

26.13 Multislot signalling

26.13.1 Multislot signalling / RR

26.13.1.1 Multislot signalling / RR / Measurement

26.13.1.1.1 Multislot signalling / RR / Measurement / symmetric

This test is applicable to all MS that supports multislot configuration.

26.13.1.1.1.1 Conformance requirements

The MS shall continuously send MEASUREMENT REPORT messages, on every uplink HSCSD channel used, on every SACCH blocks and the measurement valid indication shall be set to valid (0) within the second block at the latest. After 20 seconds the values in the MEASUREMENT REPORT message shall contain measurement results for the 4 strongest BCCH carriers with known and allowed NCC part of BSIC.

References

GSM 04.08 sections 3.4.1.2 and 9.1.21, GSM 05.08 section 8.4.

26.13.1.1.1.2 Test purpose

- 1) To test that, when a combination of normal neighbours, and non-permitted NCCs is “on air”, the MS reports only on normal neighbours and that in symmetric HSCSD configuration the neighbouring cell measurement reports are copied on every uplink HSCSD channel used.

26.13.1.1.1.3 Method of test

Initial Conditions

System Simulator:

For GSM 450 or GSM 480: 8 cells with the following settings:

Transmitter	Level	NCC	BSCC	ARFCN (GSM450)	ARFCN (GSM480)	Cell Identity
Serving, S1	-60	1	3	260	307	0001H
Neighbour, N1	-85	1	5	264	311	0002H
Neighbour, N2	-80	1	7	268	315	0003H
Neighbour, N3	-75	2	1	272	319	0004H
Neighbour, N4	-55	3	3	276	323	0005H
Neighbour, N5	-50	4	5	280	327	0006H
Neighbour, N6	-45	1	7	284	331	0007H
Neighbour, N7	-40	1	1	288	335	0008H

For GSM 900 or DCS 1800: 8 cells with the following settings:

Transmitter	Level	NCC	BSCC	ARFCN (GSM900)	ARFCN (DCS1800)	Cell Identity
Serving, S1	-60	1	3	002	514	0001H
Neighbour, N1	-85	1	5	008	530	0002H
Neighbour, N2	-80	1	7	014	602	0003H
Neighbour, N3	-75	2	1	020	665	0004H
Neighbour, N4	-55	3	3	026	762	0005H
Neighbour, N5	-50	4	5	032	686	0006H
Neighbour, N6	-45	1	7	038	549	0007H
Neighbour, N7	-40	1	1	044	810	0008H

With the exception of the Cell Allocation, the rest of the parameters for all eight cells are the same as the default settings and default SYSTEM INFORMATION TYPE 1 to 4 message contents for cell A. The Cell Allocation for the serving cell is the same as the default setting for cell A. The Cell Allocations for the neighbour cells need have only one entry, consisting of the ARFCN of that cell's BCCH.

Mobile Station:

The MS is in the active state of a service using symmetric multislot connection.

Related PICS/PIXIT Statements

- Type of MS (GSM 450 or GSM 480 or P-GSM 900 or EGSM or DCS 1 800).
- Multislot class
- Supported teleservices/bearer services

Foreseen Final State of the MS

Active state of a service using symmetric multislot connection.

Test Procedure

This test procedure is repeated for all the symmetric multislot configurations MS supports.

With the MS having a multislot connection in progress, the SS sends SYSTEM INFORMATION TYPE 5 & 6 on the SACCH/M. All 7 of the BCCHs "on air" are indicated in the BA (N1 is excluded). The MS shall send MEASUREMENT REPORTs back to the SS on every uplink HSCSD channel, and it shall be indicated in these that measurement results for the 4 strongest carriers have been obtained.

Maximum Duration of Test

5 minutes, including 1 minute for any necessary operator actions.

Expected Sequence

SYSTEM INFORMATION TYPE 5, SYSTEM INFORMATION TYPE 6 and MEASUREMENT REPORT are sent continuously, a table is not applicable in this test. The interval between 2 successive Layer 2 frames containing MEASUREMENT REPORTs shall not exceed one Layer 2 frame.

Specific Message Contents

GSM 450 begin:

SYSTEM INFORMATION TYPE 5

Information Element	value/remark
Neighbour Cells Description	
Format Identifier	Range 128
BCCH Allocation Sequence	1
BCCH Allocation ARFCN	The channel numbers 259, 260, 262, 263, 264, 266, 267, 268, 269, 270, 271, 272, 274, 275, 276, 277, 278, 280, 281, 282, 283, 284, 285, 286, 287, 288, 290, 291, 292 and 293 belong to the BCCH allocation.
- EXT IND	Information Element carries complete BA.

SYSTEM INFORMATION TYPE 6:

Information Element	value/remark
Protocol Discriminator	RR Management
Message Type	sys info 6
Cell Identity	Default
LAI	Default
Cell Options	
- Power Control Indicator	Power Control Indicator is set
- DTX Indicator	MS shall not use DTX
- Radio-Link-Time-out	Default
PLMN permitted	only NCC 1 permitted

MEASUREMENT REPORT

Information Element	value/remark
Protocol Discriminator	RR Management
Transaction Identifier	0000
Message Type	MEASUREMENT REPORT
Measurement Results	
BA_used	1
DTX_used	DTX was not used
RXLEV_FULL_SERVING_CELL	See NOTE 1
RXLEV_SUB_SERVING_CELL	See NOTE 1
MEAS_VALID	See NOTE 2
RXQUAL_FULL_SERVING_CELL	See NOTE 1
RXQUAL_SUB_SERVING_CELL	See NOTE 1
NO_NCELL_M	4 neighbour cell measurement results
RXLEV_NCELL_1	See NOTE 1
BCCH_FREQ_NCELL_1	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_1	Corresponds to that of BCCH_FREQ_NCELL_1
RXLEV_NCELL_2	See NOTE 1
BCCH_FREQ_NCELL_2	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_2	Corresponds to that of BCCH_FREQ_NCELL_2
RXLEV_NCELL_3	See NOTE 1
BCCH_FREQ_NCELL_3	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_3	Corresponds to that of BCCH_FREQ_NCELL_3
RXLEV_NCELL_4	See NOTE 1
BCCH_FREQ_NCELL_4	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_4	Corresponds to that of BCCH_FREQ_NCELL_4
RXLEV_NCELL_5	00 0000
BCCH_FREQ_NCELL_5	0 0000
BSIC_NCELL_5	00 0000
RXLEV_NCELL_6	00 0000
BCCH_FREQ_NCELL_6	0 0000
BSIC_NCELL_6	00 0000

This message shall contain one report on each of N7, N6, S1 and N2.

GSM 450 end:

GSM 480 begin:

SYSTEM INFORMATION TYPE 5

Information Element	value/remark
Neighbour Cells Description	
Format Identifier	Range 128
BCCH Allocation Sequence	1
BCCH Allocation ARFCN	The channel numbers 306, 307, 308, 310, 311, 312, 313, 315, 316, 317, 318, 319, 321, 322, 323, 324, 325, 326, 327, 329, 330, 331, 332, 333, 334, 335, 337, 338, 339 and 340 belong to the BCCH allocation.
- EXT IND	Information Element carries complete BA.

