER SETUP	The SS establishes the AM RAB for IMS signalling
14	→		RADIO BEARER SETUP COMPLETE	
15				EXCEPTION: In parallel to the events described in steps 17 to 23 below, the behaviour in steps 16 occurs.
16				Steps defined in annex C22 in TS 34.229-1[46]
17	←		ACTIVATE PDP CONTEXT ACCEPT	The SS accepts the PDP context
18	←		REQUEST SECONDARY PDP CONTEXT ACTIVATION	The SS requests a Secondary PDP context activation and starts timer T3385 (NOTE 3)
19	→		ACTIVATE SECONDARY PDP CONTEXT REQUEST	The UE requests a Secondary PDP context activation, enters the state PDP-ACTIVE-PENDING and starts timer T3380 (NOTE 3)
20				The SS stops timer T3385
21	←		RADIO BEARER SETUP	The SS establishes the UM RAB for IMS voice
22	→		RADIO BEARER SETUP COMPLETE	
23	←		ACTIVATE SECONDARY PDP CONTEXT ACCEPT	The SS accepts the Secondary PDP context activation with the requested QoS

NOTE 1: The UE shall not include the PDP address but the PDP address allocation is dynamic and shall be handled by the SS by including the IPv4 and/or IPv6 PDP address (set as per PIXIT) in the ACTIVATE PDP CONTEXT ACCEPT message.

NOTE 2: The UEs supporting S1 mode shall include interactive or background traffic class in the QoS requested. The UEs not supporting S1 mode should include interactive or background traffic class in the QoS requested.

NOTE 3: 'Conversational' is included in the QoS in the REQUEST SECONDARY PDP CONTEXT ACTIVATION and in the ACTIVATE SECONDARY PDP CONTEXT REQUEST message sent by the UE.

7.2.5.2.4 Specific message contents

All Specific message contents shall be referred to clause 9.

SYSTEM INFORMATION BLOCK TYPE 3 (Step 1)

The same content as in default message in TS 34.108 section 6.1.0b with the following exceptions:

Information Element	Value/remark
IMS Emergency Support Indicator	This IE specifies the support of IMS emergency call in the cell for limited service mode UE

Step 4: The UE transmits an *RRCConnectionSetupComplete* message to confirm the successful completion of the connection establishment

ATTACH REQUEST (Step 5)

Information Element	Value/remark
Attach Request message identity	Emergency Attach, Follow-on request pending
Mobile identity	IMSI

Step 8: The SS transmits a *SecurityModeCommand* message to activate AS security.

Step 9: The UE transmits a *SecurityModeComplete* message and establishes the initial security configuration.

ATTACH ACCEPT (Step 10)

Information Element	Value/remark
Emergency number list	10 numbers (TS 24.008, 10.5.3.13) The numbers shall be different than any of those indicated in TS 22.101 clause 10.1.1 AND the numbers stored in the USIM
Network feature support information element	Emergency bearer services supported in lu mode, but not supported in A/Gb mode

Step 12: UE transmits a Activate PDP Context Request message with Request Type set to Emergency with a PDP type number "IPv4v6 address" in the Requested PDP address information element. See TS 34.229 Annex C.17

Step 13: SS sends Radio Bearer Setup message - Use the same message as specified in clause 7.2.5.1.4 step 10

Step 21: SS sends Radio Bearer Setup message - Use the same message as specified in clause 7.2.5.1.4 step 19.

7.2.6 IP address allocation

UE IP address is allocated during the mobile originating packet switched sessions procedure referred to 7.2.4.2.

If UE supports IPv4/IPv6 or IPv6, a full IPv6 address is allocated to UE via NAS signalling in the PDP CONTEXT ACCEPT message. Once the PDP context is established, if the UE supports IPv6 it may perform IPv6 Stateless Address Autoconfiguration. The UE sends an **ICMPv6 Router Solicitation** message; as response the network sends an **ICMPv6 Router Advertisement** message.

Depending on the UE configuration there may be unpredictable delay in the start of the Stateless Address Auto configuration procedure. A guarding time of 1.2 sec is granted within which the procedure is expected to start. If the timer expires then the test shall advance to the next specified step in the test sequence.

7.3 Test procedures for RF test

NOTE: In general parameters defined for specific test cases in 3GPP TS 34.121 [2] take priority over the default parameters defined in the present document.

7.3.1 UE Test States for RF testing

In this clause, the states of the UE for the test are defined. For RF testing the same UE test states as specified in section 7.2.1 apply plus an additional RB Test Mode State. The RB Test Mode State can be reached from the UE States 2, 3 and 7 according to section 7.2.1. For this RB Test Mode State the different protocols shall be in the following states:

	RRC	CC	MM	SM	GMM
RB Test Mode State	connected	null	see Note	pdp-inactive	same as previous state
NOTE: The MM state is "MM connection active" if an RRC connection exists for the CS domain otherwise it is "same as previous state".					

7.3.2 Test procedure for TX, RX and Performance Requirement (without handover)

7.3.2.1 Initial conditions

System Simulator

- test cases using 1 cell:
 - 1cell, default parameters.
- other test cases using this test procedure:
 - Number of cells and parameters for specific tests are defined in 3GPP TS 34.121 [2] and take priority over the default parameters.

User Equipment:

- The UE shall initially be operated under normal RF test conditions if not otherwise stated in the initial conditions for the actual test case.
- The Test-USIM shall be inserted.
- The UE has a valid TMSI (CS) after the execution of the procedure described in clause 7.2.2.1.
- The UE has a valid P-TMSI (PS) after the execution of the procedure described in clause 7.2.2.2.

7.3.2.2 Definition of system information messages

The default system information messages specified in clause 6.1.0b are used with the following exceptions.

Contents of System information block type 1: RRC

Information Element	Value/remark
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00 00
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00(T3212 is set to infinity) 01
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in connected mode	
- T305	Infinity

Contents of System information block type 3 and 4: RRC

Information Element	Value/remark
- Qrxlevmin	-115

Contents of System Information Block type 5 (FDD)

Information Element	Value/remark
- Secondary CCPCH system information	
- Secondary CCPCH info	FDD
- CHOICE mode	Not Present
- Secondary scrambling code	FALSE
- STTD indicator	64
- Spreading factor	2
- Code number	FALSE
- Pilot symbol existence	TRUE (default value)
- TFCI existence	Flexible (default value)
- Fixed or Flexible position	Not Present
- Timing offset	Absence of this IE is equivalent to default value 0

7.3.2.3 Procedure

7.3.2.3.1 For UE supporting CS

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION (BCCH)	Broadcast
2	←		PAGING TYPE1 (PCCH)	Paging (CS domain, TMSI)
3	→		RRC CONNECTION REQUEST (CCCH)	RRC
4	←		RRC CONNECTION SETUP (CCCH)	RRC
5	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6	→		PAGING RESPONSE	RR
7	←		AUTHENTICATION REQUEST	MM
8	→		AUTHENTICATION RESPONSE	MM
9	←		SECURITY MODE COMMAND	RRC
10	→		SECURITY MODE COMPLETE	RRC
11	←		ACTIVATE RB TEST MODE	TC
12	→		ACTIVATE RB TEST MODE COMPLETE	TC
13	←		RADIO BEARER SETUP	RRC (RAB SETUP)
14	→		RADIO BEARER SETUP COMPLETE	RRC
15	←		CLOSE UE TEST LOOP (DCCH)	TC (UE test loop mode set up)
16	→		CLOSE UE TEST LOOP COMPLETE	TC (confirms that loopback entities for the radio bearer(s) have been created and loop back is activated)
17	←		OPEN UE TEST LOOP	TC
18	→		OPEN UE TEST LOOP COMPLETE	TC
19	←		RRC CONNECTION RELEASE	RRC
20	→		RRC CONNECTION RELEASE COMPLETE	RRC

7.3.2.3.2 For UE supporting PS only

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION (BCCH)	Broadcast
2	←		PAGING TYPE1 (PCCH)	Paging (PS domain, P-TMSI)
3	→		RRC CONNECTION REQUEST (CCCH)	RRC
4	←		RRC CONNECTION SETUP (CCCH)	RRC
5	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6	→		SERVICE REQUEST	GMM
7	←		AUTHENTICATION AND CIPHERING REQUEST	GMM
8	→		AUTHENTICATION AND CIPHERING RESPONSE	GMM
9	←		SECURITY MODE COMMAND	RRC
10	→		SECURITY MODE COMPLETE	RRC
11	←		ACTIVATE RB TEST MODE	TC
12	→		ACTIVATE RB TEST MODE COMPLETE	TC

13	←	RADIO BEARER SETUP	RRC (RAB SETUP)
14	→	RADIO BEARER SETUP COMPLETE	RRC
15	←	CLOSE UE TEST LOOP (DCCH)	TC (UE test loop mode set up)
16	→	CLOSE UE TEST LOOP COMPLETE	TC (confirms that loopback entities for the radio bearer(s) have been created and loop back is activated)
17	←	OPEN UE TEST LOOP	TC
18	→	OPEN UE TEST LOOP COMPLETE	TC
19	←	RRC CONNECTION RELEASE	RRC
20	→	RRC CONNECTION RELEASE COMPLETE	RRC

7.3.2.3.3 For CS+PS multi RAB combination

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION (BCCH)	Broadcast
2		←	PAGING TYPE1 (PCCH)	Paging (CS domain, TMSI)
3		→	RRC CONNECTION REQUEST (CCCH)	RRC
4		←	RRC CONNECTION SETUP (CCCH)	RRC
5		→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6		→	PAGING RESPONSE	RR
7		←	AUTHENTICATION REQUEST	MM
8		→	AUTHENTICATION RESPONSE	MM
9		←	SECURITY MODE COMMAND	RRC
10		→	SECURITY MODE COMPLETE	RRC
11		←	PAGING TYPE 2 (DCCH)	TMSI (GSM-MAP)/ P-TMSI
12		→	SERVICE REQUEST	GMM
13		←	SECURITY MODE COMMAND	RRC
14		→	SECURITY MODE COMPLETE	RRC
15		←	ACTIVATE RB TEST MODE	TC
16		→	ACTIVATE RB TEST MODE COMPLETE	TC
17		←	RADIO BEARER SETUP	RRC CS radio bearer(s) are configured
18		→	RADIO BEARER SETUP COMPLETE	RRC
19		←	RADIO BEARER SETUP	RRC PS radio bearer(s) are configured
20		→	RADIO BEARER SETUP COMPLETE	RRC
21		←	CLOSE UE TEST LOOP (DCCH)	TC (UE test loop mode set up)
22		→	CLOSE UE TEST LOOP COMPLETE	TC (confirms that loopback entities for the radio bearer(s) have been created and loop back is activated)
23		←	OPEN UE TEST LOOP	TC
24		→	OPEN UE TEST LOOP COMPLETE	TC
25		←	RRC CONNECTION RELEASE	RRC
26		→	RRC CONNECTION RELEASE COMPLETE	RRC

7.3.2.4 Specific message contents

The default message contents specified in clause 9.2 are used with the following exceptions.

7.3.2.4.1 ATTACH ACCEPT

This message is sent from the SS to the UE, used for the UE supporting PS only.

Contents of Attach Accept message: GMM

Information Element	Value/remark
Periodic RA update timer	E0 (timer is deactivated)

7.3.2.4.2 Reference measurement channels

The configurations of the reference measurement channels for RF tests are described in 3GPP TS 34.121 [2], annex C for FDD and 3GPP TS 34.122 [5], annex C for TDD.

7.3.2.4.3 Void

7.3.2.4.4 Compressed mode

[T.B.D]

7.3.2.4.5 Transmit diversity mode

[T.B.D]

7.3.3 Test procedure for test cases using Cell_PCH or URA_PCH state

7.3.3.1 Initial conditions

System Simulator:

- Number of cells and parameters for specific tests are defined in 3GPP TS 34.121 [2] and take priority over the default parameters.

User Equipment:

- The UE shall be operated under RF test conditions.
- The Test-USIM shall be inserted.
- The UE has a valid TMSI (CS) after the execution of the procedure described in clause 7.2.2.1.
- The UE has a valid P-TMSI (PS) after the execution of the procedure described in clause 7.2.2.2.

7.3.3.2 Definition of system information messages

The default system information messages specified in clause 6.1.0b are used with the following exceptions.

Contents of System information block type 1: RRC

Information Element	Value/remark
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00 00
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00(T3212 is set to infinity) 01
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in connected mode	
- T305	Infinity

Contents of System information block type 3 and 4: RRC

Information Element	Value/remark
- Qrxlevmin	-115

Contents of System Information Block type 5 (FDD)

Information Element	Value/remark
- Secondary CCPCH system information	
- Secondary CCPCH info	
- CHOICE mode	FDD
- Secondary scrambling code	Not Present
- STTD indicator	FALSE
- Spreading factor	64
- Code number	2

- Pilot symbol existence	FALSE
- TFCI existence	TRUE (default value)
- Fixed or Flexible position	Flexible (default value)
- Timing offset	Not Present
Absence of this IE is equivalent to default value 0	

7.3.3.3 Procedure

7.3.3.3.1 For UE supporting PS

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION (BCCH)	Broadcast
2	←		PAGING TYPE1 (PCCH)	Paging (PS domain, P-TMSI)
3	→		RRC CONNECTION REQUEST (CCCH)	RRC
4	←		RRC CONNECTION SETUP (CCCH)	RRC
5	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6	→		SERVICE REQUEST	GMM
7	←		AUTHENTICATION AND CIPHERING REQUEST	GMM
8	→		AUTHENTICATION AND CIPHERING RESPONSE	GMM
9	←		SECURITY MODE COMMAND	RRC
10	→		SECURITY MODE COMPLETE	RRC
11	←		ACTIVATE RB TEST MODE	TC
12	→		ACTIVATE RB TEST MODE COMPLETE	TC
13	←		RADIO BEARER SETUP	RRC - RAB SETUP using Reference Radio Bearer Configuration
14	→		RADIO BEARER SETUP COMPLETE	RRC
15	←		PHYSICAL CHANNEL RECONFIGURATION	RRC - RRC state indicator is set to "Cell_PCH" or "URA_PCH" depending on the test case
16	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	RRC The UE sends this message before it completes state transition.
17			Void	SS sends the L2 ack on the PHYSICAL CHANNEL RECONFIGURATION COMPLETE message. NOTE: The SS should continue to keep the dedicated channel configuration during the time when the L2 ack is sent to the UE.

7.3.3.4 Specific message contents

The default message contents specified in clause 9.2 are used with the following exceptions.

The RADIO BEARER SETUP message is defined in clause 9.2.1, "Contents of RADIO BEARER SETUP message: AM or UM (UE supports PS RAB only)".

The PHYSICAL CHANNEL RECONFIGURATION message is defined in clause 9.1.1, "Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM" using condition A8 for URA_PCH and condition A10 for Cell_PCH.

Contents of Attach Accept message: GMM

Information Element	Value/remark
Periodic RA update timer	E0 (timer is deactivated)

7.3.4 Test procedure for Handover

NOTE: This test procedure is also used for some other test cases involving more than 1 cell.

7.3.4.1 Initial conditions

System Simulator:

- Intra-frequency hard handover and soft handover (for FDD) case:
 - 2 cells, default parameters according to Cell 1 and Cell 2 in clause 6.1.4.
- Inter-frequency hard handover case:
 - 2 cells, default parameters according to Cell 1 and Cell 4 in clause 6.1.4.
- Inter-system handover UTRAN to GSM case:
 - 2 cells, default parameters according to Cell 1 and Cell 9 in clause 6.1.4.
- other test cases using this test procedure:
 - Number of cells and parameters for specific tests are defined in 3GPP TS 34.121 [2] for FDD and TS 34.122 [5] for TDD and take priority over the default parameters.

User Equipment:

- The UE shall be initially operated under the normal RF test conditions if not otherwise stated in the initial conditions for the actual test case.
- The Test-USIM shall be inserted.
- The UE has a valid TMSI (CS) after the execution of the procedure described in clause 7.2.2.1.
- The UE has a valid P-TMSI (PS) after the execution of the procedure described in clause 7.2.2.2.

7.3.4.2 Definition of system information messages

The default system information messages specified in clause 6.1.0b are used with the following exceptions.

Contents of System information block type 1: RRC

Information Element	Value/remark
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00 00
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00(T3212 is set to infinity) 01
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in connected mode	
- T305	Infinity

Contents of System information block type 3 and 4: RRC

Information Element	Value/remark
- Qrxlevmin	-115

Contents of System Information Block type 5 (FDD)

Information Element	Value/remark
- Secondary CCPCH system information	
- Secondary CCPCH info	
- CHOICE mode	FDD
- Secondary scrambling code	Not Present
- STTD indicator	FALSE

- Spreading factor	64
- Code number	2
- Pilot symbol existence	FALSE
- TFCI existence	TRUE (default value)
- Fixed or Flexible position	Flexible (default value)
- Timing offset	Not Present
	Absence of this IE is equivalent to default value 0

For the intra-frequency hard handover and soft handover (for FDD) case the default messages for SIB11 and SIB12 as specified for Cell 1 and Cell 2 in clause 6.1.4 are used.

For the inter-frequency hard handover case the default messages for SIB11 and SIB12 as specified for Cell 1 and Cell 4 in clause 6.1.4 are used.

For the inter-system handover from UTRAN to GSM case the default messages for SIB11 and SIB12 as specified for Cell 1 and Cell 9 in clause 6.1.4 are used.

7.3.4.3 Procedure

7.3.4.3.1 For UE supporting CS

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION (BCCH)	Broadcast
2		←	PAGING TYPE1 (PCCH)	Paging (CS domain, TMSI)
3		→	RRC CONNECTION REQUEST (CCCH)	RRC
4		←	RRC CONNECTION SETUP (CCCH)	RRC
5		→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6		→	PAGING RESPONSE	RR
7		←	AUTHENTICATION REQUEST	MM
8		→	AUTHENTICATION RESPONSE	MM
9		←	SECURITY MODE COMMAND	RRC
10		→	SECURITY MODE COMPLETE	RRC
11		←	ACTIVATE RB TEST MODE	TC
12		→	ACTIVATE RB TEST MODE COMPLETE	TC
13		←	RADIO BEARER SETUP	RRC - RAB SETUP using Reference Radio Bearer Configuration - RRC state indicator is set to "CELL_DCH"
14		→	RADIO BEARER SETUP COMPLETE	RRC
15		←	RRC CONNECTION RELEASE	RRC
16		→	RRC CONNECTION RELEASE COMPLETE	RRC

7.3.4.3.2 For UE supporting PS only

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION (BCCH)	Broadcast
2		←	PAGING TYPE1 (PCCH)	Paging (PS domain, P-TMSI)
3		→	RRC CONNECTION REQUEST (CCCH)	RRC
4		←	RRC CONNECTION SETUP (CCCH)	RRC
5		→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6		→	SERVICE REQUEST	GMM
7		←	AUTHENTICATION AND CIPHERING REQUEST	GMM
8		→	AUTHENTICATION AND CIPHERING RESPONSE	GMM
9		←	SECURITY MODE COMMAND	RRC
10		→	SECURITY MODE COMPLETE	RRC
11		←	ACTIVATE RB TEST MODE	TC
12		→	ACTIVATE RB TEST MODE COMPLETE	TC

13	←	RADIO BEARER SETUP	RRC - RAB SETUP using Reference Radio Bearer Configuration - RRC state indicator is set to "CELL_DCH"
14	→	RADIO BEARER SETUP COMPLETE	RRC
15	←	RRC CONNECTION RELEASE	RRC
16	→	RRC CONNECTION RELEASE COMPLETE	RRC

7.3.4.4 Specific message contents

The default message contents specified in clause 9.2 are used with the following exceptions.

Contents of Attach Accept message: GMM

Information Element	Value/remark
Periodic RA update timer	E0 (timer is deactivated)

7.3.5 Test procedure for test cases using CELL_FACH state

7.3.5.1 Initial conditions

System Simulator:

- Number of cells and parameters for specific tests are defined in TS 34.121 [2] and take priority over the default parameters.

User Equipment:

- The UE shall be operated under RF test conditions.
- The Test-USIM shall be inserted.
- The UE has a valid TMSI (CS) after the execution of the procedure described in clause 7.2.2.1.
- The UE has a valid P-TMSI (PS) after the execution of the procedure described in clause 7.2.2.2.

7.3.5.2 Definition of system information messages

The default system information messages specified in clause 6.1.0b are used with the following exceptions.

Contents of System information block type 1: RRC

Information Element	Value/remark
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00 00
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00(T3212 is set to infinity) 01
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in connected mode	
- T305	Infinity

Contents of System information block type 3 and 4: RRC

Information Element	Value/remark
- Qrxlevmin	-115

Contents of System Information Block type 5 (FDD)

Information Element	Value/remark
- Secondary CCPCH system information	
- Secondary CCPCH info	
- CHOICE mode	FDD
- Secondary scrambling code	Not Present
- STTD indicator	FALSE
- Spreading factor	64
- Code number	2
- Pilot symbol existence	FALSE
- TFCI existence	TRUE (default value)
- Fixed or Flexible position	Flexible (default value)
- Timing offset	Not Present
	Absence of this IE is equivalent to default value 0

7.3.5.3 Procedure

7.3.5.3.1 For UE supporting CS

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION (BCCH)	Broadcast
2	←		PAGING TYPE1 (PCCH)	Paging (CS domain, TMSI)
3	→		RRC CONNECTION REQUEST (CCCH)	RRC
4	←		RRC CONNECTION SETUP (CCCH)	RRC
5	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6	→		PAGING RESPONSE	RR
7	←		AUTHENTICATION REQUEST	MM
8	→		AUTHENTICATION RESPONSE	MM
9	←		SECURITY MODE COMMAND	RRC
10	→		SECURITY MODE COMPLETE	RRC
11	←		ACTIVATE RB TEST MODE	TC
12	→		ACTIVATE RB TEST MODE COMPLETE	TC
13	←		DEACTIVATE RB TEST MODE	TC
14	→		DEACTIVATE RB TEST MODE COMPLETE	TC
15	←		RRC CONNECTION RELEASE	RRC
16	→		RRC CONNECTION RELEASE COMPLETE	RRC

7.3.5.3.2 For UE supporting PS only

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION (BCCH)	Broadcast
2	←		PAGING TYPE1 (PCCH)	Paging (PS domain, P-TMSI)
3	→		RRC CONNECTION REQUEST (CCCH)	RRC
4	←		RRC CONNECTION SETUP (CCCH)	RRC
5	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6	→		SERVICE REQUEST	GMM
7	←		AUTHENTICATION AND CIPHERING REQUEST	GMM
8	→		AUTHENTICATION AND CIPHERING RESPONSE	GMM
9	←		SECURITY MODE COMMAND	RRC
10	→		SECURITY MODE COMPLETE	RRC
11	←		ACTIVATE RB TEST MODE	TC
12	→		ACTIVATE RB TEST MODE COMPLETE	TC
13	←		DEACTIVATE RB TEST MODE	TC
14	→		DEACTIVATE RB TEST MODE COMPLETE	TC
15	←		RRC CONNECTION RELEASE	RRC
16	→		RRC CONNECTION RELEASE COMPLETE	RRC

7.3.5.4 Specific message contents

The default message contents specified in clause 9.2 are used with the following exceptions.