SYSTEM INFORMATION TYPE 6:

Information Element	value/remark
Protocol Discriminator	RR Management
Message Type	sys info 6
Cell Identity	Default
LAI	Default
Cell Options	
- Power Control Indicator	Power Control Indicator is set
- DTX Indicator	MS shall not use DTX
- Radio-Link-Time-out	Default
PLMN permitted	only NCC 1 permitted

MEASUREMENT REPORT

Information Element	value/remark
Protocol Discriminator	RR Management
Transaction Identifier	0000
Message Type	MEASUREMENT REPORT
Measurement Results	
BA_used	1
DTX_used	DTX was not used
RXLEV_FULL_SERVING_CELL	See NOTE 1
RXLEV_SUB_SERVING_CELL	See NOTE 1
MEAS_VALID	See NOTE 2
RXQUAL_FULL_SERVING_CELL	See NOTE 1
RXQUAL_SUB_SERVING_CELL	See NOTE 1
NO_NCELL_M	4 neighbour cell measurement results
RXLEV_NCELL_1	See NOTE 1
BCCH_FREQ_NCELL_1	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_1	Corresponds to that of BCCH_FREQ_NCELL_1
RXLEV_NCELL_2	See NOTE 1
BCCH_FREQ_NCELL_2	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_2	Corresponds to that of BCCH_FREQ_NCELL_2
RXLEV_NCELL_3	See NOTE 1
BCCH_FREQ_NCELL_3	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_3	Corresponds to that of BCCH_FREQ_NCELL_3
RXLEV_NCELL_4	See NOTE 1
BCCH_FREQ_NCELL_4	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_4	Corresponds to that of BCCH_FREQ_NCELL_4
RXLEV_NCELL_5	00 0000
BCCH_FREQ_NCELL_5	0 0000
BSIC_NCELL_5	00 0000
RXLEV_NCELL_6	00 0000
BCCH_FREQ_NCELL_6	0 0000
BSIC_NCELL_6	00 0000

This message shall contain one report on each of N7, N6, S1 and N2.

GSM 480 end:

GSM 900 begin:

SYSTEM INFORMATION TYPE 5

Information Element	value/remark
Neighbour Cells Description	
Format Identifier	bit map 0
BCCH Allocation Sequence	1
BCCH Allocation ARFCN	The channel numbers 2, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 23, 24, 26, 28, 29, 30, 32, 34, 35, 36, 38, 40 and 44 belong to the BCCH allocation.
- EXT IND	Information Element carries complete BA.

SYSTEM INFORMATION TYPE 6:

Information Element	value/remark
Protocol Discriminator	RR Management
Message Type	sys info 6
Cell Identity	Default
LAI	Default
Cell Options	
- Power Control Indicator	Power Control Indicator is set
- DTX Indicator	MS shall not use DTX
- Radio-Link-Time-out	Default
PLMN permitted	only NCC 1 permitted

MEASUREMENT REPORT

Information Element	value/remark
Protocol Discriminator	RR Management
Transaction Identifier	0000
Message Type	MEASUREMENT REPORT
Measurement Results	
BA_used	1
DTX_used	DTX was not used
RXLEV_FULL_SERVING_CELL	See NOTE 1
RXLEV_SUB_SERVING_CELL	See NOTE 1
MEAS_VALID	See NOTE 2
RXQUAL_FULL_SERVING_CELL	See NOTE 1
RXQUAL_SUB_SERVING_CELL	See NOTE 1
NO_NCELL_M	4 neighbour cell measurement results
RXLEV_NCELL_1	See NOTE 1
BCCH_FREQ_NCELL_1	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_1	Corresponds to that of BCCH_FREQ_NCELL_1
RXLEV_NCELL_2	See NOTE 1
BCCH_FREQ_NCELL_2	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_2	Corresponds to that of BCCH_FREQ_NCELL_2
RXLEV_NCELL_3	See NOTE 1
BCCH_FREQ_NCELL_3	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_3	Corresponds to that of BCCH_FREQ_NCELL_3
RXLEV_NCELL_4	See NOTE 1
BCCH_FREQ_NCELL_4	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_4	Corresponds to that of BCCH_FREQ_NCELL_4
RXLEV_NCELL_5	00 0000
BCCH_FREQ_NCELL_5	0 0000
BSIC_NCELL_5	00 0000
RXLEV_NCELL_6	00 0000
BCCH_FREQ_NCELL_6	0 0000
BSIC_NCELL_6	00 0000

This message shall contain one report on each of N7, N6, S1 and N2.

GSM 900 end:

DCS 1 800 begin:

SYSTEM INFORMATION TYPE 5

Information Element	value/remark
Protocol Discriminator	RR management
Message Type	Sys Info 5.
Neighbour Cells Description	
- Format	1024 range
- EXT IND	Information Element carries complete BA.
- W(i)	Non null for ARFCN 514, 549, 602, 665, 686, 762, 810.

SYSTEM INFORMATION TYPE 6

Information Element	value/remark
Protocol Discriminator	RR Management
Message Type	sys info 6
Cell Identity	Default
LAI	Default
Cell Options	
- Power Control Indicator	Power Control Indicator is set
- DTX Indicator	MS shall not use DTX
- Radio_Link_Timeout	Default
PLMN permitted	only NCC 1 permitted

MEASUREMENT REPORT

Information Element	value/remark
Protocol Discriminator	RR Management
Transaction Identifier	0000
Message Type	MEASUREMENT REPORT
Measurement Results	
BA_used	1
DTX_used	DTX was not used
RXLEV_FULL_SERVING_CELL	See NOTE 1
RXLEV_SUB_SERVING_CELL	See NOTE 1
MEAS_VALID	See NOTE 2
RXQUAL_FULL_SERVING_CELL	See NOTE 1
RXQUAL_SUB_SERVING_CELL	See NOTE 1
NO_NCELL_M	4 neighbour cell measurement results
RXLEV_NCELL_1	See NOTE 1
BCCH_FREQ_NCELL_1	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_1	Corresponds to that of BCCH_FREQ_NCELL_1
RXLEV_NCELL_2	See NOTE 1
BCCH_FREQ_NCELL_2	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_2	Corresponds to that of BCCH_FREQ_NCELL_2
RXLEV_NCELL_3	See NOTE 1
BCCH_FREQ_NCELL_3	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_3	Corresponds to that of BCCH_FREQ_NCELL_3
RXLEV_NCELL_4	See NOTE 1
BCCH_FREQ_NCELL_4	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_4	Corresponds to that of BCCH_FREQ_NCELL_4
RXLEV_NCELL_5	00 0000
BCCH_FREQ_NCELL_5	0 0000
BSIC_NCELL_5	00 0000
RXLEV_NCELL_6	00 0000
BCCH_FREQ_NCELL_6	0 0000
BSIC_NCELL_6	00 0000

This message shall contain one report on each of N7, N6, S1 and N2.

DCS 1 800 end:

NOTE 1: These actual values are not checked.

NOTE 2: The Measurement Valid Indication shall be set to valid within the second SACCH block at the latest.

26.13.1.1.2 Multislot signalling / RR / Measurement / asymmetric

This test is applicable to all MS that supports multislot configuration.

26.13.1.1.2.1 Conformance requirements

The MS shall continuously send MEASUREMENT REPORT messages, on every uplink HSCSD channel used, on every SACCH blocks and the measurement valid indication shall be set to valid (0) within the second block at the latest. After 20 seconds the values in the MEASUREMENT REPORT message shall contain measurement results for the 4 strongest BCCH carriers with known and allowed NCC part of BSIC.

References

GSM 04.08 sections 3.4.1.2 and 9.1.21, GSM 05.08 section 8.4.

26.13.1.1.2.2 Test purpose

- 1) To test that, when a combination of normal neighbours, barred cells and non-permitted NCCs is “on air”, the MS reports only on normal neighbours and that in asymmetric HSCSD configuration the neighbouring cell measurement reports are copied on every uplink HSCSD channel used.