Contents of Attach Accept message: GMM

Information Element	Value/remark
Periodic RA update timer	E0 (timer is deactivated)

The RRC connection setup is defined in clause 9.1.1, "Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_FACH)".

7.3.6 Test procedure for HSDPA RF Performance Requirement

7.3.6.1 Initial conditions

System Simulator:

- 1 HS-DSCH cell, default parameters.

User Equipment:

- The UE shall initially be operated under normal RF test conditions if not otherwise stated in the initial conditions for the actual test case.
- The Test-USIM shall be inserted.
- The UE has a valid TMSI (CS) after the execution of the procedure described in clause 7.2.2.1.
- The UE has a valid P-TMSI (PS) after the execution of the procedure described in clause 7.2.2.2.

7.3.6.2 Definition of system information messages

The default system information messages specified in clause 6.1.0b are used with the following exceptions.

Contents of System information block type 1: RRC

Information Element	Value/remark
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00 00
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00(T3212 is set to infinity) 01
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in connected mode	
- T305	Infinity

Contents of System information block type 3 and 4: RRC

Information Element	Value/remark
- Qrxlevmin	-115

Contents of System Information Block type 5 (FDD)

Information Element	Value/remark
- Secondary CCPCH system information	
- Secondary CCPCH info	
- CHOICE mode	FDD
- Secondary scrambling code	Not Present
- STTD indicator	FALSE
- Spreading factor	64

- Code number	2
- Pilot symbol existence	FALSE
- TFCI existence	TRUE (default value)
- Fixed or Flexible position	Flexible (default value)
- Timing offset	Not Present
	Absence of this IE is equivalent to default value 0

7.3.6.3 Procedure

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION (BCCH)	Broadcast
2	←		PAGING TYPE1 (PCCH)	Paging (CS domain, TMSI)
3	→		RRC CONNECTION REQUEST (CCCH)	RRC
4	←		RRC CONNECTION SETUP (CCCH)	RRC
5	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6	→		PAGING RESPONSE	RR
7	←		AUTHENTICATION REQUEST	MM
8	→		AUTHENTICATION RESPONSE	MM
9	←		SECURITY MODE COMMAND	RRC (CS domain)
10	→		SECURITY MODE COMPLETE	RRC
11	←		PAGING TYPE2 (DCCH)	Paging (TMSI (GSM-MAP)/ P-TMSI)
12	→		SERVICE REQUEST	GMM
13	←		AUTHENTICATION AND CIPHERING REQUEST	GMM
14	→		AUTHENTICATION AND CIPHERING RESPONSE	GMM
15	←		SECURITY MODE COMMAND	RRC (PS domain, IE Integrity protection mode command set to "modify")
16	→		SECURITY MODE COMPLETE	RRC
17	←		ACTIVATE RB TEST MODE	TC
18	→		ACTIVATE RB TEST MODE COMPLETE	TC
19	←		RADIO BEARER SETUP	RRC (RAB SETUP RMC 12.2 CS)
20	→		RADIO BEARER SETUP COMPLETE	RRC
21	←		RADIO BEARER SETUP	RRC (RAB SETUP HSDPA PS)
22	→		RADIO BEARER SETUP COMPLETE	RRC
A23	←		CLOSE UE TEST LOOP (DCCH)	TC (UE test loop mode set up to loop the RMC 12.2 to UL RMC 12.2) . Test steps A23, A24, A26 and A27 are only executed when the test method in TS 34.121 [2] specifies that loopback test shall be used.
A24	→		CLOSE UE TEST LOOP COMPLETE	TC (confirms that loopback entities for the radio bearer(s) have been created and loop back is activated)
25	<-->			Perform test
A26	←		OPEN UE TEST LOOP	TC
A27	→		OPEN UE TEST LOOP COMPLETE	TC
28	←		RRC CONNECTION RELEASE	RRC
29	→		RRC CONNECTION RELEASE COMPLETE	RRC

7.3.6.4 Specific message contents

The default message contents specified in clause 9.2 are used with the following exceptions.

7.3.6.4.1 ATTACH ACCEPT

This message is sent from the SS to the UE.

Contents of Attach Accept message: GMM

Information Element	Value/remark
Periodic RA update timer	E0 (timer is deactivated)

7.3.6.4.2 RADIO BEARER SETUP

For step 19, the message in clause 9.2, "Contents of RADIO BEARER SETUP message: AM or UM (Test Loop Mode1)" is used with condition A1. For step 21, the message in clause 9.2, "Contents of RADIO BEARER SETUP message: AM or UM (HSDPA)" is used.

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121[2], annex C for FDD and 3GPP TS 34.122 [5], annex C for TDD.

7.3.6.4.3 RRC CONNECTION SETUP

For step 4, the message in clause 9.2, "Contents of RRC CONNECTION SETUP message: UM" is used with the following exceptions:

Contents of RRC CONNECTION SETUP message: UM

Information Element	Value/remark
- Default DPCH Offset Value	Arbitrary set to value 1536..306176 by step of 2560 (this corresponds to a 0.5 slot timing offset between the DPCH and the HS-DPCH)

7.3.7 Test procedure for inter-RAT handover used in RRM testing

7.3.7.1 Initial conditions

System Simulator:

- 2 cells, default parameters according to Cell 1 and Cell 9 in clause 6.1.4.

User Equipment:

- The UE shall be initially operated under the normal RF test conditions if not otherwise stated in the initial conditions for the actual test case.
- The Test-USIM shall be inserted.
- The UE has a valid TMSI (CS) after the execution of the procedure described in clause 7.2.2.1.
- The UE has a valid P-TMSI (PS) after the execution of the procedure described in clause 7.2.2.2.

7.3.7.2 Definition of system information messages

The default system information messages specified in clause 6.1.0b are used with the following exceptions.

Contents of System information block type 1: RRC

Information Element	Value/remark
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00 00
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	

Information Element	Value/remark
- GSM-MAP NAS system information	00(T3212 is set to infinity) 01
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in connected mode	
- T305	Infinity

Contents of System information block type 3 and 4: RRC

Information Element	Value/remark
- Qrxlevmin	-115

Contents of System Information Block type 5 (FDD)

Information Element	Value/remark
- Secondary CCPCH system information	
- Secondary CCPCH info	FDD
- CHOICE mode	Not Present
- Secondary scrambling code	FALSE
- STTD indicator	64
- Spreading factor	2
- Code number	FALSE
- Pilot symbol existence	TRUE (default value)
- TFCI existence	Flexible (default value)
- Fixed or Flexible position	Not Present
- Timing offset	Absence of this IE is equivalent to default value 0

For the inter-system handover from UTRAN FDD to GSM case the default messages for SIB11 and SIB12 as specified for Cell 1 and Cell 9 in clause 6.1.4 are used.

7.3.7.3 Procedure

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION (BCCH)	Broadcast
2	←		PAGING (PCCH)	Paging
3	→		RRC CONNECTION REQUEST (CCCH)	RRC
4	←		RRC CONNECTION SETUP (CCCH)	RRC (Transition to cell DCH)
5	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6	→		PAGING RESPONSE	RR
7	←		AUTHENTICATION REQUEST	MM
8	→		AUTHENTICATION RESPONSE	MM
9	←		SECURITY MODE COMMAND	RRC
10	→		SECURITY MODE COMPLETE	RRC
11	←		SET UP	CC (see note)
12	→		CALL CONFIRMED	CC
13	←		RADIO BEARER SETUP	RRC RAB SETUP
14	→		RADIO BEARER SETUP COMPLETE	RRC
15	→		ALERTING	CC (this message is optional)
16	→		CONNECT	CC
17	←		CONNECT ACKNOWLEDGE	CC

NOTE: The "Signal" information element is not included in the SETUP message.

7.3.7.4 Specific message contents

The default message contents specified in clause 9.1 are used with the following exceptions.

Contents of Attach Accept message: GMM

Information Element	Value/remark
Periodic RA update timer	E0 (timer is deactivated)

7.3.8 Test procedure for inter-RAT cell FACH reselection used in RRM testing

7.3.8.1 Initial conditions

System Simulator:

- Number of cells and parameters for specific tests are defined in TS 34.121 [2] and take priority over the default parameters.

User Equipment:

- The UE shall be operated under RF test conditions.
- The Test-USIM shall be inserted.
- The UE has a valid TMSI (CS) after the execution of the procedure described in clause 7.2.2.1.
- The UE has a valid P-TMSI (PS) after the execution of the procedure described in clause 7.2.2.2.

7.3.8.2 Definition of system information messages

The default system information messages specified in clause 6.1.0b are used with the following exceptions.

Contents of System information block type 1: RRC

Information Element	Value/remark
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00 00
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00(T3212 is set to infinity) 01
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in connected mode	
- T305	Infinity

Contents of System information block type 3 and 4: RRC

Information Element	Value/remark
- Qrxlevmin	-115

Contents of System Information Block type 5 (FDD)

Information Element	Value/remark
- Secondary CCPCH system information	
- Secondary CCPCH info	
- CHOICE mode	FDD
- Secondary scrambling code	Not Present
- STTD indicator	FALSE
- Spreading factor	64
- Code number	2
- Pilot symbol existence	FALSE
- TFCI existence	TRUE (default value)
- Fixed or Flexible position	Flexible (default value)
- Timing offset	Not Present
	Absence of this IE is equivalent to default value 0

7.3.8.3 Procedure

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION (BCCH)	Broadcast
2	→		RRC CONNECTION REQUEST (CCCH)	RRC
3	←		RRC CONNECTION SETUP (CCCH)	RRC
4	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
5	→		SERVICE REQUEST	GMM
6	←		AUTHENTICATION AND CIPHERING REQUEST	GMM
7	→		AUTHENTICATION AND CIPHERING RESPONSE	GMM
8	←		SECURITY MODE COMMAND	RRC
9	→		SECURITY MODE COMPLETE	RRC
10	→		ACTIVATE PDP CONTEXT REQUEST	SM
11	←		RADIO BEARER SETUP	RRC RAB SETUP
12	→		RADIO BEARER SETUP COMPLETE	RRC
13	←		ACTIVATE PDP CONTEXT ACCEPT	SM

7.3.8.4 Specific message contents

The default message contents specified in clause 9.1 are used with the following exceptions.

Contents of Attach Accept message: GMM

Information Element	Value/remark
Periodic RA update timer	E0 (timer is deactivated)

The RRC connection setup is defined in clause 9.1.1, "Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_FACH)".

7.3.9 Test procedure for E-DCH RF test cases

7.3.9.1 Initial conditions

System Simulator:

- 1 HS-DSCH plus E-DCH cell, default parameters.

User Equipment:

- The UE shall initially be operated under normal RF test conditions if not otherwise stated in the initial conditions for the actual test case.
- The Test-USIM shall be inserted.
- The UE has a valid TMSI (CS) after the execution of the procedure described in clause 7.2.2.1.
- The UE has a valid P-TMSI (PS) after the execution of the procedure described in clause 7.2.2.2.

7.3.9.2 Definition of system information messages

The default system information messages specified in clause 6.1.0b are used with the following exceptions.

Contents of System information block type 1: RRC

Information Element	Value/remark
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00 00
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP

Information Element	Value/remark
- CN domain specific NAS system information - GSM-MAP NAS system information - CN domain specific DRX cycle length coefficient - UE Timers and constants in connected mode - T305	00(T3212 is set to infinity) 01 7 Infinity

Contents of System information block type 3 and 4: RRC

Information Element	Value/remark
- Qrxlevmin	-115

Contents of System Information Block type 5 (FDD)

Information Element	Value/remark
- Secondary CCPCH system information - Secondary CCPCH info - CHOICE mode - Secondary scrambling code - STTD indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible position - Timing offset	FDD Not Present FALSE 64 2 FALSE TRUE (default value) Flexible (default value) Not Present Absence of this IE is equivalent to default value 0

7.3.9.3 Procedure

7.3.9.3.1 For UE transmitting on E-DCH with DCH

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION (BCCH)	Broadcast
2		←	PAGING TYPE1 (PCCH)	Paging (CS domain, TMSI)
3		→	RRC CONNECTION REQUEST (CCCH)	RRC
4		←	RRC CONNECTION SETUP (CCCH)	RRC
5		→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6		→	PAGING RESPONSE	RR
7		←	AUTHENTICATION REQUEST	MM
8		→	AUTHENTICATION RESPONSE	MM
9		←	SECURITY MODE COMMAND	RRC (CS domain)
10		→	SECURITY MODE COMPLETE	RRC
11		←	PAGING TYPE2 (DCCH)	Paging (TMSI (GSM-MAP)/ P-TMSI)
12		→	SERVICE REQUEST	GMM
13		←	AUTHENTICATION AND CIPHERING REQUEST	GMM
14		→	AUTHENTICATION AND CIPHERING RESPONSE	GMM
15		←	SECURITY MODE COMMAND	RRC (PS domain, IE Integrity protection mode command set to "modify")
16		→	SECURITY MODE COMPLETE	RRC
17		←	ACTIVATE RB TEST MODE	TC
18		→	ACTIVATE RB TEST MODE COMPLETE	TC
19		←	RADIO BEARER SETUP	RRC (RAB SETUP RMC 12.2 CS)
20		→	RADIO BEARER SETUP COMPLETE	RRC
21		←	RADIO BEARER SETUP	RRC (RAB SETUP HSDPA and E-DCH PS)
22		→	RADIO BEARER SETUP COMPLETE	RRC

A23	←	CLOSE UE TEST LOOP (DCCH)	TC (UE test loop mode set up) . Test steps A23, A24, A26 and A27 are only executed when the test method in TS 34.121 [2] specifies that loopback test shall be used.
A24	→	CLOSE UE TEST LOOP COMPLETE	
25	<-->		TC (confirms that loopback entities for the radio bearer(s) have been created and loop back is activated) Perform test
A26	←	OPEN UE TEST LOOP	TC
A27	→	OPEN UE TEST LOOP COMPLETE	TC
28	←	RRC CONNECTION RELEASE	RRC
29	→	RRC CONNECTION RELEASE COMPLETE	RRC

7.3.9.3.2 For UE transmitting on E-DCH without DCH

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION (BCCH)	Broadcast
2	←		PAGING TYPE1 (PCCH)	Paging (PS domain, P-TMSI)
3	→		RRC CONNECTION REQUEST (CCCH)	RRC
4	←		RRC CONNECTION SETUP (CCCH)	RRC
5	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6	→		SERVICE REQUEST	GMM
7	←		AUTHENTICATION AND CIPHERING REQUEST	GMM
8	→		AUTHENTICATION AND CIPHERING RESPONSE	GMM
9	←		SECURITY MODE COMMAND	RRC (PS domain)
10	→		SECURITY MODE COMPLETE	RRC
11	←		ACTIVATE RB TEST MODE	TC
12	→		ACTIVATE RB TEST MODE COMPLETE	TC
13	←		RADIO BEARER SETUP	RRC (RAB SETUP HSDPA and E-DCH PS)
14	→		RADIO BEARER SETUP COMPLETE	RRC
A15	←		CLOSE UE TEST LOOP (DCCH)	TC (UE test loop mode set up) . Test steps A15, A16, A18 and A19 are only executed when the test method in TS 34.121 [2] specifies that loopback test shall be used.
A16	→		CLOSE UE TEST LOOP COMPLETE	
17	<-->			TC (confirms that loopback entities for the radio bearer(s) have been created and loop back is activated) Perform test
A18	←		OPEN UE TEST LOOP	TC
A19	→		OPEN UE TEST LOOP COMPLETE	TC
20	←		RRC CONNECTION RELEASE	RRC
21	→		RRC CONNECTION RELEASE COMPLETE	RRC

7.3.9.4 Specific message contents

The default message contents specified in clause 9.2 are used with the following exceptions.

7.3.9.4.1 ATTACH ACCEPT

This message is sent from the SS to the UE.

Contents of Attach Accept message: GMM

Information Element	Value/remark
Periodic RA update timer	E0 (timer is deactivated)

7.3.9.4.2 RADIO BEARER SETUP

For step 19, the message in clause 9.2, "Contents of RADIO BEARER SETUP message: AM or UM (Test Loop Model)" is used with condition A1. For step 21, the message in clause 9.2, "Contents of RADIO BEARER SETUP message: AM or UM (E-DCH and HSDPA)" is used.

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121[2], annex C for FDD and 3GPP TS 34.122 [5], annex C for TDD. The configurations of the reference channels for E-DCH RF tests are described in 3GPP TS 34.121[2].

7.3.9.4.3 RRC CONNECTION SETUP

For step 4, the messages in clause 9.2, "Contents of RRC CONNECTION SETUP message: UM" is used with the following exceptions:

Contents of RRC CONNECTION SETUP message: UM

Information Element	Value/remark
- Default DPCH Offset Value	Arbitrary set to value 1536..306176 by step of 2560 (this corresponds to a 0.5 slot timing offset between the DPCH and the HS-DPCH)

7.3.10 Test procedure for MBMS RF/RRM test cases

7.3.10.1 Initial conditions

System Simulator:

- Number of cells and parameters for specific tests are defined in TS 34.121 [2] and take priority over the default parameters.

User Equipment:

- The UE shall be operated under RF test conditions.
- The Test-USIM shall be inserted.
- The UE has a valid TMSI (CS) after the execution of the procedure described in clause 7.2.2.1.
- The UE has a valid P-TMSI (PS) after the execution of the procedure described in clause 7.2.2.2.

7.3.10.2 Definition of system information messages

The default system information messages specified in clause 6.1.0b are used with the following exceptions.

Contents of System information block type 1: RRC

Information Element	Value/remark
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00 00
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00(T3212 is set to infinity) 01
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in connected mode	
- T305	Infinity

Contents of System information block type 3 and 4: RRC

Information Element	Value/remark
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- Qrxlevmin	-115
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Contents of System Information Block type 5 (FDD)

As specified in 34.108 clause 6.1.0b with the following exceptions and using condition M2.

Information Element	Value/remark
- Secondary CCPCH system information	
- Secondary CCPCH info	
- CHOICE mode	FDD
- Secondary scrambling code	Not Present
- STTD indicator	FALSE
- Spreading factor	64
- Code number	2
- Pilot symbol existence	FALSE
- TFCI existence	TRUE (default value)
- Fixed or Flexible position	Flexible (default value)
- Timing offset	Not Present
	Absence of this IE is equivalent to default value 0

7.3.10.3 Procedure

Step	Direction		Message	Comments
	UE	SS		
0				UE selects the required MBMS broadcast service
1	←		SYSTEM INFORMATION (BCCH)	Broadcast
2	←		MBMS MODIFIED SERVICES INFORMATION (MCCH)	No Service in Modified Service list
3	←		MBMS UNMODIFIED SERVICES INFORMATION (MCCH)	MBMS required UE action " set to acquire PTM RB info".
4	←		MBMS GENERAL INFORMATION (MCCH)	
5	←		MBMS COMMON P-T-M RB INFORMATION (MCCH)	Contains configuration of the MTCH radio bearer.
6	←		MBMS CURRENT CELL P-T-M RB INFORMATION (MCCH)	Indicates the radio bearer configuration to be used for reception of the service.
7	←		MBMS NEIGHBOURING CELL P-T-M RB INFORMATION (MCCH)	Optional depending on whether neighbour cells are required.
8	←		PAGING TYPE1 (PCCH)	Paging (PS domain, P-TMSI)
9	→		RRC CONNECTION REQUEST (CCCH)	RRC
10	←		RRC CONNECTION SETUP (CCCH)	RRC
11	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
12	→		SERVICE REQUEST	GMM
13	←		AUTHENTICATION AND CIPHERING REQUEST	GMM
14	→		AUTHENTICATION AND CIPHERING RESPONSE	GMM
15	←		SECURITY MODE COMMAND	RRC
16	→		SECURITY MODE COMPLETE	RRC
17	←		ACTIVATE RB TEST MODE	TC
18	→		ACTIVATE RB TEST MODE COMPLETE	TC
19			void	
20	←		CLOSE UE TEST LOOP	TC (UE test loop mode 3 set up) The RLC SDU counting shall be performed by the UE
21	→		CLOSE UE TEST LOOP COMPLETE	TC (test loop mode 3 on MTCH is activated)
A22	←		PHYSICAL CHANNEL RECONFIGURATION	RRC - RRC state indicator set to "Cell_PCH" Test steps A22 and A23 are only executed when the test method in TS 34.121 [2] specifies that transition to CELL_PCH state is required.

A23	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	RRC The UE sends this message before it completes state transition.
	<-->		Perform test.
A24	←	PAGING TYPE 1	RRC - RRC state indicator set to "Cell_FACH" Test steps A24, A25 and A26 are only executed when the test method in TS 34.121 [2] specifies that the test is performed in CELL_PCH state.
A25	→	CELL UPDATE	RRC
A26	←	CELL UPDATE CONFIRM	RRC
27	←	OPEN UE TEST LOOP	TC
28	→	OPEN UE TEST LOOP COMPLETE	TC
29	←	RRC CONNECTION RELEASE	RRC
30	→	RRC CONNECTION RELEASE COMPLETE	RRC

7.3.10.4 Specific message contents

The default message contents specified in clause 9.1.1 are used with the following exceptions.

Contents of MBMS GENERAL INFORMATION message: UM (Step 4)

Information Element	Value/remark	Version
MICH configuration information		Rel-6
- MICH Power offset	0dB	Rel-6
- CHOICE Mode	FDD	Rel-6
- Channelisation code	7	Rel-6
- Number of NI per frame	18	Rel-6
- STTD indicator	FALSE	Rel-6

Contents of MBMS COMMON P-T-M RB INFORMATION message: UM (Step 5)

For step 5, the message in clause 9.2.1 "Contents of MBMS COMMON P-T-M RB INFORMATION message: UM" is used

Contents of MBMS CURRENT P-T-M RB INFORMATION message: UM (Step 6)

For step 6, the message in clause 9.1.1 "Contents of MBMS CURRENT P-T-M RB INFORMATION message: UM" is used with condition A2.

PHYSICAL CHANNEL RECONFIGURATION (Step A22)

For step A22, the message in clause 9.1.1 "Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM" is used with condition A9 for Cell_PCH.

PAGING TYPE 1 (Step A24)

Information Element	Value/remark
Message Type	
Paging record list	
-Paging record	
- CHOICE Used paging identity	Utran-Identity
-U-RNTI	
-SRNC-Identity	'000000000001'B
-S-RNTI	'00000000000000000001'B
BCCH modification info	Not Present

Contents of ATTACH ACCEPT message: GMM

This message is sent from the SS to the UE.

Information Element	Value/remark
Periodic RA update timer	E0 (timer is deactivated)

7.3.11 Test procedure for HSDPA with F-DPCH RF Performance Requirement

7.3.11.1 Initial conditions

System Simulator:

- 1 HS-DSCH with F-DPCH cell, default parameters.