26.13.1.1.2.3 Method of test

Initial Conditions

System Simulator:

For GSM 450 or GSM 480: 8 cells with the following settings:

Transmitter	Level	NCC	BSCC	ARFCN (GSM450)	ARFCN (GSM480)	Cell Identity
Serving, S1	-60	1	3	260	307	0001H
Neighbour, N1	-85	1	5	264	311	0002H
Neighbour, N2	-80	1	7	268	315	0003H
Neighbour, N3	-75	2	1	272	319	0004H
Neighbour, N4	-55	3	3	276	323	0005H
Neighbour, N5	-50	4	5	280	327	0006H
Neighbour, N6	-45	1	7	284	331	0007H
Neighbour, N7	-40	1	1	288	335	0008H

For GSM 900 or DCS 1800: 8 cells with the following settings:

Transmitter	Level	NCC	BSCC	ARFCN (GSM900)	ARFCN (DCS1800)	Cell Identity
Serving, S1	-60	1	3	002	514	0001H
Neighbour, N1	-85	1	5	008	530	0002H
Neighbour, N2	-80	1	7	014	602	0003H
Neighbour, N3	-75	2	1	020	665	0004H
Neighbour, N4	-55	3	3	026	762	0005H
Neighbour, N5	-50	4	5	032	686	0006H
Neighbour, N6	-45	1	7	038	549	0007H
Neighbour, N7	-40	1	1	044	810	0008H

With the exception of the Cell Allocation, the rest of the parameters for all eight cells are the same as the default settings and default SYSTEM INFORMATION TYPE 1 to 4 message contents for cell A. The Cell Allocation for the serving cell is the same as the default setting for cell A. The Cell Allocations for the neighbour cells need have only one entry, consisting of the ARFCN of that cell's BCCH.

Mobile Station:

The MS is in the active state of a service using asymmetric multislots connection.

Related PICS/PIXIT Statements

- Type of MS (GSM 450 or GSM 480 or P-GSM 900 or EGSM or DCS 1 800).
- Multislot class
- Supported teleservices/bearer services

Foreseen Final State of the MS

Active state of a service using asymmetric multislot connection.

Test Procedure

This test procedure is performed twice.

MS having a multislot connection with maximum number of timeslots in the downlink and one slot in uplink direction in progress, the SS sends SYSTEM INFORMATION TYPE 5 & 6 (on the second iteration of the test two timeslots are used in the downlink and one in uplink direction the SS also sends SYSTEM INFORMATION TYPE 5bis) on the SACCH/M. All 7 of the BCCHs "on air" are indicated in the BA (N1 is excluded). The MS shall send MEASUREMENT REPORTs back to the SS on every uplink HSCSD channel, and it shall be indicated in these that measurement results for the 4 strongest carriers have been obtained.

Maximum Duration of Test

5 minutes, including 1 minute for any necessary operator actions.

Expected Sequence

This sequence is performed for execution counter, k = 1, 2.

Since when k = 1, SYSTEM INFORMATION TYPE 5, SYSTEM INFORMATION TYPE 6 and MEASUREMENT REPORT (and when k = 2 an additional SYSTEM INFORMATION TYPE 5bis is included) are sent continuously, a table is not applicable in this test. The interval between 2 successive Layer 2 frames containing MEASUREMENT REPORTs shall not exceed one Layer 2 frame.

Specific Message Contents

GSM 450 begin:

SYSTEM INFORMATION TYPE 5

Information Element	value/remark
Neighbour Cells Description	
Format Identifier	Range 128
BCCH Allocation Sequence	1
BCCH Allocation ARFCN	The channel numbers 259, 260, 262, 263, 264, 266, 267, 268, 269, 270, 271, 272, 274, 275, 276, 277, 278, 280, 281, 282, 283, 284, 285, 286, 287, 288, 290, 291, 292 and 293 belong to the BCCH allocation.
- EXT IND	k = 1. Information Element carries complete BA. k = 2. Information Element carries only a part of the BA.

SYSTEM INFORMATION TYPE 5bis (Sent only when k = 2)

Information Element	value/remark
Protocol Discriminator	RR management
Message Type	Sys Info 5bis.
Neighbour Cells Description	
- Format	256 range
- EXT IND	k = 2. Information Element carries only a part of the BA.
- W(i)	Channel 0 and 800 belong to the BCCH allocation.

SYSTEM INFORMATION TYPE 6:

Information Element	value/remark
Protocol Discriminator	RR Management
Message Type	sys info 6
Cell Identity	default
LAI	default
Cell Options	
- Power Control Indicator	Power Control Indicator is set
- DTX Indicator	MS shall not use DTX
- Radio_Link_Timeout	default
PLMN permitted	only NCC 1 permitted

MEASUREMENT REPORT

Information Element	Value/remark
Protocol Discriminator	RR Management
Transaction Identifier	0000
Message Type	MEASUREMENT REPORT
Measurement Results	
BA_used	1
DTX_used	DTX was not used
RXLEV_FULL_SERVING_CELL	See NOTE 1
RXLEV_SUB_SERVING_CELL	See NOTE 1
MEAS_VALID	See NOTE 2
RXQUAL_FULL_SERVING_CELL	See NOTE 1
RXQUAL_SUB_SERVING_CELL	See NOTE 1
NO_NCELL_M	4 neighbour cell measurement results
RXLEV_NCELL_1	See NOTE 1
BCCH_FREQ_NCELL_1	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_1	Corresponds to that of BCCH_FREQ_NCELL_1
RXLEV_NCELL_2	See NOTE 1
BCCH_FREQ_NCELL_2	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_2	Corresponds to that of BCCH_FREQ_NCELL_2
RXLEV_NCELL_3	See NOTE 1
BCCH_FREQ_NCELL_3	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_3	Corresponds to that of BCCH_FREQ_NCELL_3
RXLEV_NCELL_4	See NOTE 1
BCCH_FREQ_NCELL_4	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_4	Corresponds to that of BCCH_FREQ_NCELL_4
RXLEV_NCELL_5	00 0000
BCCH_FREQ_NCELL_5	0 0000
BSIC_NCELL_5	00 0000
RXLEV_NCELL_6	00 0000
BCCH_FREQ_NCELL_6	0 0000
BSIC_NCELL_6	00 0000

This message shall contain one report on each of N7, N6, S1 and N2.

GSM 450 end:

GSM 480 begin:

SYSTEM INFORMATION TYPE 5

Information Element	value/remark
Neighbour Cells Description	
Format Identifier	Range 128
BCCH Allocation Sequence	1
BCCH Allocation ARFCN	The channel numbers 306, 307, 308, 310, 311, 312, 313, 315, 316, 317, 318, 319, 321, 322, 323, 324, 325, 326, 327, 329, 330, 331, 332, 333, 334, 335, 337, 338, 339 and 340 belong to the BCCH allocation.
- EXT IND	k = 1. Information Element carries complete BA. k = 2. Information Element carries only a part of the BA.

SYSTEM INFORMATION TYPE 5bis (Sent only when k = 2)

Information Element	value/remark
Protocol Discriminator	RR management
Message Type	Sys Info 5bis.
Neighbour Cells Description	
- Format	256 range
- EXT IND	k = 2. Information Element carries only a part of the BA.
- W(i)	Channel 0 and 800 belong to the BCCH allocation.

SYSTEM INFORMATION TYPE 6:

Information Element	value/remark
Protocol Discriminator	RR Management
Message Type	sys info 6
Cell Identity	default
LAI	default
Cell Options	
- Power Control Indicator	Power Control Indicator is set
- DTX Indicator	MS shall not use DTX
- Radio_Link_Timeout	default
PLMN permitted	only NCC 1 permitted

MEASUREMENT REPORT

Information Element	Value/remark
Protocol Discriminator	RR Management
Transaction Identifier	0000
Message Type	MEASUREMENT REPORT
Measurement Results	
BA_used	1
DTX_used	DTX was not used
RXLEV_FULL_SERVING_CELL	See NOTE 1
RXLEV_SUB_SERVING_CELL	See NOTE 1
MEAS_VALID	See NOTE 2
RXQUAL_FULL_SERVING_CELL	See NOTE 1
RXQUAL_SUB_SERVING_CELL	See NOTE 1
NO_NCELL_M	4 neighbour cell measurement results
RXLEV_NCELL_1	See NOTE 1
BCCH_FREQ_NCELL_1	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_1	Corresponds to that of BCCH_FREQ_NCELL_1
RXLEV_NCELL_2	See NOTE 1
BCCH_FREQ_NCELL_2	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_2	Corresponds to that of BCCH_FREQ_NCELL_2
RXLEV_NCELL_3	See NOTE 1
BCCH_FREQ_NCELL_3	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_3	Corresponds to that of BCCH_FREQ_NCELL_3
RXLEV_NCELL_4	See NOTE 1
BCCH_FREQ_NCELL_4	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_4	Corresponds to that of BCCH_FREQ_NCELL_4
RXLEV_NCELL_5	00 0000
BCCH_FREQ_NCELL_5	0 0000
BSIC_NCELL_5	00 0000
RXLEV_NCELL_6	00 0000
BCCH_FREQ_NCELL_6	0 0000
BSIC_NCELL_6	00 0000

This message shall contain one report on each of N7, N6, S1 and N2.