User Equipment:

- The UE shall initially be operated under normal RF test conditions if not otherwise stated in the initial conditions for the actual test case.
- The Test-USIM shall be inserted.
- The UE has a valid TMSI (CS) after the execution of the procedure described in clause 7.2.2.1.
- The UE has a valid P-TMSI (PS) after the execution of the procedure described in clause 7.2.2.2.

7.3.11.2 Definition of system information messages

The default system information messages specified in clause 6.1.0b are used with the following exceptions.

Contents of System information block type 1: RRC

Information Element	Value/remark
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00 00
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00(T3212 is set to infinity) 01
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in connected mode	
- T305	Infinity

Contents of System information block type 3 and 4: RRC

Information Element	Value/remark
- Qrxlevmin	-115

Contents of System Information Block type 5 (FDD)

Information Element	Value/remark
- Secondary CCPCH system information	
- Secondary CCPCH info	
- CHOICE mode	FDD
- Secondary scrambling code	Not Present
- STTD indicator	FALSE
- Spreading factor	64
- Code number	2
- Pilot symbol existence	FALSE
- TFCI existence	TRUE (default value)
- Fixed or Flexible position	Flexible (default value)
- Timing offset	Not Present
	Absence of this IE is equivalent to default value 0

7.3.11.3 Procedure

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION (BCCH)	Broadcast
2	←		PAGING TYPE1 (PCCH)	Paging (PS domain, P-TMSI)
3	→		RRC CONNECTION REQUEST (CCCH)	RRC
4	←		RRC CONNECTION SETUP (CCCH)	RRC
5	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6	→		SERVICE REQUEST	GMM
7	←		AUTHENTICATION AND CIPHERING REQUEST	GMM
8	→		AUTHENTICATION AND CIPHERING RESPONSE	GMM
9	←		SECURITY MODE COMMAND	RRC (PS domain)
10	→		SECURITY MODE COMPLETE	RRC
11	←		ACTIVATE RB TEST MODE	TC
12	→		ACTIVATE RB TEST MODE COMPLETE	TC
13	←		RADIO BEARER SETUP	RRC (RAB SETUP HSDPA with F-DPCH)
14	→		RADIO BEARER SETUP COMPLETE	RRC
15	<-->			Perform test
16	←		RRC CONNECTION RELEASE	RRC
17	→		RRC CONNECTION RELEASE COMPLETE	RRC

7.3.11.4 Specific message contents

The default message contents specified in clause 9.2 are used with the following exceptions.

7.3.11.4.1 ATTACH ACCEPT

This message is sent from the SS to the UE.

Contents of Attach Accept message: GMM

Information Element	Value/remark
Periodic RA update timer	E0 (timer is deactivated)

7.3.11.4.2 RADIO BEARER SETUP

For step 13, the message in clause 9.2, "Contents of RADIO BEARER SETUP message: AM or UM (HSDPA with F-DPCH)" is used.

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121[2], annex C for FDD and 3GPP TS 34.122 [5], annex C for TDD.

7.3.11.4.3 RRC CONNECTION SETUP

For step 4, the message in clause 9.2, "Contents of RRC CONNECTION SETUP message: UM" is used with the following exceptions:

Contents of RRC CONNECTION SETUP message: UM

Information Element	Value/remark
- Default DPCH Offset Value	Arbitrary set to value 1536..306176 by step of 2560 (this corresponds to a 0.5 slot timing offset between the DPCH and the HS-DPCH)

7.3.12 Test procedure for HSDPA in CELL_FACH RF Performance Requirement

7.3.12.1 Initial conditions

System Simulator:

- Number of cells and parameters for specific tests are defined in TS 34.121 [2] and take priority over the default parameters.

User Equipment:

- The UE shall be operated under RF test conditions.
- The Test-USIM shall be inserted.
- The UE has a valid TMSI (CS) after the execution of the procedure described in clause 7.2.2.1.
- The UE has a valid P-TMSI (PS) after the execution of the procedure described in clause 7.2.2.2.

7.3.12.2 Definition of system information messages

The default system information messages specified in clause 6.1.0b are used with the following exceptions.

Contents of System information block type 1: RRC

Information Element	Value/remark
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00 00
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00(T3212 is set to infinity) 01
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in connected mode	
- T305	Infinity

Contents of System information block type 3 and 4: RRC

Information Element	Value/remark
- Qrxlevmin	-115

Contents of System Information Block type 5 (FDD)

Information Element	Value/remark
- Secondary CCPCH system information	
- Secondary CCPCH info	FDD
- CHOICE mode	Not Present
- Secondary scrambling code	FALSE
- STTD indicator	64
- Spreading factor	2
- Code number	FALSE
- Pilot symbol existence	TRUE (default value)
- TFCI existence	Flexible (default value)
- Fixed or Flexible position	Not Present
- Timing offset	Absence of this IE is equivalent to default value 0

Additional crucial parameters for the test requirements are repeated in table 7.3.12-1 and these overrule the parameters defined in SIB type 5.

Table 7.3.12.1: UE parameters for Random Access test

Parameter	Unit	Value
Maximum number of preamble ramping cycles (M_{max}).		2
Maximum number of preambles in one preamble ramping cycle (Preamble Retrans Max)		2
The backoff time T_{B01} $N_{B01min}=N_{B01max}$	ms #TTI	N/A 0
Power step when no acquisition indicator is received (Power offset P0)	dB	3
Power offset between the last transmitted preamble and the control part of the message (Power offset P _{p-m})	dB	0
Maximum allowed UL TX power	dBm	21

7.3.12.3 Procedure

Step	Direction		Message	Comments
	UE	SS		
1			SYSTEM INFORMATION (BCCH)	Broadcast
2			PAGING TYPE1 (PCCH)	Paging (PS domain, P-TMSI)
3			RRC CONNECTION REQUEST (CCCH)	RRC
4			RRC CONNECTION SETUP (CCCH)	RRC
5			RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6			SERVICE REQUEST	GMM
7			AUTHENTICATION AND CIPHERING REQUEST	GMM
8			AUTHENTICATION AND CIPHERING RESPONSE	GMM
9			SECURITY MODE COMMAND	RRC
10			SECURITY MODE COMPLETE	RRC
11			ACTIVATE RB TEST MODE	TC
12			ACTIVATE RB TEST MODE COMPLETE	TC
13			RADIO BEARER SETUP	RRC (RAB SETUP HSDPA PS in CELL_FACH)
14			RADIO BEARER SETUP COMPLETE	RRC
15			CLOSE UE TEST LOOP	TC (UE test loop mode 1 set up) The RLC SDU counting shall be performed by the SS
16			CLOSE UE TEST LOOP COMPLETE	TC (test loop mode 1 on DTCH is activated)
17				Perform test.
18			OPEN UE TEST LOOP	TC
19			OPEN UE TEST LOOP COMPLETE	TC
20			DEACTIVATE RB TEST MODE	TC
21			DEACTIVATE RB TEST MODE COMPLETE	TC
22			RRC CONNECTION RELEASE	RRC

7.3.12.4 Specific message contents

The default message contents specified in clause 9.2 are used with the following exceptions.

Contents of Attach Accept message: GMM

Information Element	Value/remark
Periodic RA update timer	E0 (timer is deactivated)

The RRC connection setup is defined in clause 9.1.1, "Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_FACH)".

For step 13, the message in clause 9.1.1, " Contents of RADIO BEARER SETUP message: AM or UM" is used with condition A24. Default parameters are set for "Interactive/Background / UL:32 DL: [max bit rate depending on UE category] with fixed RLC and MAC-ehs / PS RAB + SRBs for CCCH + DCCH on RACH and SRB with fixed RLC and MAC-ehs on HS-DSCH / DL:QPSK" in clause 6.10.2.4.7.1 using the 10 ms UL TTI alternative with the following exception:

Information Element	Condition	Value/remark	Version
- 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 clause 6 Parameter Set	
- MAC logical channel priority		1 (Note 1)	-

Note 1: The exception is required to get ASC #0 according to 25.321 section 11.2.1. ASC#0 guarantee persistence value 1 to not cause delay in the RACH procedure.

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121[2], annex C for FDD and 3GPP TS 34.122 [5], annex C for TDD.

7.3.13 Test procedure for DC-HSDPA and DB-DC-HSDPA RF tests

7.3.13.1 Initial conditions

System Simulator:

- Dual HS-DSCH cell, default parameters.

User Equipment:

- The UE shall initially be operated under normal RF test conditions if not otherwise stated in the initial conditions for the actual test case.
- The Test-USIM shall be inserted.
- The UE has a valid TMSI (CS) after the execution of the procedure described in clause 7.2.2.1.
- The UE has a valid P-TMSI (PS) after the execution of the procedure described in clause 7.2.2.2.

7.3.13.2 Definition of system information messages

The default system information messages specified in clause 6.1.0b are used with the following exceptions.

Contents of System information block type 1: RRC

Information Element	Value/remark
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00 00
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00(T3212 is set to infinity) 01
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in connected mode	
- T305	Infinity

Contents of System information block type 3 and 4: RRC

Information Element	Value/remark
- Qrxlevmin	-115

Contents of System Information Block type 5 (FDD)

Information Element	Value/remark
- Secondary CCPCH system information	
- Secondary CCPCH info	
- CHOICE mode	FDD
- Secondary scrambling code	Not Present
- STTD indicator	FALSE
- Spreading factor	64
- Code number	2
- Pilot symbol existence	FALSE
- TFCI existence	TRUE (default value)
- Fixed or Flexible position	Flexible (default value)
- Timing offset	Not Present
	Absence of this IE is equivalent to default value 0

7.3.13.3 Procedure

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION (BCCH)	Broadcast
2		←	PAGING TYPE1 (PCCH)	Paging (CS domain, TMSI)
3		→	RRC CONNECTION REQUEST (CCCH)	RRC
4		←	RRC CONNECTION SETUP (CCCH)	RRC
5		→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6		→	PAGING RESPONSE	RR
7		←	AUTHENTICATION REQUEST	MM
8		→	AUTHENTICATION RESPONSE	MM
9		←	SECURITY MODE COMMAND	RRC (CS domain)
10		→	SECURITY MODE COMPLETE	RRC
11		←	PAGING TYPE2 (DCCH)	Paging (TMSI (GSM-MAP)/ P-TMSI)
12		→	SERVICE REQUEST	GMM
13		←	AUTHENTICATION AND CIPHERING REQUEST	GMM
14		→	AUTHENTICATION AND CIPHERING RESPONSE	GMM
15		←	SECURITY MODE COMMAND	RRC (PS domain, IE Integrity protection mode command set to "modify")
16		→	SECURITY MODE COMPLETE	RRC
17		←	ACTIVATE RB TEST MODE	TC
18		→	ACTIVATE RB TEST MODE COMPLETE	TC
19		←	RADIO BEARER SETUP	RRC (RAB SETUP RMC 12.2 CS)
20		→	RADIO BEARER SETUP COMPLETE	RRC
21		←	RADIO BEARER SETUP	RRC (RAB SETUP DC-HSDPA PS)
22		→	RADIO BEARER SETUP COMPLETE	RRC
23		<-->		Perform test
24		←	RRC CONNECTION RELEASE	RRC
25		→	RRC CONNECTION RELEASE COMPLETE	RRC

7.3.13.4 Specific message contents

The default message contents specified in clause 9.2 are used with the following exceptions.

7.3.13.4.1 ATTACH ACCEPT

This message is sent from the SS to the UE.

Contents of Attach Accept message: GMM

Information Element	Value/remark
Periodic RA update timer	E0 (timer is deactivated)

7.3.13.4.2 RADIO BEARER SETUP

For step 19, the message in clause 9.2, "Contents of RADIO BEARER SETUP message: AM or UM (Test Loop Mode1)" is used with condition A1. For step 21, the message in clause 9.2, " RADIO BEARER SETUP message: AM or UM (DC-HSDPA)" is used.

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121[2], annex C for FDD and 3GPP TS 34.122 [5], annex C for TDD.

7.3.13.4.3 RRC CONNECTION SETUP

For step 4, the message in clause 9.2, "Contents of RRC CONNECTION SETUP message: UM" is used with the following exceptions:

Contents of RRC CONNECTION SETUP message: UM

Information Element	Value/remark
- Default DPCH Offset Value	Arbitrary set to value 1536..306176 by step of 2560 (this corresponds to a 0.5 slot timing offset between the DPCH and the HS-DPCH)

7.3.14 Test procedure for DC-HSUPA RF tests

7.3.14.1 Initial conditions

System Simulator:

- Dual E-DCH cell, default parameters.

User Equipment:

- The UE shall initially be operated under normal RF test conditions if not otherwise stated in the initial conditions for the actual test case.
- The Test-USIM shall be inserted.
- The UE has a valid TMSI (CS) after the execution of the procedure described in clause 7.2.2.1.
- The UE has a valid P-TMSI (PS) after the execution of the procedure described in clause 7.2.2.2.

7.3.14.2 Definition of system information messages

The default system information messages specified in clause 6.1.0b are used with the following exceptions.

Contents of System information block type 1: RRC

Information Element	Value/remark
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00 00
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00(T3212 is set to infinity) 01
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in connected mode	
- T305	Infinity

Contents of System information block type 3 and 4: RRC

Information Element	Value/remark
- Qrxlevmin	-115

Contents of System Information Block type 5 (FDD)

Information Element	Value/remark
- Secondary CCPCH system information	
- Secondary CCPCH info	FDD
- CHOICE mode	Not Present
- Secondary scrambling code	Not Present
- STTD indicator	FALSE
- Spreading factor	64
- Code number	2
- Pilot symbol existence	FALSE
- TFCI existence	TRUE (default value)
- Fixed or Flexible position	Flexible (default value)
- Timing offset	Not Present
	Absence of this IE is equivalent to default value 0

7.3.14.3 Procedure

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION (BCCH)	Broadcast
2		←	PAGING TYPE1 (PCCH)	Paging (CS domain, TMSI)
3		→	RRC CONNECTION REQUEST (CCCH)	RRC
4		←	RRC CONNECTION SETUP (CCCH)	RRC
5		→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6		→	PAGING RESPONSE	RR
7		←	AUTHENTICATION REQUEST	MM
8		→	AUTHENTICATION RESPONSE	MM
9		←	SECURITY MODE COMMAND	RRC (CS domain)
10		→	SECURITY MODE COMPLETE	RRC
11		←	PAGING TYPE2 (DCCH)	Paging (TMSI (GSM-MAP)/ P-TMSI)
12		→	SERVICE REQUEST	GMM
13		←	AUTHENTICATION AND CIPHERING REQUEST	GMM
14		→	AUTHENTICATION AND CIPHERING RESPONSE	GMM
15		←	SECURITY MODE COMMAND	RRC (PS domain, IE Integrity protection mode command set to "modify")
16		→	SECURITY MODE COMPLETE	RRC
17		←	ACTIVATE RB TEST MODE	TC
18		→	ACTIVATE RB TEST MODE COMPLETE	TC
21		←	RADIO BEARER SETUP	RRC (RAB SETUP DC-HSUPA PS)
22		→	RADIO BEARER SETUP COMPLETE	RRC
23		<-->		Perform test
24		←	RRC CONNECTION RELEASE	RRC
25		→	RRC CONNECTION RELEASE COMPLETE	RRC

7.3.14.4 Specific message contents

The default message contents specified in clause 9.2 are used with the following exceptions.

7.3.14.4.1 ATTACH ACCEPT

This message is sent from the SS to the UE.

Contents of Attach Accept message: GMM

Information Element	Value/remark
Periodic RA update timer	E0 (timer is deactivated)

7.3.14.4.2 RADIO BEARER SETUP

The Radio Bearer Setup message is defined in clause 9.2, "Contents of RADIO BEARER SETUP message: AM or UM (DC-HSUPA)".

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121[2], annex C for FDD and 3GPP TS 34.122 [5], annex C for TDD.

7.3.14.4.3 RRC CONNECTION SETUP

The RRC connection setup is defined in clause 9.1.1, "Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_FACH)".

7.3.15 Test procedure for Multiple-cell Performance Requirement for 1,28 Mcps TDD

7.3.15.1 Initial conditions

System Simulator

- Number of cells and parameters for specific tests are defined in TS 34.122 [5] and take priority over the default parameters.

User Equipment:

- The UE shall be operated under RF test conditions.
- The Test-USIM shall be inserted.
- The UE has a valid TMSI (CS) after the execution of the procedure described in clause 7.2.2.1.
- The UE has a valid P-TMSI (PS) after the execution of the procedure described in clause 7.2.2.2.

7.3.15.2 Definition of system information messages

The default system information messages specified in clause 6.1.0b are used with the following exceptions.

Contents of System information block type 1: RRC

Information Element	Value/remark
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00 00
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00(T3212 is set to infinity) 01
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in connected mode	
- T305	Infinity

Contents of System information block type 3 and 4: RRC

Information Element	Value/remark
- Qrxlevmin	-115

Contents of System Information Block type 11 (1.28 Mcps TDD)

This is the default message content of SIB 11 for cell 1.

<ul style="list-style-type: none"> - Intra-frequency measurement identity - Intra-frequency cell info list - 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 CCPCH info - Cell parameters ID - Primary CCPCH TX power - Timeslot list - CHOICE TDD option <ul style="list-style-type: none"> - 1.28 Mcps TDD - Timeslot number - Cell Selection and Re-selection info 		<p>Not Present Absence of this IE is equivalent to default value 1</p> <p>Not present (This IE shall be ignored by the UE for SIB11)</p> <p>1</p> <p>Not present Absence of this IE is equivalent to default value 0dB</p> <p>Not Present FALSE TDD</p> <p>19 Not Present Not Present</p> <p>Not Present Not Present (The IE shall be absent as this is the serving cell)</p>
<ul style="list-style-type: none"> - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN Indicator - CHOICE mode - Primary CCPCH info - Cell parameters ID - Primary CCPCH TX power - Timeslot list - CHOICE TDD option <ul style="list-style-type: none"> - 1.28 Mcps TDD - Timeslot number - Cell Selection and Re-selection info 		<p>2</p> <p>Not present Absence of this IE is equivalent to default value 0dB</p> <p>Not Present FALSE TDD</p> <p>58 Not Present Not Present</p> <p>Not Present Not Present</p>
<ul style="list-style-type: none"> - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN Indicator - CHOICE mode - Primary CCPCH info - Cell parameters ID - Primary CCPCH TX power - Timeslot list - CHOICE TDD option <ul style="list-style-type: none"> - 1.28 Mcps TDD - Timeslot number - Cell Selection and Re-selection info 		<p>3</p> <p>Not present Absence of this IE is equivalent to default value 0dB</p> <p>Not Present FALSE TDD</p> <p>85 Not Present Not Present</p> <p>Not Present Not Present</p>
<ul style="list-style-type: none"> - Intra-frequency cell id - Cell info 		<p>7</p> <p>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.7(TDD)" in clause 6.1.4</p>
<ul style="list-style-type: none"> - Intra-frequency cell id - Cell info 		<p>8</p> <p>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.8(TDD)" in clause 6.1.4</p>

7.3.15.3 Procedure

7.3.15.3.1 For UE supporting CS

Step	Direction		Message	Comments
	UE	SS		
1			SYSTEM INFORMATION (BCCH)	Broadcast
2		←	PAGING TYPE1 (PCCH)	Paging (CS domain, TMSI)
3		→	RRC CONNECTION REQUEST (CCCH)	RRC
4		←	RRC CONNECTION SETUP (CCCH)	RRC
5		→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6		→	PAGING RESPONSE	RR
7		←	AUTHENTICATION REQUEST	MM
8		→	AUTHENTICATION RESPONSE	MM
9		←	SECURITY MODE COMMAND	RRC
10		→	SECURITY MODE COMPLETE	RRC
11		←	ACTIVATE RB TEST MODE	TC
12		→	ACTIVATE RB TEST MODE COMPLETE	TC
13		←	RADIO BEARER SETUP	RRC (RAB SETUP)
14		→	RADIO BEARER SETUP COMPLETE	RRC
15		←	CLOSE UE TEST LOOP (DCCH)	TC (UE test loop mode set up)
16		→	CLOSE UE TEST LOOP COMPLETE	TC (confirms that loopback entities for the radio bearer(s) have been created and loop back is activated)
17		←	OPEN UE TEST LOOP	TC
18		→	OPEN UE TEST LOOP COMPLETE	TC
19		←	RRC CONNECTION RELEASE	RRC
20		→	RRC CONNECTION RELEASE COMPLETE	RRC

7.3.15.3.2 For UE supporting PS only

Step	Direction		Message	Comments
	UE	SS		
1			SYSTEM INFORMATION (BCCH)	Broadcast
2		←	PAGING TYPE1 (PCCH)	Paging (PS domain, P-TMSI)
3		→	RRC CONNECTION REQUEST (CCCH)	RRC
4		←	RRC CONNECTION SETUP (CCCH)	RRC
5		→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6		→	SERVICE REQUEST	GMM
7		←	AUTHENTICATION AND CIPHERING REQUEST	GMM
8		→	AUTHENTICATION AND CIPHERING RESPONSE	GMM
9		←	SECURITY MODE COMMAND	RRC
10		→	SECURITY MODE COMPLETE	RRC
11		←	ACTIVATE RB TEST MODE	TC
12		→	ACTIVATE RB TEST MODE COMPLETE	TC
13		←	RADIO BEARER SETUP	RRC (RAB SETUP)
14		→	RADIO BEARER SETUP COMPLETE	RRC
15		←	CLOSE UE TEST LOOP (DCCH)	TC (UE test loop mode set up)
16		→	CLOSE UE TEST LOOP COMPLETE	TC (confirms that loopback entities for the radio bearer(s) have been created and loop back is activated)
17		←	OPEN UE TEST LOOP	TC
18		→	OPEN UE TEST LOOP COMPLETE	TC
19		←	RRC CONNECTION RELEASE	RRC
20		→	RRC CONNECTION RELEASE COMPLETE	RRC

7.3.15.4 Specific message contents

The default message contents specified in clause 9.2 are used with the following exceptions.

7.3.15.4.1 ATTACH ACCEPT

This message is sent from the SS to the UE, used for the UE supporting PS only.

Contents of Attach Accept message: GMM

Information Element	Value/remark
Periodic RA update timer	E0 (timer is deactivated)

7.3.15.4.2 Reference measurement channels

The configurations of the reference measurement channels for RF tests are described in 3GPP TS 34.122 [5], annex C for TDD.

7.3.16 Test procedure for 4C-HSDPA RF tests

7.3.16.1 Initial conditions

System Simulator:

- Dual HS-DSCH cell, default parameters.

User Equipment:

- The UE shall initially be operated under normal RF test conditions if not otherwise stated in the initial conditions for the actual test case.
- The Test-USIM shall be inserted.
- The UE has a valid TMSI (CS) after the execution of the procedure described in clause 7.2.2.1.
- The UE has a valid P-TMSI (PS) after the execution of the procedure described in clause 7.2.2.2.

7.3.16.2 Definition of system information messages

The default system information messages specified in clause 6.1.0b are used with the following exceptions.

Contents of System information block type 1: RRC

Information Element	Value/remark
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00 00
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00(T3212 is set to infinity) 01
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in connected mode	
- T305	Infinity

Contents of System information block type 3 and 4: RRC

Information Element	Value/remark
- Qrxlevmin	-115

Contents of System Information Block type 5 (FDD)

Information Element	Value/remark
- Secondary CCPCH system information	
- Secondary CCPCH info	
- CHOICE mode	FDD
- Secondary scrambling code	Not Present
- STTD indicator	FALSE
- Spreading factor	64

- Code number	2
- Pilot symbol existence	FALSE
- TFCI existence	TRUE (default value)
- Fixed or Flexible position	Flexible (default value)
- Timing offset	Not Present
	Absence of this IE is equivalent to default value 0

7.3.16.3 Procedure

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION (BCCH)	Broadcast
2	←		PAGING TYPE1 (PCCH)	Paging (CS domain, TMSI)
3	→		RRC CONNECTION REQUEST (CCCH)	RRC
4	←		RRC CONNECTION SETUP (CCCH)	RRC
5	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6	→		PAGING RESPONSE	RR
7	←		AUTHENTICATION REQUEST	MM
8	→		AUTHENTICATION RESPONSE	MM
9	←		SECURITY MODE COMMAND	RRC (CS domain)
10	→		SECURITY MODE COMPLETE	RRC
11	←		PAGING TYPE2 (DCCH)	Paging (TMSI (GSM-MAP)/ P-TMSI)
12	→		SERVICE REQUEST	GMM
13	←		AUTHENTICATION AND CIPHERING REQUEST	GMM
14	→		AUTHENTICATION AND CIPHERING RESPONSE	GMM
15	←		SECURITY MODE COMMAND	RRC (PS domain, IE Integrity protection mode command set to "modify")
16	→		SECURITY MODE COMPLETE	RRC
17	←		ACTIVATE RB TEST MODE	TC
18	→		ACTIVATE RB TEST MODE COMPLETE	TC
19	←		RADIO BEARER SETUP	RRC (RAB SETUP RMC 12.2 CS)
20	→		RADIO BEARER SETUP COMPLETE	RRC
21	←		RADIO BEARER SETUP	RRC (RAB SETUP DC-HSDPA PS)
22	→		RADIO BEARER SETUP COMPLETE	RRC
23	<-->			Perform test
24	←		RRC CONNECTION RELEASE	RRC
25	→		RRC CONNECTION RELEASE COMPLETE	RRC

7.3.16.4 Specific message contents

The default message contents specified in clause 9.2 are used with the following exceptions.

7.3.16.4.1 ATTACH ACCEPT

This message is sent from the SS to the UE.

Contents of Attach Accept message: GMM

Information Element	Value/remark
Periodic RA update timer	E0 (timer is deactivated)

7.3.16.4.2 RADIO BEARER SETUP

For step 19, the message in clause 9.2, "Contents of RADIO BEARER SETUP message: AM or UM (Test Loop Model)" is used with condition A1. For step 21, the message in clause 9.2, "RADIO BEARER SETUP message: AM or UM (DC-HSDPA)" is used with secondary serving cell defined as per table 5.0aB or 5.0aC of 3GPP TS 25.101.

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121[2], annex C for FDD and 3GPP TS 34.122 [5], annex C for TDD.

7.3.16.4.3 RRC CONNECTION SETUP

For step 4, the message in clause 9.2, "Contents of RRC CONNECTION SETUP message: UM" is used with the following exceptions:

Contents of RRC CONNECTION SETUP message: UM

Information Element	Value/remark
- Default DPCH Offset Value	Arbitrary set to value 1536..306176 by step of 2560 (this corresponds to a 0.5 slot timing offset between the DPCH and the HS-DPCH)

7.3.17 Test procedure for TX, RX and Performance Requirement for UL CLTD

7.3.17.1 Initial conditions

System Simulator:

- 1 HS-DSCH cell, default parameters.

User Equipment:

- The UE shall initially be operated under normal RF test conditions if not otherwise stated in the initial conditions for the actual test case.
- The Test-USIM shall be inserted.
- The UE has a valid TMSI (CS) after the execution of the procedure described in clause 7.2.2.1.
- The UE has a valid P-TMSI (PS) after the execution of the procedure described in clause 7.2.2.2.

7.3.17.2 Definition of system information messages

The default system information messages specified in clause 6.1.0b are used with the following exceptions.

Contents of System information block type 1: RRC

Information Element	Value/remark
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00 00
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	00(T3212 is set to infinity) 01
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in connected mode	
- T305	Infinity

Contents of System information block type 3 and 4: RRC

Information Element	Value/remark
- Qrxlevmin	-115

Contents of System Information Block type 5 (FDD)

Information Element	Value/remark
- Secondary CCPCH system information	
- Secondary CCPCH info	

- CHOICE mode	FDD
- Secondary scrambling code	Not Present
- STTD indicator	FALSE
- Spreading factor	64
- Code number	2
- Pilot symbol existence	FALSE
- TFCI existence	TRUE (default value)
- Fixed or Flexible position	Flexible (default value)
- Timing offset	Not Present
	Absence of this IE is equivalent to default value 0

7.3.17.3 Procedure

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION (BCCH)	Broadcast
2		←	PAGING TYPE1 (PCCH)	Paging (CS domain, TMSI)
3		→	RRC CONNECTION REQUEST (CCCH)	RRC
4		←	RRC CONNECTION SETUP (CCCH)	RRC
5		→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6		→	PAGING RESPONSE	RR
7		←	AUTHENTICATION REQUEST	MM
8		→	AUTHENTICATION RESPONSE	MM
9		←	SECURITY MODE COMMAND	RRC (CS domain)
10		→	SECURITY MODE COMPLETE	RRC
11		←	PAGING TYPE2 (DCCH)	Paging (TMSI (GSM-MAP)/ P-TMSI)
12		→	SERVICE REQUEST	GMM
13		←	AUTHENTICATION AND CIPHERING REQUEST	GMM
14		→	AUTHENTICATION AND CIPHERING RESPONSE	GMM
15		←	SECURITY MODE COMMAND	RRC (PS domain, IE Integrity protection mode command set to "modify")
16		→	SECURITY MODE COMPLETE	RRC
17		←	ACTIVATE RB TEST MODE	TC
18		→	ACTIVATE RB TEST MODE COMPLETE	TC
19		←	RADIO BEARER SETUP	RRC (RAB SETUP RMC 12.2 CS)
20		→	RADIO BEARER SETUP COMPLETE	RRC
21		←	RADIO BEARER SETUP	RRC (RAB SETUP HSDPA PS)
22		→	RADIO BEARER SETUP COMPLETE	RRC
A23		←	CLOSE UE TEST LOOP (DCCH)	TC (UE test loop mode set up to loop the RMC 12.2 to UL RMC 12.2). Test steps A23, A24, A26 and A27 are only executed when the test method in TS 34.121 [2] specifies that loopback test shall be used.
A24		→	CLOSE UE TEST LOOP COMPLETE	TC (confirms that loopback entities for the radio bearer(s) have been created and loop back is activated)
25		<-->		Perform test
A26		←	OPEN UE TEST LOOP	TC
A27		→	OPEN UE TEST LOOP COMPLETE	TC
28		←	RRC CONNECTION RELEASE	RRC
29		→	RRC CONNECTION RELEASE COMPLETE	RRC

7.3.17.4 Specific message contents

The default message contents specified in clause 9.2 are used with the following exceptions.

7.3.17.4.1 ATTACH ACCEPT

This message is sent from the SS to the UE.

Contents of Attach Accept message: GMM

Information Element	Value/remark
Periodic RA update timer	E0 (timer is deactivated)

7.3.17.4.2 RADIO BEARER SETUP

For step 19, the message in clause 9.2, "Contents of RADIO BEARER SETUP message: AM or UM (Test Loop Mode1)" is used with condition A1. For step 21, the message in clause 9.2, "Contents of RADIO BEARER SETUP message: AM or UM (HSDPA)" is used.

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121[2], annex C for FDD and 3GPP TS 34.122 [5], annex C for TDD.

7.3.17.4.3 RRC CONNECTION SETUP

For step 4, the message in clause 9.2, "Contents of RRC CONNECTION SETUP message: UM" is used with the following exceptions:

Contents of RRC CONNECTION SETUP message: UM

Information Element	Value/remark
- Default DPCH Offset Value	Arbitrary set to value 1536.306176 by step of 2560 (this corresponds to a 0.5 slot timing offset between the DPCCH and the HS-DPCCH)

7.3.17.4.4 RADIO BEARER SETUP

Default message in 9.2 is to be used with following exceptions at step 21

Information Element	Value/remark	Version
Uplink CLTD info FDD		Rel-11
- CHOICE <i>Mode</i>	New	
- S-DPCCH Info		
- S-DPCCH/DPCCH power offset	0	
- Initial CLTD activation state	First state	
- Primary CPICH Info		
- Primary Scrambling Code	Reference to clause 6.1 "Default settings (FDD)"	

Information Element	Value/remark	Version
F-TPICH Info		Rel-11
- F-TPICH slot format	1	
- F-TPICH Code number	6	
- F-TPICH frame offset	1024	

7.4 Common generic procedures for AS testing

7.4.1 UE RRC Test States for common procedures

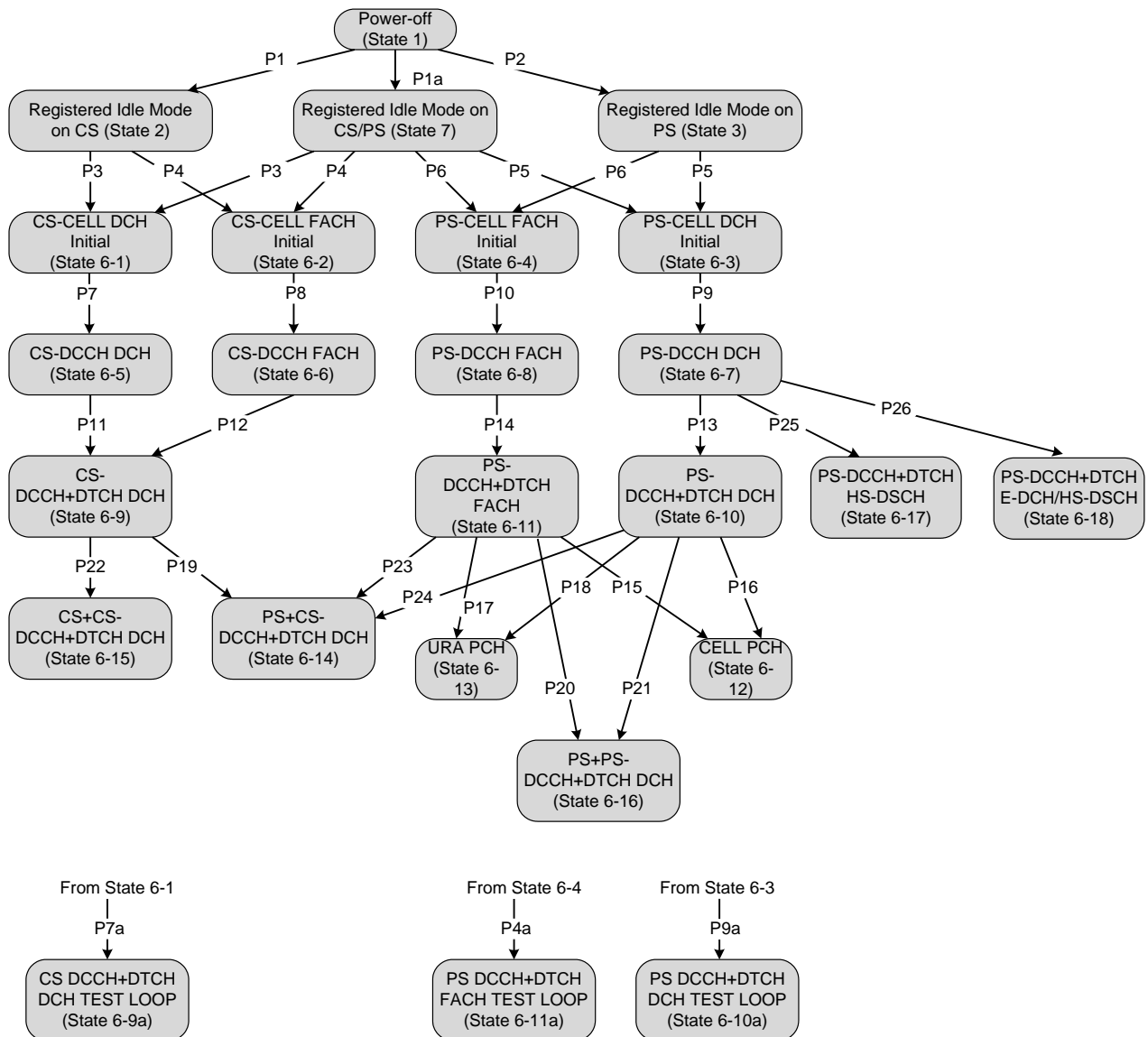


Figure 7.4.1.1: UE RRC test initial states and common procedures

For UE to set up a call in UTRAN there are a number of procedures to be undertaken in a hierarchical sequence to move between known states. The sequences are shown in figure 7.4.1.1; the operating states for various protocols in the UE are given in table 7.4.1.1.

It is noted that figure 7.4.1.1 should not be construed as a formal state transition diagram, in any manner. The intention here is to define the starting state of UE following the execution of the procedures indicated above.

Table 7.4.1.1: The UE states

		RRC	CC	MM	SM	GMM
State 1	Power OFF	-----	Null	Null	Pdp-Inactive	GMM-null
State 2	Registered Idle Mode on CS	Idle	Null	MM Idle	Pdp-Inactive	GMM-deregistered
State 3	Registered Idle Mode on PS	Idle	Null	Null	Pdp-Inactive	GMM-registered
State 7	Registered Idle Mode on CS/PS	Idle	Null	MM Idle	Pdp-Inactive	GMM-registered
State BGP6-1	CS-CELL_DCH_Initial	Connected	Null	MM Idle	Pdp-Inactive	As previous
State BGP6-2	CS-CELL_FACH_Initial	Connected	Null	MM Idle	Pdp-nactive	As previous
State BGP6-3	PS-CELL_DCH_Initial	Connected	Null	As previous	Pdp-Inactive	GMM registered
State BGP6-4	PS-CELL_FACH_Initial	Connected	Null	As previous	Pdp-Inactive	GMM registered
State BGP6-5	CS-DCCH_DCH	Connected (CELL_DCH)	Null	MM Idle	Pdp-Inactive	As previous
State BGP6-6	CS-DCCH_FACH	Connected (CELL_FACH)	Null	MM Idle	Pdp-Inactive	As previous
State BGP6-7	PS-DCCH_DCH	Connected (CELL_DCH)	Null	As previous	Pdp-Active pending	GMM registered
State BGP6-8	PS-DCCH_FACH	Connected (CELL_FACH)	Null	As previous	Pdp-Active pending	GMM registered
State BGP6-9	CS-DCCH+DTCH_DCH	Connected (CELL_DCH)	Active	MM connection active	Pdp-Inactive	As previous
State BGP6-9a	CS-DCCH+DTCH_DCH_TEST_LOOP	Connected (CELL_DCH)	Null	MM Idle	Pdp-Inactive	As previous
State BGP6-10	PS-DCCH+DTCH_DCH	Connected (CELL_DCH)	Null	As previous	Pdp-Active	GMM registered
State BGP6-10a	PS-DCCH+DTCH_DCH_TEST_LOOP	Connected (CELL_DCH)	Null	As previous	Pdp-Inactive	GMM registered
State BGP6-11	PS-DCCH+DTCH_FACH	Connected (CELL_FACH)	Null	As previous	Pdp-Active	GMM registered
State BGP6-11a	PS-DCCH+DTCH_FACH_TEST_LOOP	Connected (CELL_FACH)	Null	As previous	Pdp-Inactive	GMM registered
State BGP6-12	CELL_PCH	Connected (CELL_PCH)	Null	As previous	Pdp-Inactive	GMM registered
State BGP6-13	URA_PCH	Connected (URA_PCH)	Null	As previous	Pdp-Inactive	GMM registered
State BGP6-14	PS+CS-DCCH+DTCH_DCH	Connected (CELL_DCH)	Active	MM connection active	Pdp-Active	GMM registered
State BGP6-15	CS+CS-DCCH+DTCH_DCH	Connected (CELL_DCH)	Active	MM connection active	Pdp-Inactive	As previous
State BGP6-16	PS+PS-DCCH+DTCH_DCH	Connected (CELL_DCH)	Null	As previous	Pdp-Active	GMM registered
State BGP6-17	PS-DCCH+DTCH_HS-DSCH	Connected (CELL_DCH)	Null	As previous	Pdp-Active	GMM registered
State BGP6-18	PS-DCCH+DTCH_E-DCH/HS-DSCH	Connected (CELL_DCH)	Null	As previous	Pdp-Active	GMM registered

State 1, state 2, state 3, P1, P2 and P1a are described in clause 7.2. States 6-X (for X=1 to 17) are described below.

7.4.2 Generic Setup Procedure for RRC test cases

7.4.2.1 RRC connection establishment procedure for circuit-switched calls (procedure P3 and P4)

7.4.2.1.1 Mobile terminating call

7.4.2.1.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions as specified in the present document.
- The Test USIM shall be inserted.

7.4.2.1.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.1.1.3 Procedure

The Call Set-up procedure shall be performed under ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1		←	PAGING TYPE 1 (PCCH)	RRC
2		→	RRC CONNECTION REQUEST (CCCH)	RRC
3		←	RRC CONNECTION SETUP (CCCH)	RRC
4		→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
5		→	PAGING RESPONSE	RR

7.4.2.1.1.4 Specific message contents

To execute procedure P3, all specific message contents shall be referred to clause 9.

To execute procedure P4, all specific message contents with the exception of step 3 shall be referred to clause 9. For step 3, the message of the same type titled "Transition to CELL_FACH" in clause 9 is used.

7.4.2.1.2 Mobile originating calls

7.4.2.1.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions as specified in the present document.
- The Test USIM shall be inserted.

7.4.2.1.2.2 Definition of system information messages

The default system information messages specified in clause 6.1 are used.

7.4.2.1.2.3 Procedure

The Call Set-up procedure shall be performed under ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		

1	→	RRC CONNECTION REQUEST (CCCH)	RRC
2	←	RRC CONNECTION SETUP (CCCH)	RRC
3	→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
4	→	CM SERVICE REQUEST	MM

7.4.2.1.2.4 Specific message contents

To execute procedure P3, all specific message contents shall be referred to clause 9.

To execute procedure P4, all specific message contents with the exception of step 2 shall be referred to clause 9. For step 2, the message of the same type titled "Transition to CELL_FACH" in clause 9 is used.

7.4.2.2 RRC connection establishment procedure for packet switched sessions (procedure P5 and P6)

7.4.2.2.1 Mobile terminating session

7.4.2.2.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions as specified in the present document.
- The Test USIM shall be inserted.

7.4.2.2.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.2.1.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1	←		PAGING TYPE1 (PCCH)	Paging
2	→		RRC CONNECTION REQUEST (CCCH)	RRC
3	←		RRC CONNECTION SETUP (CCCH)	RRC
4	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
5	→		SERVICE REQUEST	GMM

7.4.2.2.1.4 Specific message contents

To execute procedure P5, all specific message contents shall be referred to clause 9.

To execute procedure P6, all specific message contents with the exception of step 3 shall be referred to clause 9. For step 3, the message of the same type titled "Transition to CELL_FACH" in clause 9 is used.

7.4.2.2.2 Mobile originating sessions

7.4.2.2.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions as specified in the present document.
- The Test USIM shall be inserted.

7.4.2.2.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.2.2.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1	→		RRC CONNECTION REQUEST (CCCH)	RRC
2	←		RRC CONNECTION SETUP (CCCH)	RRC
3	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
4	→		SERVICE REQUEST	GMM

7.4.2.2.2.4 Specific message contents

To execute procedure P5, all specific message contents shall be referred to clause 9.

To execute procedure P6, all specific message contents with the exception of step 2 shall be referred to clause 9. For step 2, the message of the same type titled "Transition to CELL_FACH" in clause 9 is used.

7.4.2.3 NAS call set up procedure for circuit switched calls (procedure P7 and P8)

7.4.2.3.1 Mobile terminating call

7.4.2.3.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-1 or state 6-2.
- The Test USIM shall be inserted.

7.4.2.3.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.3.1.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1	←		AUTHENTICATION REQUEST	MM
2	→		AUTHENTICATION RESPONSE	MM
3	←		SECURITY MODE COMMAND	RRC
4	→		SECURITY MODE COMPLETE	RRC
5	←		SET UP	CC
6	→		CALL CONFIRMED	CC

7.4.2.3.1.4 Specific message contents

All RRC specific message contents shall be referred to clause 9.

7.4.2.3.2 Mobile originating calls

7.4.2.3.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-1 or state 6-2.
- The Test USIM shall be inserted.

7.4.2.3.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.3.2.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1	←		AUTHENTICATION REQUEST	MM
2	→		AUTHENTICATION RESPONSE	MM
3	←		SECURITY MODE COMMAND	RRC
4	→		SECURITY MODE COMPLETE	RRC
5	→		SET UP	CC
6	←		CALL PROCEEDING	CC

7.4.2.3.2.4 Specific message contents

All RRC specific message contents shall be referred to clause 9.

7.4.2.4 NAS session activation procedure for packet switched sessions (procedure P9 and P10)

7.4.2.4.1 Mobile terminating session

7.4.2.4.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-3 or state 6-4.
- The Test USIM shall be inserted.

7.4.2.4.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.4.1.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1	←		AUTHENTICATION AND CIPHERING REQUEST	GMM
2	→		AUTHENTICATION AND CIPHERING RESPONSE	GMM
3	←		SECURITY MODE COMMAND	RRC
4	→		SECURITY MODE COMPLETE	RRC

5	←	REQUEST PDP CONTEXT ACTIVATION	SM
6	→	ACTIVATE PDP CONTEXT REQUEST	SM

7.4.2.4.1.4 Specific message contents

All RRC specific message contents shall be referred to clause 9.

7.4.2.4.2 Mobile originating sessions

7.4.2.4.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-3 or state 6-4.
- The Test USIM shall be inserted.

7.4.2.4.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.4.2.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1	←		AUTHENTICATION AND CIPHERING REQUEST	GMM
2	→		AUTHENTICATION AND CIPHERING RESPONSE	GMM
3	←		SECURITY MODE COMMAND	RRC
4	→		SECURITY MODE COMPLETE	RRC
5	→		ACTIVATE PDP CONTEXT REQUEST	SM

7.4.2.4.2.4 Specific message contents

All RRC specific message contents shall be referred to clause 9.

7.4.2.5 Radio access bearer establishment procedure for circuit switched calls (procedure P11 and P12)

7.4.2.5.1 Mobile terminating call

7.4.2.5.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-5 or state 6-6.
- The Test USIM shall be inserted.