GSM 480 end:

GSM 900 begin:

SYSTEM INFORMATION TYPE 5

Information Element	value/remark
Neighbour Cells Description	
Format Identifier	bit map 0
BCCH Allocation Sequence	1
BCCH Allocation ARFCN	The channel numbers 2, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 23, 24, 26, 28, 29, 30, 32, 34, 35, 36, 38, 40 and 44 belong to the BCCH allocation.
- EXT IND	k = 1. Information Element carries complete BA. k = 2. Information Element carries only a part of the BA.

SYSTEM INFORMATION TYPE 5bis (Sent only when k = 2)

Information Element	value/remark
Protocol Discriminator	RR management
Message Type	Sys Info 5bis.
Neighbour Cells Description	
- Format	256 range
- EXT IND	k = 2. Information Element carries only a part of the BA.
- W(i)	Channel 0 and 800 belong to the BCCH allocation.

SYSTEM INFORMATION TYPE 6:

Information Element	value/ remark
Protocol Discriminator	RR Management
Message Type	sys info 6
Cell Identity	default
LAI	default
Cell Options	
- Power Control Indicator	Power Control Indicator is set
- DTX Indicator	MS shall not use DTX
- Radio_Link_Timeout	default
PLMN permitted	only NCC 1 permitted

MEASUREMENT REPORT

Information Element	Value/remark
Protocol Discriminator	RR Management
Transaction Identifier	0000
Message Type	MEASUREMENT REPORT
Measurement Results	
BA_used	1
DTX_used	DTX was not used
RXLEV_FULL_SERVING_CELL	See NOTE 1
RXLEV_SUB_SERVING_CELL	See NOTE 1
MEAS_VALID	See NOTE 2
RXQUAL_FULL_SERVING_CELL	See NOTE 1
RXQUAL_SUB_SERVING_CELL	See NOTE 1
NO_NCELL_M	4 neighbour cell measurement results
RXLEV_NCELL_1	See NOTE 1
BCCH_FREQ_NCELL_1	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_1	Corresponds to that of BCCH_FREQ_NCELL_1
RXLEV_NCELL_2	See NOTE 1
BCCH_FREQ_NCELL_2	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_2	Corresponds to that of BCCH_FREQ_NCELL_2
RXLEV_NCELL_3	See NOTE 1
BCCH_FREQ_NCELL_3	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_3	Corresponds to that of BCCH_FREQ_NCELL_3
RXLEV_NCELL_4	See NOTE 1
BCCH_FREQ_NCELL_4	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_4	Corresponds to that of BCCH_FREQ_NCELL_4
RXLEV_NCELL_5	00 0000
BCCH_FREQ_NCELL_5	0 0000
BSIC_NCELL_5	00 0000
RXLEV_NCELL_6	00 0000
BCCH_FREQ_NCELL_6	0 0000
BSIC_NCELL_6	00 0000

This message shall contain one report on each of N7, N6, S1 and N2.

GSM 900 end:

DCS 1 800 begin:

SYSTEM INFORMATION TYPE 5

Information Element	value/remark
Protocol Discriminator	RR management
Message Type	Sys Info 5.
Neighbour Cells Description	
- Format	1024 range
- EXT IND	k = 1. Information Element carries complete BA. k = 2. Information Element carries only a part of the BA.
- W(i)	k = 1. Non null for ARFCN 514, 549, 602, 665, 686, 762, 810. k = 2. Non null for ARFCN 549, 602, 665, 686, 810.

SYSTEM INFORMATION TYPE 5bis (Sent only when k = 2)

Information Element	value/remark
Protocol Discriminator	RR management
Message Type	Sys Info 5bis.
Neighbour Cells Description	
- Format	1024 range
- EXT IND	k = 2. Information Element carries only a part of the BA.
- W(i)	k = 2. Non null ARFCN 20, 514, 762.

SYSTEM INFORMATION TYPE 6

Information Element	value/remark
Protocol Discriminator	RR Management
Message Type	sys info 6
Cell Identity	default
LAI	default
Cell Options	
- Power Control Indicator	Power Control Indicator is set
- DTX Indicator	MS shall not use DTX
- Radio_Link_Timeout	default
PLMN permitted	only NCC 1 permitted

MEASUREMENT REPORT

Information Element	Value/remark
Protocol Discriminator	RR Management
Transaction Identifier	0000
Message Type	MEASUREMENT REPORT
Measurement Results	
BA_used	1
DTX_used	DTX was not used
RXLEV_FULL_SERVING_CELL	See NOTE 1
RXLEV_SUB_SERVING_CELL	See NOTE 1
MEAS_VALID	See NOTE 2
RXQUAL_FULL_SERVING_CELL	See NOTE 1
RXQUAL_SUB_SERVING_CELL	See NOTE 1
NO_NCELL_M	4 neighbour cell measurement results
RXLEV_NCELL_1	See NOTE 1
BCCH_FREQ_NCELL_1	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_1	Corresponds to that of BCCH_FREQ_NCELL_1
RXLEV_NCELL_2	See NOTE 1
BCCH_FREQ_NCELL_2	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_2	Corresponds to that of BCCH_FREQ_NCELL_2
RXLEV_NCELL_3	See NOTE 1
BCCH_FREQ_NCELL_3	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_3	Corresponds to that of BCCH_FREQ_NCELL_3
RXLEV_NCELL_4	See NOTE 1
BCCH_FREQ_NCELL_4	Corresponds to one of N7, N6, S1 or N2
BSIC_NCELL_4	Corresponds to that of BCCH_FREQ_NCELL_4
RXLEV_NCELL_5	00 0000
BCCH_FREQ_NCELL_5	0 0000
BSIC_NCELL_5	00 0000
RXLEV_NCELL_6	00 0000
BCCH_FREQ_NCELL_6	0 0000
BSIC_NCELL_6	00 0000

This message shall contain one report on each of N7, N6, S1 and N2.

DCS 1 800 end:

NOTE 1: These actual values are not checked.

NOTE 2: The Measurement Valid Indication shall be set to valid within the second SACCH block at the latest.

26.13.1.1.3 Multislot signaling / RR / Measurement / asymmetric / change of the reported subchannel

This test is applicable to all MS that supports multislot configuration.

26.13.1.1.3.1 Conformance requirements

The MS shall continuously send MEASUREMENT REPORT messages, on the main channel, reporting the worst subchannel. One of the other subchannels is made worse than the one originally reported one and the MEASUREMENT REPORTs sent on the main channel are based on the new worst subchannel.

References

GSM 04.08 sections 3.4.1.2 and 9.1.21, GSM 05.08 section 8.4.

26.13.1.1.3.2 Test purpose

- 1) To test that the MS shall report on the main SACCH: RXLEV_FULL and RXLEV_SUB from the main channel and the worst RXQUAL_FULL values and RXQUAL_SUB values from the main channel and the unidirectional channels.
- 2) To test that, when an another subchannel becomes the worst, MEASUREMENT REPORTs sent on the main channel are based on the new worst subchannel.

26.13.1.1.3.3 Method of test

Initial Conditions

System Simulator:

For GSM 450 or GSM 480: 1 cell with the following settings:

Transmitter	Level	NCC	BCC	ARFCN (GSM450)	ARFCN (GSM480)	Cell Identity
Serving, S1	-60	1	3	260	307	0001H

For GSM 900 or DCS 1800: 1 cell with the following settings:

Transmitter	Level	NCC	BCC	ARFCN (GSM900)	ARFCN (DCS1800)	Cell Identity
Serving, S1	-60	1	3	002	514	0001H

Mobile Station:

The MS is in the active state of a service using asymmetric multislot connection.