7.4.2.5.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.5.1.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1	←		RADIO BEARER SETUP	RRC RAB SETUP
2	→		RADIO BEARER SETUP COMPLETE	RRC
3	→		ALERTING	CC (This message is optional)
4	→		CONNECT	CC
5	←		CONNECT ACKNOWLEDGE	CC

7.4.2.5.1.4 Specific message contents

To execute procedure P11, use the message titled "CS speech" (defined in clause 9) for the message in step 1. To execute procedure 12, use the message "The others of speech in CS" (defined in clause 9) for the message in step 1.

7.4.2.5.2 Mobile originating calls

7.4.2.5.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-5 or state 6-6.
- The Test USIM shall be inserted.

7.4.2.5.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.5.2.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1	←		RADIO BEARER SETUP	RRC RAB SETUP
2	→		RADIO BEARER SETUP COMPLETE	RRC
3	←		ALERTING	CC
4	←		CONNECT	CC
5	→		CONNECT ACKNOWLEDGE	CC

7.4.2.5.2.4 Specific message contents

To execute procedure P11, use the message titled "CS speech" (defined in clause 9) for the message in step 1. To execute procedure 12, use the message "The others of speech in CS" (defined in clause 9) for the message in step 1.

7.4.2.5a Test loop activation and radio access bearer establishment procedure for circuit switched calls (procedure P7a)

7.4.2.5a.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-1.
- The Test USIM shall be inserted.

7.4.2.5a.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.5a.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1	←		AUTHENTICATION REQUEST	MM
2	→		AUTHENTICATION RESPONSE	MM
3	←		SECURITY MODE COMMAND	RRC
4	→		SECURITY MODE COMPLETE	RRC
5	←		ACTIVATE RB TEST MODE (DCCH)	TC
6	→		ACTIVATE RB TEST MODE COMPLETE (DCCH)	TC
1	←		RADIO BEARER SETUP	RRC RAB SETUP
2	→		RADIO BEARER SETUP COMPLETE	RRC
14	←		CLOSE UE TEST LOOP (DCCH)	TC UE test mode 1 RLC SDU size set as specified for the actual test case.
15	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	TC

7.4.2.5a.4 Specific message contents

To execute procedure P7a, use the message titled "CS speech" (defined in clause 9) for the message in step 1.

7.4.2.6 Radio access bearer establishment procedure for packet switched sessions (procedure P13, P14, P25 and P26)

7.4.2.6.1 Mobile terminating session

7.4.2.6.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-7 or state 6-8.
- The Test USIM shall be inserted.

7.4.2.6.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.6.1.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1	←		RADIO BEARER SETUP	RRC RAB SETUP
2	→		RADIO BEARER SETUP COMPLETE	RRC
3	←		ACTIVATE PDP CONTEXT ACCEPT	SM

7.4.2.6.1.4 Specific message contents

For step 1, the messages in clause 9 are used. To execute procedure P13, use the message titled "Packet to CELL_DCH from CELL_DCH in PS". To execute procedure P14, use the message titled "Packet to CELL_FACH from CELL_FACH in PS". To execute procedure P25, use the message titled "Packet to CELL_DCH/ HS-DSCH from CELL_DCH in PS". To execute procedure P26, use the RADIO BEARER SETUP message with one of the conditions A12, A13, A14, A15, A16, A19, A20, A21 or A22..

7.4.2.6.2 Mobile originating sessions

7.4.2.6.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-7 or state 6-8.
- The Test USIM shall be inserted.

7.4.2.6.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.6.2.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1		←	RADIO BEARER SETUP	RRC RAB SETUP
2		→	RADIO BEARER SETUP COMPLETE	RRC
3		←	ACTIVATE PDP CONTEXT ACCEPT	SM

7.4.2.6.2.4 Specific message contents

For step 1, the messages in clause 9 are used. To execute procedure P13, use the message titled "Packet to CELL_DCH from CELL_DCH in PS". To execute procedure P14, use the message titled "Packet to CELL_FACH from CELL_FACH in PS". To execute procedure P25, use the message titled "Packet to CELL_DCH/ HS-DSCH from CELL_DCH in PS". To execute procedure P26, use the RADIO BEARER SETUP message with one of the conditions A12, A13, A14, A15 or A16.

7.4.2.6a Test loop activation and radio access bearer establishment procedure for packet switched sessions (procedure P4a and P9a)

7.4.2.6a.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-3 or state 6-4.
- The Test USIM shall be inserted.

7.4.2.6a.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.6a.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1		←	AUTHENTICATION AND CIPHERING REQUEST	GMM
2		→	AUTHENTICATION AND CIPHERING RESPONSE	GMM
3		←	SECURITY MODE COMMAND	RRC
4		→	SECURITY MODE COMPLETE	RRC
5		←	ACTIVATE RB TEST MODE (DCCH)	TC

6	→	ACTIVATE RB TEST MODE COMPLETE (DCCH)	TC
7	←	RADIO BEARER SETUP	RRC RAB SETUP. The 'pdcch info' IE shall be omitted.
8	→	RADIO BEARER SETUP COMPLETE	RRC
14	←	CLOSE UE TEST LOOP (DCCH)	TC UE test mode 1 RLC SDU size set as specified for the actual test case.
15	→	CLOSE UE TEST LOOP COMPLETE (DCCH)	TC

7.4.2.6a.4 Specific message contents

For step 1, the messages in clause 9 are used. To execute procedure P9a, use the message titled "Packet to CELL_DCH from CELL_DCH in PS". To execute procedure 4a, use the message titled "Packet to CELL_FACH from CELL_FACH in PS" with the exception that the 'pdcch info' IE shall be omitted.

7.4.2.7 Procedure for transitions to CELL_PCH or URA_PCH state (procedure P15, P16, P17 and P18)

7.4.2.7.1 Transition to CELL_PCH (procedure P15 and P16)

7.4.2.7.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-10 or state 6-11.
- The Test USIM shall be inserted.

7.4.2.7.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.7.1.3 Procedure

The Call Set-up procedure shall be performed under ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	RRC
2	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	RRC

7.4.2.7.1.4 Specific message contents

Contents of PHYSICAL CHANNEL RECONFIGURATION message: DCCH-AM (Step 1)

Information Element	Value/remark
Message Type	
RRC State Indicator	CELL_PCH

7.4.2.7.2 Transition to URA_PCH (procedure P17 and P18)

7.4.2.7.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-10 or state 6-11.
- The Test USIM shall be inserted.

7.4.2.7.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.7.2.3 Procedure

The Call Set-up procedure shall be performed under ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	RRC
2		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	RRC

7.4.2.7.2.4 Specific message contents

Contents of PHYSICAL CHANNEL RECONFIGURATION message: DCCH-AM (Step 1)

Information Element	Value/remark
Message Type	
RRC State Indicator	URA_PCH

7.4.2.8 Radio access bearer establishment procedure with packet switched sessions for transitions to Multi Call state (procedure P19, 20 and 21)

7.4.2.8.1 Transition to PS+CS-DCCH+DTCH DCH (procedure P19)

7.4.2.8.1.1 Mobile terminating session

7.4.2.8.1.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall have registered in CS/PS.
- The UE shall be in state 6-9.
- The Test USIM shall be inserted.

7.4.2.8.1.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.8.1.1.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1		←	PAGING TYPE2 (DCCH)	Paging
2		→	SERVICE REQUEST	GMM
3		←	AUTHENTICATION AND CIPHERING REQUEST	GMM
4		→	AUTHENTICATION AND CIPHERING RESPONSE	GMM
5		←	SECURITY MODE COMMAND	RRC
6		→	SECURITY MODE COMPLETE	RRC
7		←	REQUEST PDP CONTEXT ACTIVATION	SM
8		→	ACTIVATE PDP CONTEXT REQUEST	SM
9		←	RADIO BEARER SETUP	RRC RAB SETUP

Step	Direction		Message	Comments
	UE	SS		
10	→		RADIO BEARER SETUP COMPLETE	RRC
11	←		ACTIVATE PDP CONTEXT ACCEPT	SM

7.4.2.8.1.1.4 Specific message contents

FFS

7.4.2.8.1.2 Mobile originating sessions

7.4.2.8.1.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-9.
- The Test USIM shall be inserted.

7.4.2.8.1.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.8.1.2.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1	→		SERVICE REQUEST	GMM
2	←		AUTHENTICATION AND CIPHERING REQUEST	GMM
3	→		AUTHENTICATION AND CIPHERING RESPONSE	GMM
4	←		SECURITY MODE COMMAND	RRC
5	→		SECURITY MODE COMPLETE	RRC
6	→		ACTIVATE PDP CONTEXT REQUEST	SM
7	←		RADIO BEARER SETUP	RRC RAB SETUP
8	→		RADIO BEARER SETUP COMPLETE	RRC
9	←		ACTIVATE PDP CONTEXT ACCEPT	SM

7.4.2.8.1.2.4 Specific message contents

FFS

7.4.2.8.2 Transition to PS+PS-DCCH+DTCH DCH (procedure P20 and P21)

7.4.2.8.2.1 Mobile terminating session

7.4.2.8.2.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-10 or state 6-11.
- The Test USIM shall be inserted.

7.4.2.8.2.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.8.2.1.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1	←		PAGING TYPE2 (DCCH)	Paging
2	→		SERVICE REQUEST	GMM
3	←		SERVICE ACCEPT	GMM
4	←		REQUEST PDP CONTEXT ACTIVATION	SM
5	→		ACTIVATE PDP CONTEXT REQUEST	SM
6	←		RADIO BEARER SETUP	RRC RAB SETUP
7	→		RADIO BEARER SETUP COMPLETE	RRC
8	←		ACTIVATE PDP CONTEXT ACCEPT	SM

7.4.2.8.2.1.4 Specific message contents

FFS

7.4.2.8.2.2 Mobile originating sessions

7.4.2.8.2.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-10 or state 6-11.
- The Test USIM shall be inserted.

7.4.2.8.2.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.8.2.2.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1	→		SERVICE REQUEST	GMM
2	←		SERVICE ACCEPT	GMM
3	→		ACTIVATE PDP CONTEXT REQUEST	SM
4	←		RADIO BEARER SETUP	RRC RAB SETUP
5	→		RADIO BEARER SETUP COMPLETE	RRC
6	←		ACTIVATE PDP CONTEXT ACCEPT	SM

7.4.2.8.2.2.4 Specific message contents

FFS

7.4.2.9 Radio access bearer establishment procedure with circuit switched calls for transitions to Multi Call state (procedure P22, P23 and P24)

7.4.2.9.1 Transition to CS+CS-DCCH+DTCH DCH (procedure P22)

7.4.2.9.1.1 Mobile terminating call

7.4.2.9.1.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-9.
- The Test USIM shall be inserted.

7.4.2.9.1.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.9.1.1.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1		←	PAGING TYPE2 (DCCH)	Paging
2		→	PAGING RESPONSE	RR
3		←	SET UP	CC
4		→	CALL CONFIRMED	CC
5		←	RADIO BEARER SETUP	RRC RAB SETUP
6		→	RADIO BEARER SETUP COMPLETE	RRC
7		→	ALERTING	CC (this message is optional)
8		→	CONNECT	CC
9		←	CONNECT ACKNOWLEDGE	CC

7.4.2.9.1.1.4 Specific message contents

FFS

7.4.2.9.1.2 Mobile originating calls

7.4.2.9.1.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-9.
- The Test USIM shall be inserted.

7.4.2.9.1.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.9.1.2.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1		→	CM SERVICE REQUEST	MM
2		←	CM SERVICE ACCEPT	MM
3		→	SET UP	CC
4		←	CALL PROCEEDING	CC
5		←	RADIO BEARER SETUP	RRC RAB SETUP
6		→	RADIO BEARER SETUP COMPLETE	RRC
7		←	ALERTING	CC
8		←	CONNECT	CC
9		→	CONNECT ACKNOWLEDGE	CC

7.4.2.9.1.2.4 Specific message contents

FFS

7.4.2.9.2 Transition to PS+CS-DCCH+DTCH DCH (procedure P23 and 24)

7.4.2.9.2.1 Mobile terminating call

7.4.2.9.2.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall have registered in CS/PS.
- The UE shall be in state 6-10 or state 6-11.
- The Test USIM shall be inserted.

7.4.2.9.2.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.9.2.1.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1		←	PAGING TYPE2 (DCCH)	Paging
2		→	PAGING RESPONSE	RR
3		←	AUTHENTICATION REQUEST	MM
4		→	AUTHENTICATION RESPONSE	MM
5		←	SECURITY MODE COMMAND	RRC
6		→	SECURITY MODE COMPLETE	RRC
7		←	SET UP	CC
8		→	CALL CONFIRMED	CC
9		←	RADIO BEARER SETUP	RRC RAB SETUP
10		→	RADIO BEARER SETUP COMPLETE	RRC
11		→	ALERTING	CC (this message is optional)
12		→	CONNECT	CC
13		←	CONNECT ACKNOWLEDGE	CC

7.4.2.9.2.1.4 Specific message contents

FFS

7.4.2.9.2.2 Mobile originating calls

7.4.2.9.2.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-10 or state 6-11.
- The Test USIM shall be inserted.

7.4.2.9.2.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1.

7.4.2.9.2.2.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1		→	CM SERVICE REQUEST	MM
2		←	AUTHENTICATION REQUEST	MM
3		→	AUTHENTICATION RESPONSE	MM
4		←	SECURITY MODE COMMAND	RRC
5		→	SECURITY MODE COMPLETE	RRC
6		→	SET UP	CC
7		←	CALL PROCEEDING	CC
8		←	RADIO BEARER SETUP	RRC RAB SETUP
9		→	RADIO BEARER SETUP COMPLETE	RRC
10		←	ALERTING	CC
11		←	CONNECT	CC
12		→	CONNECT ACKNOWLEDGE	CC

7.4.2.9.2.2.4 Specific message contents

FFS

7.5 Test procedures for A-GPS Performance requirements testing

This clause specifies the procedures that shall be used for testing of A-GPS Performance requirements in TS 37.571-1 [47] clause 5.

7.5.1 Normal UE based A-GPS procedure

The procedure in this clause shall be used for all UE-based A-GPS TTF test cases in CELL_DCH and CELL_FACH state as specified in TS 37.571-1 [47] clause 5.

7.5.1.1 Initial conditions

User Equipment:

The UE is in CELL_DCH or CELL_FACH state after executing the procedure defined in clause F.2 of TS 37.571-1 [47].

7.5.1.2 Procedure

Step	Direction		Message	Comments
	UE	SS		
1		←	RESET UE POSITIONING STORED INFORMATION	TC
2		←	RRC MEASUREMENT CONTROL	RRC (Setup, No Reporting, Nav model Satellites 1, 2, 3, 4, 5 (1))
3		←	RRC MEASUREMENT CONTROL	RRC (Modify, No Reporting, Nav model Satellites 6, 7, 8, 9 (1), Iono Model)
4		←	RRC MEASUREMENT CONTROL	RRC (Modify, Periodical Reporting Criterion, GPS Ref time (1), ReferencePosition (1))
5		→	RRC MEASUREMENT REPORT	RRC (Position Estimate), 1 st test instance
6		←	RESET UE POSITIONING STORED INFORMATION	TC
7		←	RRC MEASUREMENT CONTROL	RRC (Setup, No Reporting, Nav model Satellites 1, 2, 3, 4, 5 (2))
8		←	RRC MEASUREMENT CONTROL	RRC (Modify, No Reporting, Nav model Satellites 6, 7, 8, 9 (2), Iono Model)

n	→	RRC MEASUREMENT REPORT	RRC (Position Estimate)
NOTE: In the actual testing the UE may report error messages at step 5 until it has been able to acquire a position estimate.			

7.5.2.3 Specific message contents

Contents of RESET UE POSITIONING STORED INFORMATION message: TC

The contents of the Reset UE Positioning Stored Information message in Step 1 are the same as specified for Normal UE based A-GPS testing in clause 7.5.1.

Contents of MEASUREMENT CONTROL message: RRC

The contents of the Measurement Control message in steps 2 and 3 are the same as specified for Normal UE based A-GPS testing in clause 7.5.1.

The contents of the Measurement Control message in step 4 are the same as specified for Normal UE based A-GPS testing in clause 7.5.1 with the following exceptions:

Information Element	Value/remark
Amount of reporting	Infinite (see note)
Reporting interval	2 000 ms
NOTE: Infinite means during the complete test time.	

7.5.3 Void

7.5.4 Normal UE assisted GPS procedure

The procedure in this clause shall be used for all UE-assisted A-GPS TTFF test cases in CELL_DCH and CELL_FACH state as specified in TS 37.571-1 [47] clause 5.

7.5.4.1 Initial conditions

User Equipment:

The UE is in CELL_DCH or CELL_FACH state after executing the procedure defined in clause F.2 of TS 37.571-1 [47].

7.5.4.2 Procedure

Step	Direction		Message	Comments
	UE	SS		
1	←		RESET UE POSITIONING STORED INFORMATION	TC
2	←		RRC MEASUREMENT CONTROL	RRC (Setup, Periodical Reporting Criteria, GPS Ref time)
3	→		RRC MEASUREMENT REPORT	RRC (Additional Assistance Data Request)
4	←		RRC MEASUREMENT CONTROL	RRC (Modify, No Reporting, Assistance Data Satellites 1, 2, 3, 4, 5, 6, 7, 8, 9)
5	←		RRC MEASUREMENT CONTROL	RRC (Modify, Periodical Reporting Criteria)
6	→		RRC MEASUREMENT REPORT	RRC (GPS Measured Results), 1 st test instance
7	←		RESET UE POSITIONING STORED INFORMATION	TC
8	←		RRC MEASUREMENT CONTROL	RRC (Setup, Periodical Reporting Criteria, GPS Ref time)
9	→		RRC MEASUREMENT REPORT	RRC (Additional Assistance Data Request)
10	←		RRC MEASUREMENT CONTROL	RRC (Modify, No Reporting, Assistance Data Satellites 1, 2, 3, 4, 5, 6, 7, 8, 9)
11	←		RRC MEASUREMENT CONTROL	RRC (Modify, Periodical Reporting Criteria)
12	→		RRC MEASUREMENT REPORT	RRC (GPS Measured Results), 2 nd test instance

Step	Direction		Message	Comments
	UE	SS		
13	←		RESET UE POSITIONING STORED INFORMATION	TC
....	
n	→		RRC MEASUREMENT REPORT	RRC (GPS Measured Results), n th test instance

7.5.4.3 Specific message contents

Contents of RESET UE POSITIONING STORED INFORMATION message: TC

Information Element	Value/remark
UE Positioning Technology	AGPS

Contents of MEASUREMENT CONTROL messages: RRC

MEASUREMENT CONTROL (Steps 2 + (n-1)*6):

Information element	Value/remark	Version
Measurement Information Elements		
Measurement Identity	10	
Measurement Command	Setup	
Measurement Reporting Mode		
- Measurement report transfer mode	Acknowledged mode RLC	
- Periodical reporting / Event trigger reporting mode	Periodical reporting	
Additional Measurements List	Not present	
CHOICE <i>Measurement type</i>	UE positioning measurement	
- UE positioning measurement		
- UE positioning reporting quantity		
- Method type	UE assisted	
- Positioning methods	GPS	R99 only
- Response time	128	
- Horizontal accuracy	19 (51 m)	
- Vertical accuracy	48 (102 m)	
- GPS timing of cell wanted	FALSE	
- Multiple sets	FALSE	R99 only
- Additional assistance data request	TRUE	
- Environmental characterization	Not present	
- Measurement validity		
- UE state	All states	
- CHOICE <i>Reporting criteria</i>	Periodical Reporting Criteria	
- Amount of reporting	1	
- Reporting Interval	20000	
- UE pos OTDOA assistance data for UE-assisted	Not present	
- UE pos OTDOA assistance data for UE-based	Not present	
- UE positioning GPS assistance data		
- UE positioning GPS reference time	As specified in TS 37.571-5 [48] clause 5.2	
Physical Channel Information Elements		
DPCH compressed mode status info	Not present	

MEASUREMENT REPORT (Steps 3 + (n-1)*6):

Information element	Value/remark	Version
Measurement Information Elements		
Measurement Identity	10	
Measured Results		
- CHOICE <i>Measurement</i>		
- UE positioning measured results		
- UE positioning OTDOA measured results	Not present	
- UE positioning position estimate info	Not present	
- UE positioning GPS measured results	Not present	
- UE positioning error		
- Error reason	Assistance Data Missing	
- GPS additional assistance data request	Defines assistance data requested by the UE	
Measured Results on RACH	Not present	
Additional Measured Results	Not present	
Event Results	Not present	

MEASUREMENT CONTROL (Steps 4 + (n-1)*6):

Information element	Value/remark	Version
Measurement Information Elements		
Measurement Identity	10	
Measurement Command	Modify	
Measurement Reporting Mode		
- Measurement report transfer mode	Acknowledged mode RLC	
- Periodical reporting / Event trigger reporting mode	Periodical reporting	
Additional Measurements List	Not present	
CHOICE <i>Measurement type</i>	UE positioning measurement	
- UE positioning measurement		
- UE positioning reporting quantity		
- Method type	UE assisted	
- Positioning methods	GPS	R99 only
- Response time	128	
- Horizontal accuracy	19 (51 m)	
- Vertical accuracy	48 (102 m)	
- GPS timing of cell wanted	FALSE	
- Multiple sets	FALSE	R99 only
- Additional assistance data request	FALSE	
- Environmental characterization	Not present	
- Measurement validity		
- UE state	All states	
- CHOICE <i>Reporting criteria</i>		
- No reporting		
- UE pos OTDOA assistance data for UE-assisted	Not present	
- UE pos OTDOA assistance data for UE-based	Not present	
- UE positioning GPS assistance data	As specified in TS 37.571-5 [48] clause 5.2 and requested by the UE in Step 3+(n-1)*6	
Physical Channel Information Elements		
DPCH compressed mode status info	Not present	

MEASUREMENT CONTROL (Steps 5 + (n-1)*6):

Information element	Value/remark	Version
Measurement Information Elements		
Measurement Identity	10	
Measurement Command	Modify	
Measurement Reporting Mode - Measurement report transfer mode - Periodical reporting / Event trigger reporting mode	Acknowledged mode RLC Periodical reporting	
Additional Measurements List	Not present	
CHOICE <i>Measurement type</i> - UE positioning measurement - UE positioning reporting quantity - Method type - Positioning methods - Response time - Horizontal accuracy - Vertical accuracy - GPS timing of cell wanted - Multiple sets - Additional assistance data request - Environmental characterization - Measurement validity - UE state - CHOICE <i>Reporting criteria</i> - Amount of reporting - Reporting Interval - UE pos OTDOA assistance data for UE-assisted - UE pos OTDOA assistance data for UE-based - UE positioning GPS assistance data	UE positioning measurement UE assisted GPS 128 19 (51 m) 48 (102 m) FALSE FALSE FALSE Not present All states Periodical Reporting Criteria 1 20000 Not present Not present Not present	R99 only R99 only
Physical Channel Information Elements		
DPCH compressed mode status info	Not present	

7.5.5 UE assisted A-GPS procedure for moving scenario and periodic update test case

The procedure in this clause shall be used for the UE-assisted A-GPS moving scenario and periodic update test case in CELL_DCH and CELL_FACH state as specified in TS 37.571-1 [47] clause 5.