Related PICS/PIXIT Statements

- Type of MS (GSM 450 or GSM 480 or P-GSM 900 or EGSM or DCS 1 800).
- Multislot class
- Supported teleservices/bearer services

Foreseen Final State of the MS

Active state of a service using asymmetric multislot connection.

Test Procedure

MS having a multislot connection with maximum number of timeslots in the downlink and one slot in uplink direction in progress, the SS sends SYSTEM INFORMATION TYPE 5 & 6 on the SACCH/M. The MS shall send MEASUREMENT REPORTs back to the SS on the main channel based on the worst subchannel. The SS allows 2 seconds for the MS to get used to the RF conditions and then records the reported RXQUAL_FULL_SERVING_CELL and RXQUAL_SUB_SERVING_CELL values.

Then an arbitrarily chosen uni-directional subchannel is made the worst from the RX quality point of view by switching off the ciphering in the SS on this channel. The MS shall send MEASUREMENT REPORTs back to the SS on the main channel based on the new worst channel. The SS allows 2 seconds for the MS to get used to the new RF conditions and then records the reported RXQUAL_FULL_SERVING_CELL and RXQUAL_SUB_SERVING_CELL values.

The difference between the RXQUAL values recorded before and after the change in RX quality shall be greater than 3.

Maximum Duration of Test

5 minutes, including 1 minute for any necessary operator actions.

Expected Sequence

Since SYSTEM INFORMATION TYPE 5, SYSTEM INFORMATION TYPE 6 and MEASUREMENT REPORT are sent continuously, a table is not applicable in this test. The interval between 2 successive Layer 2 frames containing MEASUREMENT REPORTs shall not exceed one Layer 2 frame.

Specific Message Contents

GSM 450 begin:

SYSTEM INFORMATION TYPE 5:

Information Element	value/remark
Neighbour Cells Description	
Format Identifier	Range 128
BCCH Allocation Sequence	1
BCCH Allocation ARFCN	The channel numbers 259, 260, 261, 262, 263, 264, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 280, 281, 282, 283, 284, 285, 286, 287, 288, 290, 291, 292 and 293 belong to the BCCH allocation.
- EXT IND	Information Element carries complete BA.

SYSTEM INFORMATION TYPE 6:

Information Element	value/remark
Protocol Discriminator	RR Management
Message Type	sys info 6
Cell Identity	default
LAI	default
Cell Options	
- Power Control Indicator	Power Control Indicator is set
- DTX Indicator	MS shall not use DTX
- Radio_Link_Timeout	default
PLMN permitted	NCC 1 permitted

MEASUREMENT REPORT:

Information Element	value/remark
Protocol Discriminator	RR Management
Transaction Identifier	0000
Message Type	MEASUREMENT REPORT
Measurement Results	
BA_used	1
DTX_used	DTX was not used
RXLEV_FULL_SERVING_CELL	See NOTE 1
RXLEV_SUB_SERVING_CELL	See NOTE 1
MEAS_VALID	See NOTE 2
RXQUAL_FULL_SERVING_CELL	The worst subchannel
RXQUAL_SUB_SERVING_CELL	The worst subchannel

GSM 450 end:

GSM 480 begin:

SYSTEM INFORMATION TYPE 5:

Information Element	value/remark
Neighbour Cells Description	
Format Identifier	Range 128
BCCH Allocation Sequence	1
BCCH Allocation ARFCN	The channel numbers numbers 306, 307, 308, 309, 310, 311, 312, 313, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 329, 330, 331, 332, 333, 334, 335, 337, 338, 339 and 340 belong to the BCCH allocation.
- EXT IND	Information Element carries complete BA.

SYSTEM INFORMATION TYPE 6:

Information Element	value/remark
Protocol Discriminator	RR Management
Message Type	sys info 6
Cell Identity	default
LAI	default
Cell Options	
- Power Control Indicator	Power Control Indicator is set
- DTX Indicator	MS shall not use DTX
- Radio_Link_Timeout	default
PLMN permitted	NCC 1 permitted

MEASUREMENT REPORT:

Information Element	value/remark
Protocol Discriminator	RR Management
Transaction Identifier	0000
Message Type	MEASUREMENT REPORT
Measurement Results	
BA_used	1
DTX_used	DTX was not used
RXLEV_FULL_SERVING_CELL	See NOTE 1
RXLEV_SUB_SERVING_CELL	See NOTE 1
MEAS_VALID	See NOTE 2
RXQUAL_FULL_SERVING_CELL	The worst subchannel
RXQUAL_SUB_SERVING_CELL	The worst subchannel

GSM 480 end:

GSM 900 begin:

SYSTEM INFORMATION TYPE 5:

Information Element	value/remark
Neighbour Cells Description	
Format Identifier	bit map 0
BCCH Allocation Sequence	1
BCCH Allocation ARFCN	The channel numbers 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 28, 29, 30, 32, 34, 35, 36, 38, 40 and 44 belong to the BCCH allocation.
- EXT IND	Information Element carries complete BA.

SYSTEM INFORMATION TYPE 6:

Information Element	value/remark
Protocol Discriminator	RR Management
Message Type	sys info 6
Cell Identity	default
LAI	default
Cell Options	
- Power Control Indicator	Power Control Indicator is set
- DTX Indicator	MS shall not use DTX
- Radio_Link_Timeout	default
PLMN permitted	NCC 1 permitted

MEASUREMENT REPORT:

Information Element	value/remark
Protocol Discriminator	RR Management
Transaction Identifier	0000
Message Type	MEASUREMENT REPORT
Measurement Results	
BA_used	1
DTX_used	DTX was not used
RXLEV_FULL_SERVING_CELL	See NOTE 1
RXLEV_SUB_SERVING_CELL	See NOTE 1
MEAS_VALID	See NOTE 2
RXQUAL_FULL_SERVING_CELL	The worst subchannel
RXQUAL_SUB_SERVING_CELL	The worst subchannel

GSM 900 end:

DCS 1 800 begin:

SYSTEM INFORMATION TYPE 5:

Information Element	value/remark
Protocol Discriminator	RR management
Message Type	Sys Info 5.
Neighbour Cells Description	
- Format	1024 range
- EXT IND	Information Element carries complete BA.
- W(i)	Non null for ARFCN 514, 530, 549, 602, 665, 686, 762, 810.

SYSTEM INFORMATION TYPE 6:

Information Element	value/ remark
Protocol Discriminator	RR Management
Message Type	sys info 6
Cell Identity	default
LAI	default
Cell Options	
- Power Control Indicator	Power Control Indicator is set
- DTX Indicator	MS shall not use DTX
- Radio_Link_Timeout	default
PLMN permitted	only NCC 1 permitted

MEASUREMENT REPORT:

Information Element	value/remark
Protocol Discriminator	RR Management
Transaction Identifier	0000
Message Type	MEASUREMENT REPORT
Measurement Results	
BA_used	1
DTX_used	DTX was not used
RXLEV_FULL_SERVING_CELL	See NOTE 1
RXLEV_SUB_SERVING_CELL	See NOTE 1
MEAS_VALID	See NOTE 2
RXQUAL_FULL_SERVING_CELL	The worst subchannel
RXQUAL_SUB_SERVING_CELL	The worst subchannel

DCS 1 800 end:

NOTE 1: These actual values are not checked.

NOTE 2: The Measurement Valid Indication shall be set to valid within the second SACCH block at the latest.

26.13.1.2 Multislot signalling / RR / Dedicated assignment

26.13.1.2.1 Multislot signalling / RR / Dedicated assignment / successful case

This test is applicable to all MS that supports multislot configuration.