7.5.5.1 Initial conditions

User Equipment:

The UE is in CELL_DCH or CELL_FACH state after executing the procedure defined in clause F.2 of TS 37.571-1 [47].

7.5.5.2 Procedure

Step	Direction		Message	Comments
	UE	SS		
1	←		RESET UE POSITIONING STORED INFORMATION	TC
2	←		RRC MEASUREMENT CONTROL	RRC (Setup, Periodical Reporting Criteria, GPS Ref time)
3	→		RRC MEASUREMENT REPORT	RRC (Additional Assistance Data Request)
4	←		RRC MEASUREMENT CONTROL	RRC (Modify, No Reporting, Assistance Data Satellites 1, 2, 3, 4, 5, 6, 7, 8, 9)
5	←		RRC MEASUREMENT CONTROL	RRC (Modify, Periodical Reporting Criteria)
6	→		RRC MEASUREMENT REPORT	RRC (GPS Measured Results), 1 st test instance
7	→		RRC MEASUREMENT REPORT	RRC (GPS Measured Results), 2 nd test instance
.....	→		
n	→		RRC MEASUREMENT REPORT	RRC (GPS Measured Results), n th test instance

NOTE: In the actual testing the UE may report error messages at step 6 until it has been able to acquire GPS measured results.

7.5.5.3 Specific message contents

Contents of RESET UE POSITIONING STORED INFORMATION message: TC

The contents of the Reset UE Positioning Stored Information message in Step 1 are the same as specified for Normal UE assisted A-GPS testing in clause 7.5.4.

Contents of MEASUREMENT CONTROL message: RRC

The contents of the Measurement Control message in steps 2 and 4 are the same as specified for Normal UE assisted A-GPS testing in clause 7.5.4.

The contents of the Measurement Control message in step 5 are the same as specified for Normal UE assisted A-GPS testing in clause 7.5.4 with the following exceptions:

Information Element	Value/remark
Amount of reporting	Infinite (see note)
Reporting interval	2 000 ms

NOTE: Infinite means during the complete test time.

7.6 Test procedures for MBMS testing

This clause specifies the procedures that shall be used for MBMS testing.

7.6.1 GMM-REGISTERED with 1 MBMS Service Activated

7.6.1.1 Initial conditions

User Equipment:

For MBMS broadcast test cases:

- The UE is in registered Idle Mode on PS state (state 3) if the UE only supports PS domain or registered Idle Mode on CS/PS (state 7) if the UE supports both CS and PS domain. The UE states are specified in clause 7.4. For MBMS multicast test cases:
 - The UE is in CELL_DCH (6-10 PS-DCCH+DTCH_DCH) or CELL_FACH (6-11 PS-DCCH+DTCH_FACH) state after executing the procedure P13 or P14 defined in clause 7.4.2.6.

For MBMS broadcast and multicast test cases:

- Subsequent to the broadcasting of System Information, MCCH messages are transmitted by the SS using MBMS configuration C1 and Default1 MCCH scheduling (No ongoing service). See subclause 11.1.
- For MBMS the RRC messages used throughout the generic setup procedures make use of specific parameter settings as specified in clause 9.1.

7.6.1.2 Procedure

For MBMS broadcast test cases:

- a) The SS request the UE to activate the requested MBMS broadcast service.
- b) The SS waits until the MBMS broadcast service has been activated in the UE
- c) The SS change UE state to CELL_DCH (6-10 PS-DCCH+DTCH_DCH) or CELL_FACH (6-11 PS-DCCH+DTCH_FACH) state by executing the procedure P13 or P14 defined in clause 7.4.2.6 except for the reception of MBMS MODIFICATION REQUEST message after RRC CONNECTION SETUP COMPLETE message during P5 or P6 procedure in case of MBMS Selected Service.

Specific Message Content for MBMS MODIFICATION REQUEST:

MBMS MODIFICATION REQUEST

Information Element	Value/remark
MBMS preferred frequency request	Check that the IE is not present
MBMS RB list requested to be released	Check that the IE is not present
MBMS Selected Service Info	Some
- CHOICE Status	
- MBMS Selected Services Full	MBMS service ID of the activated MBMS service
- MBMS Selected Service ID	
- MBMS Service ID	
- CHOICE PLMN identity	
- SameAs-MIB	Check to see that one of the below choice element is present (no data)
- explicitPLMN_Id	Check to see if it is set to the same value as "PLMN ID" in the Master Information block transmitted for the current serving cell.

For MBMS multicast test cases:

Step	Direction		Message	Comments
	UE	SS		
1				Make UE join a multicast service
2		→	IGMP/MLD JOIN	IGMP/MLD
3		←	REQUEST MBMS CONTEXT ACTIVATION	SM
4		→	ACTIVATE MBMS CONTEXT REQUEST	SM
5		←	AUTHENTICATION AND CIPHERING REQUEST	GMM
6		→	AUTHENTICATION AND CIPHERING RESPONSE	GMM
7		←	ACTIVATE MBMS CONTEXT ACCEPT	SM

If required, transition from CELL_FACH (6-11) to CELL_PCH (6-12) or URA_PCH (6-13) state using the procedures P15 or P17 respectively will be performed.

7.6.1.3 Specific message contents

All specific message contents shall be referred to clause 9 with the following exceptions:

PHYSICAL CHANNEL RECONFIGURATION (procedures 6-12 and 6-13)

Information Element	Value/remark
UTRAN DRX cycle length coefficient	7

Attach Accept message: GMM

Information Element	Value/remark
NetworkFeatureSupport	MBMS supported

Service Request message: GMM

Information Element	Value/remark
ServiceType	MBMS Service Reception

REQUEST MBMS CONTEXT ACTIVATION

Information Element	Value/remark
Linked NSAPI	5
Offered Multicast address	Present
Access point name	Present
MBMS protocol configuration options	Not present

ACTIVATE MBMS CONTEXT REQUEST

Information Element	Value/remark
Requested MBMS NSAPI	128
Requested LLC SAPI	Present
Supported MBMS bearer capabilities	Present
Requested Multicast address	Present
Access point name	Present
MBMS protocol configuration options	Not present

ACTIVATE MBMS CONTEXT ACCEPT

Information Element	Value/remark
Temporary Mobile Group Identity	
- MBMS Service Id	Present
- MCC	Present
- MNC	Present
Negotiated LLC SAPI	Present
MBMS protocol configuration options	Not present

IPv4_Datagram

Information Element	Value/remark
Version	0x4
HeaderLength	Present
TypeOfService	Present
TotalLength	Present
Identification	Present
ReservedFlag	Present
MoreFragments	Present
FragmentationOffset	Present
TimeToLive	Present
Protocol	Present
HeaderChecksum	Present
SourceAddress	Present
DestinationAddress	Present
OptionsList	Router alert option with value 0 (0x94040000)
Data	IGMP PDU

IGMP/JOIN (IPv4)

Information Element	Value/remark
---------------------	--------------

Type	0x16 (Version 2 Membership Report)
Max Resp Time	Present
Checksum	Present
Group Address	Multicast IP address

IGMP/Leave (IPv4)

Information Element	Value/remark
Type	0x17 (Version 2 Membership Report)
Max Resp Time	Present
Checksum	Present
Group Address	Multicast IP address

IPv6_Datagram

Information Element	Value/remark
Version	0x6
TrafficClass	Present
FlowLabel	Present
PayloadLength	Present
NextHeader	Present
HopLimit	Present
SourceAddress	Present
DestinationAddress	Present
ExtensionHeaders	Router alert option with value 0 (0x05020000)
Data	MLD PDU

MLD/JOIN (IPv6)

Information Element	Value/remark
Type	0x83
Code	Present
Checksum	Present
Maximum Response Delay	Present
Reserved	Present
Group Address	Multicast IP address

MLD/LEAVE (IPv6)

Information Element	Value/remark
Type	0x84
Code	Present
Checksum	Present
Maximum Response Delay	Present
Reserved	Present
Group Address	Multicast IP address

7.6.2 IDLE with 1 MBMS Service Activated

7.6.2.1 Initial conditions

User Equipment:

For MBMS broadcast test cases:

- The UE is in registered Idle Mode on PS state (state 3) if the UE only supports PS domain or registered Idle Mode on CS/PS (state 7) if the UE supports both CS and PS domain. The UE states are specified in clause 7.4.

For MBMS multicast test cases:

- The UE is in CELL_FACH (6-11 PS-DCCH+DTCH_FACH) state after executing the procedure P14 defined in clause 7.4.2.6.

For MBMS broadcast and multicast test cases:

- Subsequent to the broadcasting of System Information, MCCH messages are transmitted by the SS using MBMS configuration C1 (No ongoing service) and Default1 MCCH scheduling. See subclause 11.1.
- For MBMS the RRC messages used throughout the generic setup procedures make use of specific parameter settings as specified in clause 9.1.

7.6.2.2 Procedure

For MBMS broadcast test cases:

- The SS request the UE to active the requested MBMS broadcast service.
- The SS waits until the MBMS broadcast service has been activated in the UE

For MBMS multicast test cases:

Step	Direction		Message	Comments
	UE	SS		
1				Make UE join a multicast service
2		→	IGMP/MLD JOIN	IGMP/MLD
3		←	REQUEST MBMS CONTEXT ACTIVATION	SM
4		→	ACTIVATE MBMS CONTEXT REQUEST	SM
5		←	AUTHENTICATION AND CIPHERING REQUEST	GMM
6		→	AUTHENTICATION AND CIPHERING RESPONSE	GMM
7		←	ACTIVATE MBMS CONTEXT ACCEPT	SM
8		←	RRC CONNECTION RELEASE	RRC
9		→	RRC CONNECTION RELEASE COMPLETE	RRC

7.6.2.3 Specific message contents

All specific message contents shall be referred to clause 9 with the following exceptions:

Attach Accept message: GMM

Information Element	Value/remark
NetworkFeatureSupport	MBMS supported

Service Request message: GMM

Information Element	Value/remark
ServiceType	MBMS Service Reception

REQUEST MBMS CONTEXT ACTIVATION

Information Element	Value/remark
Linked NSAPI	5
Offered Multicast address	Present
Access point name	Present
MBMS protocol configuration options	Not present

ACTIVATE MBMS CONTEXT REQUEST

Information Element	Value/remark
Requested MBMS NSAPI	128
Requested LLC SAPI	Present
Supported MBMS bearer capabilities	Present

Requested Multicast address	Present
Access point name	Present
MBMS protocol configuration options	Not present

ACTIVATE MBMS CONTEXT ACCEPT

Information Element	Value/remark
Temporary Mobile Group Identity	
- MBMS Service Id	Present
- MCC	Present
- MNC	Present
Negotiated LLC SAPI	Present
MBMS protocol configuration options	Not present

IPv4_Datagram

Information Element	Value/remark
Version	0x4
HeaderLength	Present
TypeOfService	Present
TotalLength	Present
Identification	Present
ReservedFlag	Present
MoreFragments	Present
FragmentationOffset	Present
TimeToLive	Present
Protocol	Present
HeaderChecksum	Present
SourceAddress	Present
DestinationAddress	Present
OptionsList	Router alert option with value 0 (0x94040000)
Data	IGMP PDU

IGMP/JOIN (IPv4)

Information Element	Value/remark
Type	0x16 (Version 2 Membership Report)
Max Resp Time	Present
Checksum	Present
Group Address	Multicast IP address

IGMP/Leave (IPv4)

Information Element	Value/remark
Type	0x17 (Version 2 Membership Report)
Max Resp Time	Present
Checksum	Present
Group Address	Multicast IP address

IPv6_Datagram

Information Element	Value/remark
Version	0x6
TrafficClass	Present
FlowLabel	Present
PayloadLength	Present
NextHeader	Present
HopLimit	Present
SourceAddress	Present
DestinationAddress	Present
ExtensionHeaders	Router alert option with value 0 (0x05020000)

Data	MLD PDU
------	---------

MLD/JOIN (IPv6)

Information Element	Value/remark
Type	0x83
Code	Present
Checksum	Present
Maximum Response Delay	Present
Reserved	Present
Group Address	Multicast IP address

MLD/LEAVE (IPv6)

Information Element	Value/remark
Type	0x84
Code	Present
Checksum	Present
Maximum Response Delay	Present
Reserved	Present
Group Address	Multicast IP address

7.6.3 MBSFN IDLE

7.6.3.1 Initial conditions

System Simulator:

- 1 MBMS MBSFN Cell 31 with default parameters.

In addition to broadcasting System Information, MCCH messages are transmitted by the SS using MBMS configuration C1 and Default1 MCCH scheduling (No ongoing service). See subclause 11.1.

- 1 unicast carrier Cell 1 with default parameters.

User Equipment:

- The UE is in MBSFN Idle mode with one service activated on the MBSFN cell as specified in subclause 7.6.4.
- On the unicast carrier cell the UE is in registered Idle Mode on PS (state 3) if the UE only supports PS domain or registered Idle Mode on CS/PS (state 7) if the UE supports both CS and PS domains. See subclause 7.6.4. The UE states are specified in subclause 7.4.

7.6.3.2 Procedure

- The SS requests the UE to de-activate the requested MBMS broadcast service.
- The SS waits until the MBMS broadcast service has been de-activated in the UE

Expected Sequence:

Step	Direction		Carrier	Message	Comment
	UE	SS			
1	←		M	SYSTEM INFORMATION (BCCH)	
2	←		M	MBMS MCCH Message Configuration C1	MBMS configuration C1 and Default1 MCCH scheduling. No session ongoing.
3		SS			SS requests the UE to de-activate the required MBMS broadcast service
4		SS			SS waits until the MBMS broadcast service has been de-activated in the UE.

7.6.3.3 Specific message contents

All message contents shall be as specified in clause 9.1.

7.6.4 MBSFN IDLE with 1 MBMS Service Activated

7.6.4.1 Initial conditions

System Simulator:

- 1 MBMS MBSFN Cell 31 with default parameters.

In addition to broadcasting System Information, MCCH messages are transmitted by the SS using MBMS configuration C2 and Default1 MCCH scheduling (No modified services. One ongoing service corresponding to that to be activated at the UE. 124 kbps PS RAB). See subclause 11.1.

- 1 unicast carrier Cell 1 with default parameters.

User Equipment:

- The UE is switched off.
- The Test-USIM shall be inserted.
- The UE shall be operated under normal test conditions.

7.6.4.2 Procedure

- a) The UE shall be switched on and the unicast carrier mobile termination shall be activated.
- b) The UE registers on the unicast carrier Cell 1. The UE registers on PS, as specified in clause 7.2.2.2 of TS 34.108 (state 3) if the UE only supports PS domain or registers on CS/PS, as specified in clause 7.2.2.3 of TS 34.108. (state 7) if the UE supports both CS and PS domains.
- c) The SS sends ACTIVATE RB TEST MODE on the unicast carrier cell. The UE acknowledges by sending ACTIVATE RB TEST MODE COMPLETE.
- d) The MBMS MBSFN mobile termination shall be activated. (See Note 1)
- e) The SS sends CLOSE UE TEST LOOP via the unicast carrier cell, requesting activation of Test Loop Mode 3 specifying the MBSFN MBMS short transmission identity of the MTCH for the activated service (on Cell 31).
- f) The SS requests the UE to activate the requested MBMS broadcast service.
- g) The UE performs an MBSFN cell search, reads System Information and camps on Cell 31.
- h) The UE reads the MCCH messages transmitted by the SS in accordance with Combination C2 and with Default1 MCCH information scheduling. See subclause 11.1. The UE shall continue acquiring the above MBMS messages until it has received a consistent set of MCCH information in the same modification period.
- i) The UE shall establish the p-t-m radio bearer for the ongoing activated MBMS service indicated in the MBMS UNMODIFIED SERVICES INFORMATION message according to the configuration defined in the MBMS CURRENT CELL P-T-M INFORMATION (one ongoing session corresponding to the service activated at the UE. The UE closes the test loop and starts counting successfully received RLC PDUs on the MTCH. The UE will send CLOST UE TEST LOOP COMPLETE.
- j) The Test Loop is opened and RB Test Mode is deactivated.

Expected Sequence:

Step	Direction		Carrier	Message	Comment
	UE	SS			
1	UE		U		UE switched on and unicast carrier mobile termination is activated.
2			U		UE registers on Unicast carrier Cell 1.
3		←	U	ACTIVATE RB TEST MODE	
4		→	U	ACTIVATE RB TEST MODE COMPLETE	
5	UE				MBMS MBSFN mobile termination is activated. UE starts MBSFN cell search. Note 1.
6		←	U	CLOSE UE TEST LOOP	Loop back mode 3 on MTCH on Cell 31 is requested.
7		SS			SS requests the UE to activate the required MBMS broadcast service
8		←	M	SYSTEM INFORMATION (BCCH)	
9		←	M	MBMS MCCH Message Configuration C2	No modified services. One ongoing service corresponding to that activated at the UE. 124 kbps PS RAB
10	UE		M		The UE shall continue acquiring the above MBMS messages until it has received a consistent set of MCCH information in the same modification period.
11		→	M	CLOSE UE TEST LOOP COMPLETE	The UE shall establish the indicated p-t-m radio bearer and close the test loop.
12		←	U	OPEN UE TEST LOOP	
13		→	U	OPEN UE TEST LOOP COMPLETE	
14		←	U	DEACTIVATE RB TEST MODE	
15		→	U	DEACTIVATE RB TEST MODE COMPLETE	

Note 1: If possible, activation of the MBMS Mobile Termination shall be delayed until registration on the unicast carrier is complete.

7.6.4.3 Specific message contents

All message contents shall be as specified in clause 9.1.

8 Test USIM Parameters

8.1 Introduction

This clause defines default parameters for programming the elementary files of the test USIM. The requirements of this clause do not apply to the USIM/ME tests of 3GPP TS 31.120 [39] and 3GPP TS 31.121 [40].

8.1.1 Definitions

"Test USIM card":

A USIM card supporting the test algorithm for authentication, programmed with the parameters defined in this clause. The electrical, mechanical and environmental requirements of the test USIM card are specified in 3GPP TS 31.101 [22] and 3GPP TS 31.102 [23].

"Test USIM":

Either a test USIM card or the USIM simulator programmed with the parameters defined in this clause.

8.1.2 Definition of the test algorithm for authentication

In order to be able to easily test the UMTS authentication and key agreement procedure as specified in 3GPP TS 33.102 [24] and 3GPP TS 33.105 [26] along the whole system, the availability of a test algorithm for generation of authentication vector based on quintets is needed (in GSM triplets was used). Additionally, calculation of the parameters for re-synchronization requests is needed. The definition of the test algorithm are the functions f_1 , f_2 , f_3 , f_4 , f_5 and the corresponding functions for re-synchronization are f_1^* and f_5^* .

For test USIM intended to be used for inter-RAT or GERAN-only test cases then the test USIM shall support the conversion functions c_2 and c_3 according to 3GPP TS 33.102 [24], clause 6.8.1.2 to derive the GSM SRES and ciphering key K_c from the UMTS XRES and cipher/integrity keys CK and IK.

The test algorithm defined in the present clause shall be implemented in test USIM cards as well in test USIM simulators and SS. The test algorithm may also, for test purposes, be implemented in AUC.

The following procedure employs bit wise modulo 2 addition ("XOR").

The following convention applies:

All data variables in the specification of this test algorithm are presented with the most significant substring on the left hand side and the least significant substring on the right hand side. A substring may be a bit, byte or other arbitrary length bitstring. Where a variable is broken down into a number of substrings, the leftmost (most significant) substring is numbered 0, the next most significant is numbered 1, and so on through to the least significant.

8.1.2.1 Authentication and key derivation in the test USIM and SS

The following steps describe sequence of operations for the functions f_1 , f_2 , f_3 , f_4 and f_5 to perform in the test USIM and SS, in order to obtain the XMAC/MAC, RES/XRES, CK, IK, K_c and AK respectively, to be used in the authentication and key agreement procedure.

Step 1:

XOR to the challenge **RAND**, a predefined number **K** (in which at least one bit is not zero, see clause 8.2), having the same bit length (128 bits) as **RAND**.

The result **XDOUT** of this is:

$$\mathbf{XDOUT}[\text{bits } 0,1, \dots 126,127] = \mathbf{K}[\text{bits } 0,1, \dots 126,127] \text{ XOR } \mathbf{RAND}[\text{bits } 0,1, \dots 126,127]$$

Step 2:

RES (test USIM), **XRES** (SS), **CK**, **IK** and **AK** are extracted from **XDOUT** this way:

$$\mathbf{RES}[\text{bits } 0,1, \dots n-1,n] = \mathbf{f}_2(\mathbf{XDOUT},n) = \mathbf{XDOUT}[\text{bits } 0,1, \dots n-1,n] \quad (\text{with } 30 < n < 128)$$

NOTE: Suggested length for RES is 128 bits (i.e. $n = 127$).
In SS and AUC, the XRES calculation is identical to RES.

$$\mathbf{CK}[\text{bits } 0,1, \dots 126,127] = \mathbf{f}_3(\mathbf{XDOUT}) = \mathbf{XDOUT}[\text{bits } 8,9, \dots 126,127,0,1, \dots 6,7]$$

$$\mathbf{IK}[\text{bits } 0,1, \dots 126,127] = \mathbf{f}_4(\mathbf{XDOUT}) = \mathbf{XDOUT}[\text{bits } 16,17, \dots 126,127,0,1, \dots 14,15]$$

$$\mathbf{AK}[\text{bits } 0,1, \dots 46,47] = \mathbf{f}_5(\mathbf{XDOUT}) = \mathbf{XDOUT}[\text{bits } 24,25, \dots 70,71]$$

For test USIM intended for inter-RAT testing the GSM ciphering key K_c shall be derived from the UMTS cipher/integrity keys:

$$\mathbf{Kc}[\text{bits } 0,1, \dots 62,63] = \mathbf{c}_3(\mathbf{CK},\mathbf{IK}), \text{ see 3GPP TS 33.102 [24], clause 6.8.1.2.}$$

Step 3:

Concatenate **SQN** with **AMF** to obtain **CDOUT** like this:

$$\mathbf{CDOUT}[\text{bits } 0,1, \dots 62,63] = \mathbf{SQN}[\text{bits } 0,1, \dots 46,47] \parallel \mathbf{AMF}[\text{bits } 0,1, \dots 14,15]$$

NOTE: For test USIM the $\mathbf{SQN} = \mathbf{SQN}_{MS} = \mathbf{SQN}_{SS}[\text{bits } 0,1, \dots 46,47] = \mathbf{AUTN}[\text{bits } 0,1, \dots 46,47] \text{ XOR } \mathbf{AK}[\text{bits } 0,1, \dots 46,47]$ where AUTN is the received authentication token.

Step 4:

XMAC (test USIM) and **MAC** (SS) are calculated from **XDOUT** and **CDOUT** this way:

$$\mathbf{XMAC}[\text{bits } 0,1, \dots, 62, 63] = \mathbf{f1}(\mathbf{XDOUT}, \mathbf{CDOUT}) = \mathbf{XDOUT}[\text{bits } 0,1, \dots, 62, 63] \text{ XOR } \mathbf{CDOUT}[\text{bits } 0,1, \dots, 62, 63]$$

NOTE: In SS and AUC, the MAC calculation is identical to XMAC.