26.13.1.2.1.1 Conformance requirements

- 1) Upon receipt of the ASSIGNMENT COMMAND message, the mobile station initiates a local end release of link layer connections, disconnects the physical channels, commands the switching to the assigned channels and

initiates the establishment of lower layer connections (this includes the activation of the channels, their connection and the establishment of the main signalling links).

- 2) MM-messages and CM-messages using SAPI=0 sent from the mobile station to the network can be duplicated by the data link layer in the following case:
 - a channel change of dedicated channels is required (assignment or handover procedure) and the last layer 2 frame has not been acknowledged by the peer data link layer before the mobile station leaves the old channel.

In this case, the mobile station does not know whether the network has received the message correctly. Therefore, the mobile station has to send the message again after the new dedicated channel is established.

- 3) The MS shall establish the link with the power level specified in the ASSIGNMENT COMMAND message.

The MS shall confirm the power control level that it is currently employing in the uplink SACCH L1 header. The indicated value shall be the power control level actually used by the mobile for the last burst of the previous SACCH period.

- 4) The MS shall apply the hopping frequencies specified in ASSIGNMENT COMMAND message in the Mobile Allocation IE or the Frequency List IE at the time of accessing the new channel using the last received Cell Allocation.
- 5) After receipt of the ASSIGNMENT COMMAND the MS shall perform the assignment and return an ASSIGNMENT COMPLETE without undue delay.

References

Conformance requirements	1),4)	GSM 04.08 sections 3.4.3 and 9.1.2.
Conformance requirements	2)	GSM 04.08 section 3.1.4.3.
Conformance requirements	3)	GSM 04.08 sections 3.4.3 and 9.1.2; GSM 05.08, section 4.2.
Conformance requirements	5)	GSM 04.08 sections 3.4.3 and 9.1.3, GSM 04.13 section 5.2.4.

26.13.1.2.1.2 Test purpose

- 1) To verify that upon receipt of an ASSIGNMENT COMMAND, the MS switches to the channel(s) defined in the ASSIGNMENT COMMAND, establishes the link and sends an ASSIGNMENT COMPLETE message. This is tested for an MS supporting TCH and multislot configuration in the special cases of a transition.

- 1.1) from non-hopping SDCCH to hopping multislot configuration;
- 1.2) from hopping multislot configuration to non-hopping multislot configuration;
- 1.3) from non-hopping multislot configuration to hopping multislot configuration;
- 1.4) from hopping symmetric multislot configuration to hopping asymmetric multislot configuration, resource upgrading used;

NOTE: The step 1.5 is applicable to all MS that supports multislot configuration $T_x > 1$ and $\text{Sum} > 3$.

- 1.5) from hopping asymmetric multislot configuration to hopping symmetric multislot configuration;
- 1.6) from hopping multislot configuration to non-hopping multislot configuration, resources downgrading to one TCH/F;
- 1.7) from non-hopping multislot configuration with one TCH/F to non-hopping multislot configuration, resource upgrading used;
- 1.8) from non-hopping multislot configuration to hopping multislot configuration, relocating all channels in multislot configuration call without changing the number of TCH/Fs allocated;
- 1.9) from hopping multislot configuration to non-hopping multislot configuration, partially relocating the channels in multislot configuration call without changing the number of TCH/Fs allocated;

- 1.10) from non-hopping multislot configuration to hopping multislot configuration, resource downgrading to one TCH/F;
- 2) To verify that an MS supporting TCH and multislot configuration, having sent a MM- or CM message that was not acknowledged on L2 before the channel assignment procedure was initiated and before the MS has left the old channel, repeats that message after completion of the assignment procedure without incrementing N(SD). This is tested in the special case of MM message AUTHENTICATION RESPONSE.
 - 3) To verify that an MS supporting TCH and multislot configuration, having received an ASSIGNMENT COMMAND, having sent an SABM frame to establish the main signalling link on the assigned main channel of the multislot configuration, reports the power level(s) specified in the ASSIGNMENT COMMAND message, in the uplink SACCH LI header of the SACCH message sent in the SACCH period following the transmission of the SABM frame.
 - 4) To verify that an MS supporting TCH and multislot configuration, having received an ASSIGNMENT COMMAND, is able in the case of frequency hopping to decode the Mobile Allocation and Frequency List IEs correctly and applies the specified frequencies using the correct Cell Allocation.
 - 5) To verify that after receipt of the ASSIGNMENT COMMAND the MS returns an ASSIGNMENT COMPLETE without undue delay.

26.13.1.2.1.3 Method of test

Initial Conditions

System Simulator:

- 1 cell, default parameters except:
- Early classmark sending enabled in SI3 rest octets

GSM 450:

- BCCH ARFCN =263.
- Throughout the test, the CA broadcast in System Information 1 is (259, 261, 263, 265, 267, 269, 271, 273, 275, 277).
- Note that the actual CA of the cell contains other frequencies.

GSM 480:

- BCCH ARFCN =310.
- Throughout the test, the CA broadcast in System Information 1 is (306, 308, 310, 312, 314, 316, 318, 320, 322, 324).
- Note that the actual CA of the cell contains other frequencies.

GSM 900:

- BCCH ARFCN =20.
- Throughout the test, the CA broadcast in System Information 1 is (10, 17, 20, 26, 34, 42, 45, 46, 52, 59).
- Note that the actual CA of the cell contains other frequencies.

DCS 1 800:

- BCCH ARFCN =747.
- Throughout the test, the CA broadcast in System Information 1 is (734, 741, 747, 754, 759, 766, 773, 775, 779, 782).
- Note that the actual CA of the cell contains other frequencies.

Mobile Station:

- The MS is in the "idle, updated" state with a TMSI allocated.

Related PICS/PIXT Statements

- Type of MS (GSM 450 or GSM 480 or P-GSM 900 or EGSM or DCS 1 800).
- Multislot class
- Classmark

Foreseen Final State of the MS

- "Idle, updated", with TMSI allocated.

Test Procedure

The SS pages the MS and allocates an SDCCH. Each time the MS shall switch to the assigned channel, establish the link and send an ASSIGNMENT COMPLETE message.

Then the SS sends an AUTHENTICATION REQUEST message. The MS shall answer with an AUTHENTICATION RESPONSE message, which is not acknowledged on L2 by the SS. Immediately after the AUTHENTICATION RESPONSE message is received, the SS sends an ASSIGNMENT COMMAND. The MS shall switch to the assigned channel, establish the link with the commanded power level and send as ASSIGNMENT COMPLETE message. Then MS shall repeat the AUTHENTICATION RESPONSE message, with the same N(SD) value.

Then the SS sends an ASSIGNMENT COMMAND, which includes a Starting Time IE. The MS shall react as specified above, but this shall be done at the time specified in Starting Time IE.

The SS initiates the channel release procedure and the main signalling link is released.

Maximum Duration of Test

30 s.

Expected Sequence

Step	Direction	Message	Comments
1	SS -> MS	PAGING REQUEST TYPE 1	
2	MS -> SS	CHANNEL REQUEST	
3	SS -> MS	IMMEDIATE ASSIGNMENT	See specific message contents.
4	MS -> SS	PAGING RESPONSE	
5	MS -> SS	CLASSMARK CHANGE	Multislot class
6	SS -> MS	ASSIGNMENT COMMAND	See specific message contents.
7	MS -> SS	ASSIGNMENT COMPLETE	Sent on the correct channel after establishment of the main signalling link. This message shall be ready to be transmitted before 600 ms after the completion of step 6.
8	SS		The SS checks that the MS reports the requested power level in the layer 1 header of the SACCH message that is sent in the first SACCH multiframe following the SABM.
9	SS -> MS	ASSIGNMENT COMMAND	See specific message contents.
10	MS -> SS	ASSIGNMENT COMPLETE	Sent on the correct channel after establishment of the main signalling link. This message shall be ready to be transmitted before 600 ms after the completion of step 9.
11	SS -> MS	ASSIGNMENT COMMAND	See specific message contents.
12	MS -> SS	ASSIGNMENT COMPLETE	Sent on the correct channel after establishment of the main signalling link. This message shall be ready to be transmitted before 600 ms after the completion of step 11.
13	SS -> MS	ASSIGNMENT COMMAND	See specific message contents.