Step 5:

The SS calculates the authentication token **AUTN**:

$$\mathbf{AUTN}[\text{bits } 0,1, \dots, 126, 127] = \mathbf{SQN} \oplus \mathbf{AK}[\text{bits } 0,1, \dots, 46, 47] \parallel \mathbf{AMF}[\text{bits } 0,1, \dots, 14, 15] \parallel \mathbf{MAC}[\text{bits } 0,1, \dots, 62, 63]$$

$$\text{Where } \mathbf{SQN} \oplus \mathbf{AK}[\text{bits } 0,1, \dots, 46, 47] = \mathbf{SQN}[\text{bits } 0,1, \dots, 46, 47] \text{ XOR } \mathbf{AK}[\text{bits } 0,1, \dots, 46, 47]$$

8.1.2.2 Generation of re-synchronization parameters in the USIM

For SS to be able to initiate an authentication re-synchronization procedure a specific AMF value has been defined.

$$\mathbf{AMF}_{\text{RESYNCH}} = \mathbf{AMF}[\text{bits } 0,1, \dots, 14, 15] = "1111 1111 1111 1111"$$

When the test USIM receives an authentication token (AUTN) having the value of AMF field equal to the $\mathbf{AMF}_{\text{RESYNCH}}$ value then the test USIM shall initiate the re-synchronization procedure.

When the test USIM starts the re-synchronization procedure, the MAC-S and AK have to be calculated using the functions $\mathbf{f1}^*$ and $\mathbf{f5}^*$, which in the test algorithm are identical to $\mathbf{f1}$ and $\mathbf{f5}$, respectively.

Step 1:

XOR to the challenge **RAND**, a predefined number **K** (in which at least one bit is not zero, see 8.2), having the same bit length (128 bits) as **RAND**.

The result **XDOUT** of this is:

$$\mathbf{XDOUT}[\text{bits } 0,1, \dots, 126, 127] = \mathbf{K}[\text{bits } 0,1, \dots, 126, 127] \text{ XOR } \mathbf{RAND}[\text{bits } 0,1, \dots, 126, 127]$$

Step 2:

AK is extracted from **XDOUT** this way:

$$\mathbf{AK}[\text{bits } 0,1, \dots, 46, 47] = \mathbf{f5}^*(\mathbf{XDOUT}) = \mathbf{XDOUT}[\text{bits } 24, 25, \dots, 70, 71]$$

Step 3:

Concatenate \mathbf{SQN}_{MS} with \mathbf{AMF}^* to obtain **CDOUT** like this:

$$\mathbf{CDOUT}[\text{bits } 0,1, \dots, 62, 63] = \mathbf{SQN}_{\text{MS}}[\text{bits } 0,1, \dots, 46, 47] \parallel \mathbf{AMF}^*[\text{bits } 0,1, \dots, 14, 15]$$

Where \mathbf{AMF}^* assumes a dummy value of all zeros.

NOTE 1: For test USIM the $\mathbf{SQN}_{\text{MS}} = \mathbf{SQN}_{\text{SS}}[\text{bits } 0,1, \dots, 46, 47] = \mathbf{AUTN}[\text{bits } 0,1, \dots, 46, 47] \text{ XOR } \mathbf{AK}[\text{bits } 0,1, \dots, 46, 47]$ where AUTN is the received authentication token.

NOTE 2: For SS and AUC the $\mathbf{SQN}_{\text{MS}} = \mathbf{AUTS}[\text{bits } 0,1, \dots, 46, 47] \text{ XOR } \mathbf{AK}[\text{bits } 0,1, \dots, 46, 47]$ where AUTS is the received re-synchronization parameter.

Step 4:

MAC-S is calculated from **XDOUT** and **CDOUT** this way:

$$\mathbf{MAC-S}[\text{bits } 0,1, \dots, 62, 63] = \mathbf{f1}^*(\mathbf{XDOUT}, \mathbf{CDOUT}) = \mathbf{XDOUT}[\text{bits } 0,1, \dots, 62, 63] \text{ XOR } \mathbf{CDOUT}[\text{bits } 0,1, \dots, 62, 63]$$

NOTE: In SS and AUC, the XMAC-S calculation is identical to MAC-S.

Step 5:

The test USIM calculates the re-synchronization parameter **AUTS**:

$$\mathbf{AUTS}[\text{bits } 0,1,\dots,110,111] = \mathbf{SQN}_{\text{MS}} \oplus \mathbf{AK}[\text{bits } 0,1,\dots,46,47] \parallel \mathbf{MAC-S}[\text{bits } 0,1,\dots,62,63]$$

$$\text{Where } \mathbf{SQN}_{\text{MS}} \oplus \mathbf{AK}[\text{bits } 0,1,\dots,46,47] = \mathbf{SQN}_{\text{MS}} [\text{bits } 0,1,\dots,46,47] \text{ XOR } \mathbf{AK}[\text{bits } 0,1,\dots,46,47]$$

8.1.2.3 Using the authentication test algorithm for UE conformance testing

8.1.2.3.1 Authentication accept case

The authentication accept case is illustrated in figures 8.1.2.3.1 and 8.1.2.3.2.

The SS calculates the authentication token AUTN according to the test algorithm as specified in clause 8.1.2.1 (step 1 to step 5) using an AMF value different from the AMF_{RESYNCH} value.

The SS sends an authentication request, including RAND and AUTN parameters, to the ME/USIM.

Based on the received RAND parameter the test USIM calculates the RES, CK, IK, Kc and XMAC parameters according to clause 8.1.2.1 (step 1 to step 4). The test USIM extracts the SQN_{MS} = SQN_{SS}, AMF and MAC parameters from the received authentication token AUTN.

The test USIM checks that XMAC = MAC and then return the RES, CK and IK parameters to the ME.

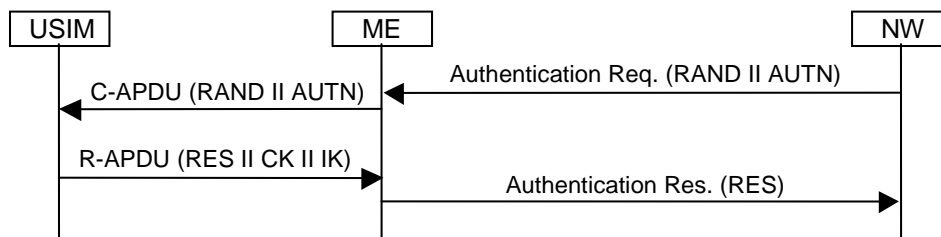


Figure 8.1.2.3.1: Network accepted by UE (USIM not supporting derivation of GSM cipher key Kc)

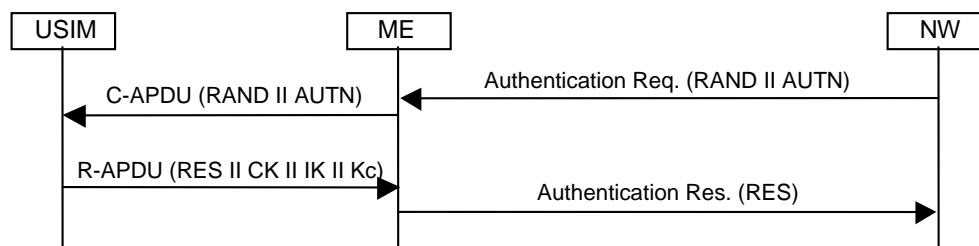


Figure 8.1.2.3.2: Network accepted by UE (USIM supporting derivation of GSM cipher key Kc)

8.1.2.3.2 MAC failure case

The MAC failure case is illustrated in figure 8.1.2.3.2.

The SS calculates the authentication token AUTN according to the test algorithm as specified in clause 8.1.2.1 (step 1 to step 5) using an AMF value different from the AMF_{RESYNCH} value and a MAC value different from what is calculated in clause 8.1.2.1 step 4.

The SS sends an authentication request, including RAND and AUTN parameters, to the ME/USIM.

Based on the received RAND parameter The test USIM calculates the RES, CK, IK, Kc and XMAC parameters according to clause 8.1.2.1 (step 1 to step 4).

The test USIM extracts the $SQN_{MS} = SQN_{SS}$, AMF and MAC parameters from the received authentication token AUTN.

When the test USIM identifies that the calculated XMAC value is different from the MAC value received in AUTN then the USIM notifies the ME of the MAC failure and the ME sends an AUTHENTICATION FAILURE message to the SS (cause "MAC failure").

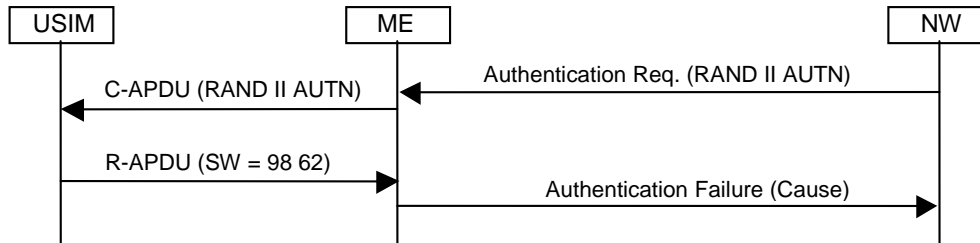


Figure 8.1.2.3.2: MAC failure cases

8.1.2.3.3 SQN failure case

The SQN failure case is illustrated in figure 8.1.2.3.3.

The SS calculates the authentication token AUTN according to the test algorithm as specified in clause 8.1.2.1 (step 1 to step 5) using an AMF value equal to $AMF_{RESYNCH}$.

The SS sends an authentication request, including RAND and AUTN parameters, to the UE/USIM.

The test USIM extracts the $SQN_{MS} = SQN_{SS}$, AMF and MAC parameters from the received authentication token AUTN.

When the test USIM identifies that the AMF field is equal to the $AMF_{RESYNCH}$ value it calculates the re-synchronization parameter AUTS as specified in clause 8.1.2.2 (step 1 to step 5) and forward it to the ME.

The ME sends an AUTHENTICATION FAILURE message to the SS including the AUTS parameter.

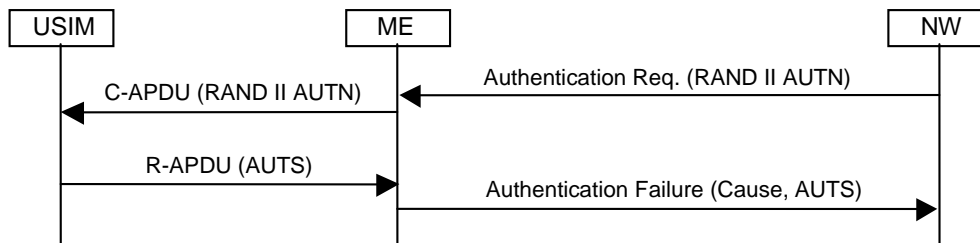


Figure 8.1.2.3.3: SQN failure case

8.1.3 Definition of the test algorithm for VGCS/VBS VSTK generation

In order to be able to easily test the VGCS/VBS key generation and encryption as specified in TS 43.020 [44] and TS 31.102 [23] along the whole system, the availability of a test algorithm for generation of the VSTK-key is needed.

The test algorithm defined in the present clause shall be implemented in test USIM cards as well in test USIM simulators and SS.

The following procedure employs bit wise modulo 2 addition ("XOR").

The following convention applies:

All data variables in the specification of this test algorithm are presented with the most significant substring on the left hand side and the least significant substring on the right hand side. A substring may be a bit, byte or other arbitrary length bitstring. Where a variable is broken down into a number of substrings, the leftmost (most significant) substring is numbered 0, the next most significant is numbered 1, and so on through to the least significant.

8.1.3.1 VSTK generation in the test USIM and SS

The following steps describe the sequence of operations for the function A8_V (TS 43.020 [44]) to be performed in the test USIM and SS, in order to obtain the VSTK, to be used in the subsequent ME/BSS key derivation steps for VGCS/VBS ciphering.

Step 1:

Expand the 36-bit value **VSTK_RAND** to an intermediate 40-bit value **EXPAND**:

FILLER[bits 0,..7] = "11111111"

EXPAND [bits 0,1, . . .39] = **FILLER**[bits 0,..3] || **VSTK_RAND**[bits 0,1, . . .35]

Expand the 40-bit value **EXPAND** to a 128-bit value **EXP_RAND**:

EXP_RAND[bits 0,1, . . .126,127] = **EXPAND**[bits 0,1, . . .39] || **EXPAND**[bits 0,1, . . .39] || **EXPAND**[bits 0,1, . . .39] || **FILLER**[bits 0,..7]

Step 2:

XOR the expanded 128 bit **EXP_RAND** with a stored **V_Ki** i.e. a 128 bit Voice Group or Broadcast Group Key (128 bit) number taken by the USIM from an internal table indexed by **VK_Id** and **Group_Id**

The result **VSTK** of this is:

VSTK[bits 0,1, . . .126,127] = **V_Ki** [bits 0,1, . . .126,127] XOR **EXP_RAND**[bits 0,1, . . .126,127]

8.2 Default Parameters for the test USIM

K:

Size: 16 Bytes

Default values: Bytes 1 (HEX): 00
 Bytes 2 (HEX): 01
 Bytes 3 (HEX): 02
 Bytes 4 (HEX): 03
 Bytes 5 (HEX): 04
 Bytes 6 (HEX): 05
 Bytes 7 (HEX): 06
 Bytes 8 (HEX): 07
 Bytes 9 (HEX): 08
 Bytes 10 (HEX): 09
 Bytes 11 (HEX): 0A
 Bytes 12 (HEX): 0B
 Bytes 13 (HEX): 0C
 Bytes 14 (HEX): 0D
 Bytes 15 (HEX): 0E

Bytes 16 (HEX): 0F

PIN Disabling:

The PIN enabled / disabled flag will be set to "PIN Disabled". This ensures that when the Test USIM is inserted into a UE the user will not be prompted for PIN entry.

8.3 Default settings for the Elementary Files (EFs)

The format and coding of elementary files of the USIM are defined in 3GPP TS 31.101 [22] and 3GPP TS 31.102 [23]. The following clauses define the default parameters to be programmed into each elementary file. Some files may be updated by the UE based on information received from the SS. These are identified in the following clauses.

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This clause suggests values in these cases.

8.3.1 Contents of the EFs at the MF level

8.3.1.1 EF_{DIR}

8.3.1.2 EF_{ICCID} (ICC Identity)

The programming of this EF is a test house option.

8.3.1.3 EF_{PL} (Preferred Languages)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.1.4 EF_{ARR} (Access rule reference)

The programming of this EF is a test house option.

8.3.2 Contents of files at the USIM ADF (Application DF) level

8.3.2.1 EF_{LI} (Language Indication)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.2 EF_{IMSI} (IMSI)

The IMSI value will be chosen by the test house. The IMSI used by the SS will align this value.

File size: 9 bytes

Default values: Byte 1 (DEC): 8

Bytes 2 to 9 (HEX): 09 10 10 ** * * * * * *

49 24 10 ** * * * * * * (for Band VI and Band IX)

"*" indicates any number between 0 and 9 subject to the restriction that IMSI mod 1000 (i.e. bytes 7, 8 and 9) lies in one of the following ranges:

- 063 to 125, 189 to 251, 315 to 377, 441 to 503, 567 to 629, 693 to 755, 819 to 881 or 945 to 999.

NOTE: This ensures that the UE can listen to the second CCCH when more than one basic physical channel is configured for the CCCH. This is necessary for the test of "paging re-organization".

8.3.2.3 EF_{Keys} (Cipherring and Integrity Keys)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.4 EF_{KeysPS} (Cipherring and Integrity Keys for Packet Switched domain)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.5 EF_{PLMNwAcT} (User controlled PLMN selector with Access Technology)

File size:	5n bytes		
Default values (HEX):	Bytes 1 to 3:	32 F4 10	(MCC, MNC) - Translates to 234, 01
	Bytes 4 to 5:	C0 B0	(Access Technology) - Translates to UTRAN, E-UTRAN, GSM, cdma2000 HRPD, cdma2000 1xRTT
	Bytes 6 to 8:	32 F4 20	(MCC, MNC)
	Bytes 9 to 10:	C0 B0	(Access Technology)
	Bytes 11 to 13:	32 F4 30	(MCC, MNC)
		
		
		
	Bytes(5n-4) to (5n-2):	32 F4 43	(MCC, MNC)
	Bytes (5n-1) to 5n:	C0 B0	(Access Technology)

PLMNs are shown coded above since this is the largest number required for a test. It is necessary to take this into account since the USIM cards must be dimensioned to cope with this number of records.

8.3.2.6 EF_{HPPLMN} (Higher Priority PLMN search period)

File size:	1 byte	
Default value (HEX):	00 (No higher priority PLMN search attempts)	

8.3.2.7 EF_{ACMmax} (ACM maximum value)

File size:	3 bytes	
Default:	Byte 1:	00
	Byte 2:	00
	Byte 3:	00

The above translates to: "Not valid".

8.3.2.8 EF_{UST} (USIM Service Table)

Services will be allocated and activated as follows.

Services		Activated	Version
Service n°1 :	Local Phone Book	Option	
Service n°2 :	Fixed Dialling Numbers (FDN)	Option	
Service n°3 :	Extension 2	Option	
Service n°4 :	Service Dialling Numbers (SDN)	Option	
Service n°5 :	Extension3	Option	
Service n°6 :	Barred Dialling Numbers (BDN)	Option	
Service n°7 :	Extension4	Option	
Service n°8 :	Outgoing Call Information (OCI and OCT)	Option	
Service n°9 :	Incoming Call Information (ICI and ICT)	Option	
Service n°10:	Short Message Storage (SMS)	Yes	
Service n°11:	Short Message Status Reports (SMSR)	Option	
Service n°12:	Short Message Service Parameters (SMSP)	Yes	

Services		Activated	Version
Service n°13:	Advice of Charge (AoC)	Yes	
Service n°14:	Capability Configuration Parameters (CCP)	Yes	
Service n°15:	Cell Broadcast Message Identifier	Yes	
Service n°16:	Cell Broadcast Message Identifier Ranges	Yes	
Service n°17:	Group Identifier Level 1	Option	
Service n°18:	Group Identifier Level 2	Option	
Service n°19:	Service Provider Name	Option	
Service n°20:	User controlled PLMN selector with Access Technology	Yes	
Service n°21:	MSISDN	Option	
Service n°22:	Image (IMG)	Option	
Service n°23:	Not used (reserved for SoLSA)	No	
Service n°24:	Enhanced Multi-Level Precedence and Pre-emption Service	Option	
Service n°25:	Automatic Answer for eLMPP	Option	
Service n°26:	RFU	No	
Service n°27:	GSM Access	Yes	
Service n°28:	Data download via SMS-PP	Option	
Service n°29:	Data download via SMS-CB	Option	
Service n°30:	Call Control by USIM	Option	
Service n°31:	MO-SMS Control by USIM	Option	
Service n°32:	RUN AT COMMAND command	Option	
Service n°33:	Packet Switched Domain	Yes	
Service n°34:	Enabled Services Table	Yes	
Service n°35:	APN Control List (ACL)	Option	
Service n°36:	Depersonalization Control Keys	Option	
Service n°37:	Co-operative Network List	Option	
Service n°38:	GSM security context	Yes	
Service n°39:	CPBCCCH Information	Yes	
Service n°40:	Investigation Scan	Yes	
Service n°41:	ME xE	Option	
Service n°42:	Operator controlled PLMN selector with Access Technology	Yes	
Service n°43:	HPLMN selector with Access Technology	Yes	
Service n°44:	Extension 5	Option	
Service n°45:	PLMN Network Name	Option	
Service n°46:	Operator PLMN List	Option	
Service n°47:	Mailbox Dialling Numbers	Option	
Service n°48:	Message Waiting Indication Status	Option	
Service n°49:	Call Forwarding Indication Status	Option	
Service n°50:	Reserved and shall be ignored	Option	
Service n°51:	Service Provider Display Information	Option	
Service n°52:	Multimedia Messaging Service (MMS)	Option	
Service n°53:	Extension 8	Option	
Service n°54:	Call control on GPRS by USIM	Option	
Service n°55:	MMS User Connectivity Parameters	Option	
Service n°56:	Network's indication of alerting in the MS (NIA)	Option	
Service n°57:	VGCS Group Identifier List (EF _{VGCS} and EF _{VGCSs})	YES	
Service n°58:	VBS Group Identifier List (EF _{VBS} and EF _{VBSs})	YES	
Service n°59:	Pseudonym	Option	REL-6 and later
Service n°60:	User Controlled PLMN selector for WLAN access	Option	REL-6 and later
Service n°61:	Operator Controlled PLMN selector for WLAN access	Option	REL-6 and later
Service n°62:	User controlled WSID list	Option	REL-6 and later
Service n°63:	Operator controlled WSID list	Option	REL-6 and later
Service n°64:	VGCS security	YES	REL-6 and later
Service n°65:	VBS security	YES	REL-6 and later
Service n°66:	WLAN Reauthentication Identity	Option	REL-6 and later
Service n°67:	Multimedia Messages Storage	Option	REL-6 and later
Service n°68:	Generic Bootstrapping Architecture (GBA)	Option	REL-6 and later
Service n°69:	MBMS security	Option	REL-6 and later
Service n°70:	Data download via USSD and USSD application mode	Option	REL-6 and later
Service n°71:	Equivalent HPLMN	Option	REL-6 and later
Service n°72:	Additional TERMINAL PROFILE after UICC activation	Option	REL-6 and later
Service n°73:	Equivalent HPLMN Presentation Indication	Option	REL-6 and later
Service n°74:	Last RPLMN Selection Indication	Yes	REL-7 and later
Service n°75:	OMA BCAST Smart Card Profile	No	REL-7 and later

Services		Activated	Version
Service n°76	GBA-based Local Key Establishment Mechanism	Option	REL-7 and later
Service n°77	Terminal Applications	No	REL-7 and later
Service n°78	Service Provider Name Icon	Option	REL-8 and later
Service n°79	PLMN Network Name Icon	Option	REL-8 and later
Service n°80	Connectivity Parameters for USIM IP connections	Option	REL-8 and later
Service n°81	Home I-WLAN Specific Identifier List	No	REL-8 and later
Service n°82	I-WLAN Equivalent HPLMN Presentation Indication	No	REL-8 and later
Service n°83	I-WLAN HPLMN Priority Indication	No	REL-8 and later
Service n°84	I-WLAN Last Registered PLMN	No	REL-8 and later
Service n°85	EPS Mobility Management Information	Option	REL-8 and later
Service n°86	Allowed CSG Lists and corresponding indications	Option	REL-8 and later
Service n°87	Call control on EPS PDN connection by USIM	No	REL-8 and later
Service n°88	HPLMN Direct Access	Option	REL-8 and later
Service n°89	eCall Data	Option	REL-8 and later
Service n°90	Operator CSG Lists and corresponding indications	Option	REL-9 and later
Service n°92	Support of CSG Display Control	Option	REL-9 and later

8.3.2.9 EF_{ACM} (Accumulated Call Meter)

File size: 3 bytes

Default: Byte 1: 00
Byte 2: 00
Byte 3: 00

The above translates to: "Not yet implemented".