Step	Direction	Message	Comments
14	MS -> SS	ASSIGNMENT COMPLETE	
15 *	SS -> MS	ASSIGNMENT COMMAND	See specific message contents.
16 *	MS -> SS	ASSIGNMENT COMPLETE	Sent on the correct channel after establishment of the main signalling link. This message shall be ready to be transmitted before 600 ms after the completion of step 15.
17	SS -> MS	ASSIGNMENT COMMAND	See specific message contents.
18	MS -> SS	ASSIGNMENT COMPLETE	Sent on the correct channel after establishment of the main signalling link. This message shall be ready to be transmitted before 600 ms after the completion of step 17.
19	SS -> MS	ASSIGNMENT COMMAND	See specific message contents.
20	MS -> SS	ASSIGNMENT COMPLETE	Sent on the correct channel after establishment of the main signalling link. This message shall be ready to be transmitted before 600 ms after the completion of step 19.
21	SS -> MS	ASSIGNMENT COMMAND	See specific message contents.
22	MS -> SS	ASSIGNMENT COMPLETE	Sent on the correct channel after establishment of the main signalling link. This message shall be ready to be transmitted before 600 ms after the completion of step 21.
23	SS -> MS	AUTHENTICATION REQUEST	
24	MS -> SS	AUTHENTICATION RESPONSE	This message is not L2 acknowledged by the SS.
25	SS -> MS	ASSIGNMENT COMMAND	See specific message contents.
26	MS -> SS	ASSIGNMENT COMPLETE	Sent on the correct channel after establishment of the main signalling link. This message shall be transmitted before 600 ms after the completion of step 25.
27	MS -> SS	AUTHENTICATION RESPONSE	N(SD) shall be the same as in step 24.
28	SS -> MS	ASSIGNMENT COMMAND	See specific message contents.
29	MS -> SS	ASSIGNMENT COMPLETE	Sent on the correct channel after establishment of the main signalling link. This message shall be transmitted at the specified Starting Time in step 28.
30	SS -> MS	CHANNEL RELEASE	The main signalling link is released.

* Note: This step is applicable to all MS that supports multislot configuration Tx>1 and Sum>3. Specific Message Contents

GSM 450 begin:

Step 3

IMMEDIATE ASSIGNMENT:

As default message contents except Channel Description	
- Channel Type	SDCCH/8
- TDMA offset	Chosen arbitrarily
- Timeslot Number	N, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF Channel
- ARFCN	the ARFCN of the BCCH carrier

Step 6

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN Power Command - Power level Frequencylist IE Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1=<X<=8) Channel Mode - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily RF hopping channel Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63) Chosen arbitrarily but with a changed value. Not included Maximum number of timeslots supported by the MS Maximum number of timeslots supported by the MS after specifying Downlink timeslots Appropriate for the test Data, 12.0 kbit/s radio interface rate Indicates all of the CA (broadcast on the BCCH) except for the BCCH carrier. Not included
---	---

Step 9

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - ARFCN Power Command - Power level Frequencylist IE Cell Channel Description Channel Mode - Mode Mobile Allocation Starting Time	10XXX (Maximum number of possible additional bidirectional TCH/Fs and SACCH/Ms subtracted by one, minimum being one) A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily Single RF Channel the ARFCN of the BCCH carrier Chosen arbitrarily but with a changed value. Not Included Use Range 128 to encode (271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291) Data, 12.0 kbit/s radio interface rate Not included Not included
--	---

Step 11

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	RF hopping channel
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- HSN	Chosen arbitrarily from the set (1 to 63)
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequencylist IE	Not included
Cell Channel Description	Not included
Multislot allocation	
- Downlink assignment	Appropriate for the test. Depending on Multislot class, Shall not have maximum number of timeslots.
- Uplink assignment	Appropriate for the test, but as many as in downlink assignment
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Indicates frequencies (271, 273, 281, 283, 285, 287, 289, 291)
Starting Time	Not included

Step 13

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset	11XXX (Appropriate number of additional unidirectional TCH/FDs and SACCH/MDs or Additional bidirectional TCH/F and SACCH/M and additional unidirectional TCH/FD and SACCH/MD
- Timeslot Number	Number of downlink timeslots shall be more than in step 11) A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	RF hopping channel
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- HSN	Chosen arbitrarily from the set (1 to 63)
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequencylist IE	Not included
Cell Channel Description	Not included
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Indicates frequencies (271, 273, 281, 283, 285, 287, 289, 291)
Starting Time	Not included

Step 15

ASSIGNMENT COMMAND

Channel Description 2	00000
- Channel Type and TDMA offset	A suitable value for multislot configuration, chosen arbitrarily
- Timeslot Number	Chosen arbitrarily
- Training Sequence Code	RF hopping channel
- Hopping	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- MAIO	Chosen arbitrarily from the set (1 to 63)
- HSN	
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequencylist IE	Not included
Cell Channel Description	Not included
Multislot allocation	
- Downlink assignment	Appropriate for the test. Must be more than one.
- Uplink assignment	Appropriate for the test, but as many as in downlink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Indicates frequencies (271, 273, 281, 283, 285, 287, 289, 291)
Starting Time	Not included

Step 17

ASSIGNMENT COMMAND

Channel Description 2	10000 (no additional timeslots)
- Channel Type and TDMA offset	A suitable value for multislot configuration, chosen arbitrarily
- Timeslot Number	Chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF Channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequencylist IE	Not Included
Cell Channel Description	Use Range 128 to encode (271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291)
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 19

ASSIGNMENT COMMAND

Channel Description 2	
- Channel Type and TDMA offset	00000
- Timeslot Number	A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF Channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode 271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291)
Multislot allocation	
- Downlink assignment	Appropriate for the test, but more than one timeslot allocated and excluding timeslot 0..
- Uplink assignment	Appropriate for the test according to MS Class described in Annex B 05.02.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 21

ASSIGNMENT COMMAND

Channel Description 2	
- Channel Type and TDMA offset	10XXX (Same number of TCH/Fs and timeslot mapping as in step 19)
- Timeslot Number	Same as in step 19
- Training Sequence Code	Chosen arbitrarily
- Hopping	Frequency hopping
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- HSN	Chosen arbitrarily from the set (1 to 63)
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291)
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Indicate frequencies (273, 281, 283)
Starting Time	Not included

Step 25

ASSIGNMENT COMMAND

Channel Description 2	00000
- Channel Type and TDMA offset	Same as in step 19
- Timeslot Number	Chosen arbitrarily
- Training Sequence Code	Single RF Channel
- Hopping	the ARFCN of the BCCH carrier
- ARFCN	
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291)
Multislot allocation	
- Downlink assignment	Indicate same timeslots as step 19.
- Uplink assignment	Appropriate for the test according to MS Class described in Annex B 05.02.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 28

ASSIGNMENT COMMAND

Channel Description 2	10000 (no additional timeslots)
- Channel Type and TDMA offset	Same as in step 19
- Timeslot Number	Chosen arbitrarily
- Training Sequence Code	Frequency hopping
- Hopping	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- MAIO	Chosen arbitrarily from the set (1 to 63)
- HSN	
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Not included
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Indicate frequencies (273, 281, 283)
Starting Time	Chosen arbitrarily

GSM 450 end:

GSM 480 begin:

Step 3

IMMEDIATE ASSIGNMENT:

As default message contents except Channel Description <ul style="list-style-type: none"> - Channel Type <li style="padding-left: 40px;">TDMA offset - Timeslot Number - Training Sequence Code - Hopping - ARFCN 	SDCCH/8 Chosen arbitrarily N, chosen arbitrarily Chosen arbitrarily Single RF Channel the ARFCN of the BCCH carrier
---	--