8.3.2.10 EF_{GID1} (Group Identifier Level 1)

The programming of this EF is a test house option.

8.3.2.11 EF_{GID2} (Group Identifier Level 2)

The programming of this EF is a test house option.

8.3.2.12 EF_{SPN} (Service Provider Name)

The programming of this EF is a test house option.

8.3.2.13 EF_{PUCT} (Price per Unit and Currency Table)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.14 EF_{CBMI} (Cell Broadcast Message identifier selection)

The programming of this EF is a test house option.

The file size is 2n bytes, where n is the number of Cell broadcast message identifier records - each record defining a type of Cell Broadcast message which may be accessed by the UE. Care should be taken when dimensioning the USIM to take into account the number of Cell Broadcast message identifier records required.

8.3.2.15 EF_{ACC} (Access Control Class)

The EFACC type A is the default type.

Type A;

File size: 2 Bytes

Default values (BIN): Byte 1: 000000**

Byte 2: *****

The test house may set any single bit shown by "*" to "1". All remaining bits of byte 2 will be set to "0". This determines the access control class of the USIM.

Type B;

Default values (BIN): Byte 1: 111110**

Byte 2: *****

The test house may set any single bit shown by "*" to "1". All remaining bits of byte 2 will be set to "0". This determines the access control class of the USIM.

Type C;

File size: 2 Bytes

Default values (BIN): Byte 1: 100010**

Byte 2: *****

The test house may set any single bit shown by "*" to "1". This determines the access control class of the USIM.

Type D;

Default values (BIN): Byte 1: 011100**

Byte 2: *****

The test house may set any single bit shown by "*" to "1". This determines the access control class of the USIM.

8.3.2.16 EF_{FPLMN} (Forbidden PLMNs)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.17 EF_{LOCi} (Location Information)

File size: 11 Bytes

Default values: Bytes 1 to 4 (HEX): FF FF FF FF (TMSI)

Bytes 5 to 9 (HEX): 42 F6 18 FF FE (LAI)

Byte 10 (HEX): FF (RFU)

Byte 11 (BIN): 00000001 (Location Update Status = "not updated")

Bytes 5 to 9: LAI-MCC = 246 (bytes 5 to 6) and LAI-MNC = 81 (byte 7) are frequently used. The LAC (bytes 8 to 9) is set to "FF FE" since this, in conjunction with byte 11 setting of "01", is used to ensure that the UE performs a location update at the beginning of a test.

Bytes in this file (e.g. TMSI in bytes 1 to 4) may be updated as a result of a location update attempt by the UE.

8.3.2.18 EF_{AD} (Administrative Data)

File size: 4 bytes

Default values Byte 1: 10000000 - (type approval operations)

Byte 2: 00000000

Byte 3: 00000000

Byte 4: 00000010

8.3.2.19 Void

8.3.2.20 EF_{CBMID} (Cell Broadcast Message Identifier for Data Download)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.21 EF_{ECC} (Emergency Call Codes)

The programming of this EF is a test house option.

8.3.2.22 EF_{CBMIR} (Cell Broadcast Message Identifier Range selection)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.23 EF_{PSLOCi} (Packet Switched location information)

File size: 14 Bytes

Default values: Bytes 1 to 4 (HEX): FF FF FF FF (P-TMSI)

Bytes 5 to 7 (HEX): FF FF FF (P-TMSI signature value)

Bytes 8 to 13 (HEX): 42 F6 18 FF FE FF (RAI)

Byte 14 (BIN): 00000001 (Routing Area update status = "not updated")

Bytes 8 to 13: RAI-MCC = 246 (bytes 8 to 9) and RAI-MNC = 81 (byte 10) are frequently used. The LAC (bytes 11 to 12) is set to "FF FE" since this, in conjunction with byte 14 setting of "01", is used to ensure that the UE performs a location update at the beginning of a test.

Bytes in this file (e.g. P-TMSI in bytes 1 to 4) may be updated as a result of a location update attempt by the UE.

8.3.2.24 EF_{FDN} (Fixed Dialling Numbers)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.25 EF_{SMS} (Short messages)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.26 EF_{MSISDN} (MSISDN)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.27 EF_{SMSp} (Short message service parameters)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.28 EF_{SMSS} (SMS status)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.29 EF_{SDN} (Service Dialling Numbers)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.30 EF_{EXT2} (Extension2)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.31 EF_{EXT3} (Extension3)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.32 EF_{SMSR} (Short message status reports)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.33 EF_{ICI} (Incoming Call Information)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.34 EF_{OCl} (Outgoing Call Information)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.35 EF_{ICT} (Incoming Call Timer)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.36 EF_{OCT} (Outgoing Call Timer)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.37 EF_{EXT5} (Extension5)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.38 EF_{CCP2} (Capability Configuration Parameters 2)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.39 EF_{eMLPP} (enhanced Multi Level Precedence and Pre-emption)

The programming of this EF is a test house option.

8.3.2.40 EF_{AAeM} (Automatic Answer for eMLPP Service)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.41 Void

8.3.2.42 EF_{Hiddenkey} (Key for hidden phone book entries)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.43 Void

8.3.2.44 EF_{BDN} (Barred dialling numbers)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.45 EF_{EXT4} (Extension 4)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.46 EF_{CMI} (Comparison method information)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.47 EF_{EST} (Enabled service table)

The programming of this EF is a test house option.

8.3.2.48 EF_{ACL} (Access point name control list)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.49 EF_{DCK} (Depersonalization control keys)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.50 EF_{CNL} (Co-operative network list)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.51 EF_{START-HFN} (Initialisation values for Hyperframe number)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.52 EF_{THRESHOLD} (Maximum value of START)

The programming of this EF is a test house option.

8.3.2.53 EF_{OPLMNwACT} (Operator controlled PLMN selector with Access Technology)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.54 EF_{HPLMNwACT} (HPLMN selector with Access Technology)

File size: 5n (n ≥ 1) Bytes

Default values: Bytes 1 to 3 (HEX): 00 F1 10 (MCC/MNC of Test UICC's Home PLMN)

Bytes 4 to 5 (HEX): C0 B0 (all Access Technologies)

Bytes 6 to 5n (HEX): FF FF FF 00 00

FF FF FF 00 00

...

FF FF FF 00 00

Bytes 1 to 3: 1st HPLMN entry with HPLMN-MCC = 001 (bytes 1 to 2) and HPLMN-MNC = 01 (byte 3) which are frequently used in multimode and equal the EF IMSI's default MCC/MNC information.

Bytes 4 to 5: All Access Technologies selected for 1st HPLMN entry.

Bytes 6 to 5n: 2nd and more HPLMN entries are empty as per default EF parameters given in 3GPP TS 31.102 [23], annex E.

8.3.2.55 EF_{ARR} (Access rule reference)

The programming of this EF is a test house option.

8.3.2.56 Void

8.3.2.57 EF_{NETPAR} (Network Parameters)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.58 EF_{PNN} (PLMN Network Name)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.59 EF_{OPL} (Operator PLMN List)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.60 EF_{MBDN} (Mailbox Dialling Numbers)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.61 EF_{EXT6} (Extension6)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.62 EF_{MBI} (Mailbox Identifier)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.63 EF_{MWIS} (Message Waiting Indication Status)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.64 EF_{CFIS} (Call Forwarding Indication Status)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.65 EF_{EXT7} (Extension7)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.66 EF_{SPDI} (Service Provider Display Information)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.67 EF_{MMSN} (MMS Notification)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.68 EF_{EXT8} (Extension 8)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.69 EF_{MMSICP} (MMS Issuer Connectivity Parameters)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.70 EF_{MMSUP} (MMS User Preferences)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.71 EF_{MMSUCP} (MMS User Connectivity Parameters)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.72 EF_{NIA} (Network's Indication of Alerting)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

If service n°57 is "available", this file shall be present.

This EF contains a list of those VGCS group identifiers the user has subscribed to. The elementary file is used by the ME for group call establishment and group call reception.

File size: Bytes 200

Default values:

Bytes	Group ID	Value	BCD encoding in the USIM
1-4	1	12	21 FF FF FF
5-8	2	123	21 F3 FF FF
9-12	3	1234	21 43 FF FF
13-16	4	12348	21 43 F8 FF
17-20	5	123491	21 43 19 FF
21-24	6	1235029	21 53 20 F9
25-28	7	12351	21 53 F1 FF
29-32	8	12352	21 53 F2 FF
33-36	9	12353	21 53 F3 FF
37-40	10	12354	21 53 F4 FF

Bytes	Group ID	Value	BCD encoding in the USIM
41-44	11	12355	21 53 F5 FF
45-48	12	12356	21 53 F6 FF
49-52	13	12357	21 53 F7 FF
53-56	14	12358	21 53 F8 FF
57-60	15	12359	21 53 F9 FF
61-64	16	20000	02 00 F0 FF
65-68	17	20001	02 00 F1 FF
69-72	18	20002	02 00 F2 FF
73-76	19	20003	02 00 F3 FF
77-80	20	20004	02 00 F4 FF
81-84	21	20005	02 00 F5 FF
85-88	22	20006	02 00 F6 FF
89-92	23	20007	02 00 F7 FF
93-96	24	20008	02 00 F8 FF
97-100	25	20009	02 00 F9 FF
101-104	26	20010	02 10 F0 FF
105-108	27	66660	66 66 F0 FF
109-112	28	66661	66 66 F1 FF
113-116	29	66662	66 66 F2 FF
117-120	30	666638	66 66 83 FF
121-124	31	66664	66 66 F4 FF
125-128	32	66665	66 66 F5 FF
129-132	33	66666	66 66 F6 FF
133-136	34	66667	66 66 F7 FF
137-140	35	66668	66 66 F8 FF
141-144	36	66669	66 66 F9 FF
145-148	37	66670	66 76 F0 FF
149-152	38	80120	08 21 F0 FF
153-156	39	80121	08 21 F1 FF
157-160	40	80122	08 21 F2 FF
161-164	41	80123	08 21 F3 FF
165-168	42	80124	08 21 F4 FF
169-172	43	80125	08 21 F5 FF
173-176	44	80126	08 21 F6 FF
177-180	45	80127	08 21 F7 FF
181-184	46	80128	08 21 F8 FF
185-188	47	80129	08 21 F9 FF
189-192	48	80130	08 31 F0 FF
193-196	49	99999	99 99 F9 FF
197-200	50	1111119	11 11 11 F9

For Group Id = 1 V_Ki with VK_Id = 0:

Size: 16 Bytes

Default values:

- Bytes 1 (HEX): 00
- Bytes 2 (HEX): 01
- Bytes 3 (HEX): 02
- Bytes 4 (HEX): 03
- Bytes 5 (HEX): 04
- Bytes 6 (HEX): 05
- Bytes 7 (HEX): 06
- Bytes 8 (HEX): 07
- Bytes 9 (HEX): 08
- Bytes 10 (HEX): 09
- Bytes 11 (HEX): 0A

Bytes 12 (HEX): 0B
 Bytes 13 (HEX): 0C
 Bytes 14 (HEX): 0D
 Bytes 15 (HEX): 0E
 Bytes 16 (HEX): 0F

Group Id= 1: V_Ki with VK_Id = 1:

Size: 16 Bytes

Default values:

Bytes 1 (HEX): 01
 Bytes 2 (HEX): 02
 Bytes 3 (HEX): 03
 Bytes 4 (HEX): 04
 Bytes 5 (HEX): 05
 Bytes 6 (HEX): 06
 Bytes 7 (HEX): 07
 Bytes 8 (HEX): 08
 Bytes 9 (HEX): 09
 Bytes 10 (HEX): 0A
 Bytes 11 (HEX): 0B
 Bytes 12 (HEX): 0C
 Bytes 13 (HEX): 0D
 Bytes 14 (HEX): 0E
 Bytes 15 (HEX): 0F
 Bytes 16 (HEX): 00

8.3.2.74 EF_{VGCS} (Voice Group Call Service Status)

If service n°57 is "available", this file shall be present.

This EF contains the status of activation for the VGCS group identifiers. The elementary file is directly related to the EF_{VGCS}. This EF shall always be allocated if EF_{VGCS} is allocated. The following list of group ID are activated: 1, 4, 20, 30, 50.

File size: 7 Bytes

Default value(HEX): Bytes 1-7: '09 00 08 20 00 00 FE'

8.3.2.75 EF_{VBS} (Voice Broadcast Service)

If service n°58 is "available", this file shall be present.

This EF contains a list of those VBS group identifiers the user has subscribed to. The elementary file is used by the ME for broadcast call establishment and broadcast call reception.

File size: Bytes 200

Default values:

Bytes	Group ID	Value	BCD encoding in the USIM
1-4	1	12	21 FF FF FF
5-8	2	123	21 F3 FF FF
9-12	3	1234	21 43 FF FF
13-16	4	12348	21 43 F8 FF

Bytes	Group ID	Value	BCD encoding in the USIM
17-20	5	123491	21 43 19 FF
21-24	6	1235029	21 53 20 F9
25-28	7	12351	21 53 F1 FF
29-32	8	12352	21 53 F2 FF
33-36	9	12353	21 53 F3 FF
37-40	10	12354	21 53 F4 FF
41-44	11	12355	21 53 F5 FF
45-48	12	12356	21 53 F6 FF
49-52	13	12357	21 53 F7 FF
53-56	14	12358	21 53 F8 FF
57-60	15	12359	21 53 F9 FF
61-64	16	20000	02 00 F0 FF
65-68	17	20001	02 00 F1 FF
69-72	18	20002	02 00 F2 FF
73-76	19	20003	02 00 F3 FF
77-80	20	20004	02 00 F4 FF
81-84	21	20005	02 00 F5 FF
85-88	22	20006	02 00 F6 FF
89-92	23	20007	02 00 F7 FF
93-96	24	20008	02 00 F8 FF
97-100	25	20009	02 00 F9 FF
101-104	26	20010	02 10 F0 FF
105-108	27	66660	66 66 F0 FF
109-112	28	66661	66 66 F1 FF
113-116	29	66662	66 66 F2 FF
117-120	30	666638	66 66 83 FF
121-124	31	66664	66 66 F4 FF
125-128	32	66665	66 66 F5 FF
129-132	33	66666	66 66 F6 FF
133-136	34	66667	66 66 F7 FF
137-140	35	66668	66 66 F8 FF
141-144	36	66669	66 66 F9 FF
145-148	37	66670	66 76 F0 FF
149-152	38	80120	08 21 F0 FF
153-156	39	80121	08 21 F1 FF
157-160	40	80122	08 21 F2 FF
161-164	41	80123	08 21 F3 FF
165-168	42	80124	08 21 F4 FF
169-172	43	80125	08 21 F5 FF
173-176	44	80126	08 21 F6 FF
177-180	45	80127	08 21 F7 FF
181-184	46	80128	08 21 F8 FF
185-188	47	80129	08 21 F9 FF
189-192	48	80130	08 31 F0 FF
193-196	49	99999	99 99 F9 FF
197-200	50	1111119	11 11 11 F9

8.3.2.76 EF_{VBSS} (Voice Broadcast Service Status)

If service n°58 is "available", this file shall be present.

This EF contains the status of activation for the VBS group identifiers. The elementary file is directly related to the EF_{VBS}. This EF shall always be allocated if EF_{VBS} is allocated.

The following list of group ID are activated: 1, 4, 20, 30, 50.

File size: 7 Bytes

Default values (HEX): Bytes 1-7: '09 00 08 20 00 00 FE'

For Group ID= 1 V_Ki with VK_Id = 0:

Size: 16 Bytes

Default values:

- Bytes 1 (HEX): 0F
- Bytes 2 (HEX): 0E
- Bytes 3 (HEX): 0D
- Bytes 4 (HEX): 0C
- Bytes 5 (HEX): 0B
- Bytes 6 (HEX): 0A
- Bytes 7 (HEX): 09
- Bytes 8 (HEX): 08
- Bytes 9 (HEX): 07
- Bytes 10 (HEX): 06
- Bytes 11 (HEX): 05
- Bytes 12 (HEX): 04
- Bytes 13 (HEX): 03
- Bytes 14 (HEX): 02
- Bytes 15 (HEX): 01
- Bytes 16 (HEX): 00

For Group Id=1 V_Ki with VK_Id = 1:

Size: 16 Bytes

Default values:

- Bytes 1 (HEX): 00
- Bytes 2 (HEX): 0F
- Bytes 3 (HEX): 0E
- Bytes 4 (HEX): 0D
- Bytes 5 (HEX): 0C
- Bytes 6 (HEX): 0B
- Bytes 7 (HEX): 0A
- Bytes 8 (HEX): 09
- Bytes 9 (HEX): 08
- Bytes 10 (HEX): 07
- Bytes 11 (HEX): 06
- Bytes 12 (HEX): 05
- Bytes 13 (HEX): 04
- Bytes 14 (HEX): 03
- Bytes 15 (HEX): 02
- Bytes 16 (HEX): 01

8.3.2.77 EF_{VGCSA} (Voice Group Call Service Ciphering Algorithm)

If service n°64 is "available", this file shall be present.

This EF contains the ciphering algorithm identifiers for each of the Master Group Key (V_Ki) of each VGCS group that the user has subscribed to (defined in EF_{VGCS}).

File size: 2 Bytes

Default value: Byte 1 = '01' (i.e. A5/1) and Byte 2 = '03' (i.e. A5/3)

8.3.2.78 EF_{VBS}CA (Voice Broadcast Service Ciphering Algorithm)

If service n°65 is "available", this file shall be present.

This EF contains the ciphering algorithm identifiers for each of the Master Group Key (V_Ki) of each VBS group that the user has subscribed to (defined in EF_{VBS}).

File size: 2 Bytes

Default value: Byte 1 = '01' (i.e. A5/1) and Byte 2 = '03' (i.e. A5/3)

8.3.2.79 EF_{GBABP} (GBA Bootstrapping parameters)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.80 EF_{MSK} (MBMS Service Keys List)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.81 EF_{MUK} (MBMS User Key)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.82 Void

8.3.2.83 EF_{GBANL} (GBA NAF List)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.84 EF_{EHPLMN} (Equivalent HPLMN)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.85 EF_{EHPLMNPI} (Equivalent HPLMN Presentation Indication)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.86 EF_{LRPLMNSI} (Last RPLMN Selection Indication)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.87 EF_{NAFKCA} (NAF Key Centre Address)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.88 EF_{SPNI} (Service Provider Name Icon)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.89 EF_{PNNI} (PLMN Network Name Icon)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.90 EF_{NCP-IP} (Network Connectivity Parameters for USIM IP connections)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.2.91 EF_{EPSLOCi} (EPS location information)

The programming of this EF is a test house option.

8.3.2.92 EF_{EPSNSC} (EPS NAS Security Context)

The programming of this EF is a test house option.

8.3.3 Contents of DFs at the USIM ADF (Application DF) level

8.3.3.1 Contents of files at the USIM SoLSA level

8.3.3.1.1 EF_{SAI} (SoLSA Access Indicator)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.1.2 EF_{SLI} (SoLSA LSA List)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.1.3 LSA Descriptor files

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.1.4 Contents of files at the MExE level

8.3.3.1.4.1 EF_{MExE-ST} (MExE Service table)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.1.4.2 EF_{ORPK} (Operator Root Public Key)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.1.4.3 EF_{ARPK} (Administrator Root Public Key)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.1.4.4 EF_{TPRPK} (Third Party Root Public Key)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.1.4.5 EF_{TKCDF} (Trusted Key/Certificates Data Files)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.2 Contents of files at the DF PHONEBOOK level

8.3.3.2.1 EF_{PBR} (Phone Book Reference file)

The programming of this EF is a test house option.

8.3.3.2.2 EF_{IAP} (Index Administration Phone book)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.2.3 EF_{ADN} (Abbreviated dialling numbers)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.2.4 EF_{EXT1} (Extension1)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.2.5 EF_{PBC} (Phone Book Control)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.2.6 EF_{GRP} (Grouping file)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.2.7 EF_{AAS} (Additional number Alpha String)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.2.8 EF_{GAS} (Grouping information Alpha String)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.2.9 EF_{ANR} (Additional Number)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.2.10 EF_{SNE} (Second Name Entry)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.2.11 EF_{CCP1} (Capability Configuration Parameters 1)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.2.12 Phone Book Synchronization

8.3.3.2.12.1 EF_{UID} (Unique Identifier)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.2.12.2 EF_{PSC} (Phone book Synchronization Counter)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.2.12.3 EF_{CC} (Change Counter)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.2.12.4 EF_{PUID} (Previous Unique Identifier)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.2.13 EF_{EMAIL} (e-mail address)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.3 Contents of files at the DF GSM-ACCESS level (Files required for GSM Access)

8.3.3.3.1 EF_{Kc} (GSM Cipherring key Kc)

File size: 9 Bytes

Default values (HEX): Bytes 1 to 8: Align with Kc used by SS

Byte 9: 07

Byte 9 is set to 07 to indicate that there is no key available at the start of a test.

The bytes within this elementary file may be updated by the UE as a result of a successful authentication attempt.

8.3.3.3.2 EF_{KcGPRS} (GPRS Cipherring key KcGPRS)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.3.3 Void

8.3.3.3.4 EF_{CPBCCH} (CPBCCH Information)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.3.3.5 EF_{InvScan} (Investigation Scan)

The programming of this EF follows default parameter.

8.3.3.4 Contents of files at the DF HNB level

8.3.3.4.1 EF_{ACSGL} (Allowed CSG Lists)

The programming of this EF is a test house option.

8.3.3.4.2 EF_{CSGT} (CSG Type)

The programming of this EF is a test house option.

8.3.3.4.3 EF_{HNBName} (Home NodeB Name)

The programming of this EF is a test house option.

8.3.3.4.4 EF_{OCST} (Operator CSG Lists)

The programming of this EF is a test house option.

8.3.3.4.5 EF_{OCST} (Operator CSG Type)

The programming of this EF is a test house option.

8.3.3.4.6 EF_{OHNBName} (Operator Home NodeB Name)

The programming of this EF is a test house option.

8.3.4 Contents of EFs at the TELECOM level

8.3.4.1 EF_{ADN} (Abbreviated dialling numbers)

The programming of this EF is a test house option. It should be noted that sufficient space should be provided on the USIM card for 101 records.

8.3.4.2 EF_{EXT1} (Extension1)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.4.3 EF_{ECCP} (Extended Capability Configuration Parameter)

The programming of this EF is a test house option.

8.3.4.4 EF_{SUME} (SetUpMenu Elements)

The programming of this EF is a test house option.

8.3.4.5 EF_{ARR} (Access rule reference)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.5 Contents of DFs at the TELECOM level

8.3.5.1 Contents of files at the DF_{GRAPHICS} level

8.3.5.1.1 EF_{IMG} (Image)

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.5.1.2 Image Instance Data Files

The programming of this EF follows default parameter written in 3GPP TS 31.102 [23], annex E.

8.3.5.2 Contents of files at the DF_{PHONEBOOK} under the DF_{TELECOM}

The programming of this EF is a test house option.