Step 6

ASSIGNMENT COMMAND

Channel Description 2 <ul style="list-style-type: none"> - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN Power Command <ul style="list-style-type: none"> - Power level Frequency list IE Multislot allocation <ul style="list-style-type: none"> - Downlink assignment - Uplink assignment - Channel set X (1=\leqX\leq8) Channel Mode <ul style="list-style-type: none"> - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily RF hopping channel Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63) Chosen arbitrarily but with a changed value. Not included Maximum number of timeslots supported by the MS Maximum number of timeslots supported by the MS after specifying Downlink timeslots Appropriate for the test Data, 12.0 kbit/s radio interface rate Indicates all of the CA (broadcast on the BCCH) except for the BCCH carrier. Not included
---	---

Step 9

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - ARFCN Power Command - Power level Frequencylist IE Cell Channel Description Channel Mode - Mode Mobile Allocation Starting Time	10XXX (Maximum number of possible additional bidirectional TCH/Fs and SACCH/Ms subtracted by one, minimum being one) A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily Single RF Channel the ARFCN of the BCCH carrier Chosen arbitrarily but with a changed value. Not Included Use Range 128 to encode (318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338) Data, 12.0 kbit/s radio interface rate Not included Not included
--	---

Step 11

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN Power Command - Power level Frequencylist IE Cell Channel Description Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1= X ≤8) Channel Mode - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily RF hopping channel Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63) Chosen arbitrarily but with a changed value. Not included Not included Appropriate for the test. Depending on Multislot class, Shall not have maximum number of timeslots. Appropriate for the test, but as many as in downlink assignment Appropriate for the test Data, 12.0 kbit/s radio interface rate Indicates frequencies (318, 320, 328, 330, 332, 334, 336, 338) Not included
---	---

Step 13

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset	11XXX (Appropriate number of additional unidirectional TCH/FDs and SACCH/MDs or Additional bidirectional TCH/F and SACCH/M and additional unidirectional TCH/FD and SACCH/MD
- Timeslot Number	Number of downlink timeslots shall be more than in step 11) A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	RF hopping channel
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- HSN	Chosen arbitrarily from the set (1 to 63)
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not included
Cell Channel Description	Not included
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Indicates frequencies (318, 320, 328, 330, 332, 334, 336, 338)
Starting Time	Not included

Step 15

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	RF hopping channel
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- HSN	Chosen arbitrarily from the set (1 to 63)
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not included
Cell Channel Description	Not included
Multislot allocation - Downlink assignment - Uplink assignment	Appropriate for the test. Must be more than one. Appropriate for the test, but as many as in downlink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Indicates frequencies (318, 320, 328, 330, 332, 334, 336, 338)
Starting Time	Not included

Step 17

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	10000 (no additional timeslots) A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code - Hopping - ARFCN	Chosen arbitrarily Single RF Channel the ARFCN of the BCCH carrier
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338)
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 19

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code - Hopping - ARFCN	Chosen arbitrarily Single RF Channel the ARFCN of the BCCH carrier
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338)
Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1=<X<=8)	Appropriate for the test, but more than one timeslot allocated and excluding timeslot 0.. Appropriate for the test according to MS Class described in Annex B 05.02. Appropriate for the test
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 21

ASSIGNMENT COMMAND

<p>Channel Description 2</p> <ul style="list-style-type: none"> - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN <p>Power Command</p> <ul style="list-style-type: none"> - Power level <p>Frequency list IE</p> <p>Cell Channel Description</p> <p>Channel Mode</p> <ul style="list-style-type: none"> - Mode <p>Mobile Allocation</p> <p>Starting Time</p>	<p>10XXX (Same number of TCH/Fs and timeslot mapping as in step 19)</p> <p>Same as in step 19</p> <p>Chosen arbitrarily</p> <p>Frequency hopping</p> <p>Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.</p> <p>Chosen arbitrarily from the set (1 to 63)</p> <p>Chosen arbitrarily but with a changed value.</p> <p>Not Included</p> <p>Use Range 128 to encode (318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338)</p> <p>Data, 12.0 kbit/s radio interface rate</p> <p>Indicate frequencies (320, 328, 330)</p> <p>Not included</p>
---	---

Step 25

ASSIGNMENT COMMAND

<p>Channel Description 2</p> <ul style="list-style-type: none"> - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - ARFCN <p>Power Command</p> <ul style="list-style-type: none"> - Power level <p>Frequency list IE</p> <p>Cell Channel Description</p> <p>Multislot allocation</p> <ul style="list-style-type: none"> - Downlink assignment - Uplink assignment - Channel set X (1=<X<=8) <p>Channel Mode</p> <ul style="list-style-type: none"> - Mode <p>Mobile Allocation</p> <p>Starting Time</p>	<p>00000</p> <p>Same as in step 19</p> <p>Chosen arbitrarily</p> <p>Single RF Channel</p> <p>the ARFCN of the BCCH carrier</p> <p>Chosen arbitrarily but with a changed value.</p> <p>Not Included</p> <p>Use Range 128 to encode (318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338)</p> <p>Indicate same timeslots as step 19.</p> <p>Appropriate for the test according to MS Class described in Annex B 05.02.</p> <p>Appropriate for the test</p> <p>Data, 12.0 kbit/s radio interface rate</p> <p>Not included</p> <p>Not included</p>
---	--

Step 28

ASSIGNMENT COMMAND

Channel Description 2 <ul style="list-style-type: none"> - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN Power Command <ul style="list-style-type: none"> - Power level Frequencylist IE Cell Channel Description Channel Mode <ul style="list-style-type: none"> - Mode Mobile Allocation Starting Time	10000 (no additional timeslots) Same as in step 19 Chosen arbitrarily Frequency hopping Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63) Chosen arbitrarily but with a changed value. Not Included Not included Data, 12.0 kbit/s radio interface rate Indicate frequencies (320, 328, 330) Chosen arbitrarily
---	--

GSM 480 end:

GSM 900 begin:

Step 3

IMMEDIATE ASSIGNMENT:

As default message contents except Channel Description <ul style="list-style-type: none"> - Channel Type TDMA offset - Timeslot Number - Training Sequence Code - Hopping - ARFCN 	SDCCH/8 Chosen arbitrarily N, chosen arbitrarily Chosen arbitrarily Single RF Channel the ARFCN of the BCCH carrier
--	--

Step 6

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN Power Command - Power level Frequency list IE Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1=<X<=8) Channel Mode - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily RF hopping channel Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63) Chosen arbitrarily but with a changed value. Not included Maximum number of timeslots supported by the MS Maximum number of timeslots supported by the MS after specifying Downlink timeslots Appropriate for the test Data, 12.0 kbit/s radio interface rate Indicates all of the CA (broadcast on the BCCH) except for the BCCH carrier. Not included
--	---

Step 9

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - ARFCN Power Command - Power level Frequency list IE Cell Channel Description Channel Mode - Mode Mobile Allocation Starting Time	10XXX (Maximum number of possible additional bidirectional TCH/Fs and SACCH/Ms subtracted by one, minimum being one) A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily Single RF Channel the ARFCN of the BCCH carrier Chosen arbitrarily but with a changed value. Not Included Bit map zero encodes (45, 46, 52, 59, 66, 73, 74, 75, 76, 108, 114) Data, 12.0 kbit/s radio interface rate Not included Not included
---	---

Step 11

ASSIGNMENT COMMAND

Channel Description 2	
- Channel Type and TDMA offset	00000
- Timeslot Number	A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	RF hopping channel
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- HSN	Chosen arbitrarily from the set (1 to 63)
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequencylist IE	Not included
Cell Channel Description	Not included
Multislot allocation	
- Downlink assignment	Appropriate for the test. Depending on Multislot class, Shall not have maximum number of timeslots.
- Uplink assignment	Appropriate for the test, but as many as in downlink assignment
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Indicates frequencies (45, 46, 73, 74, 75, 76, 108, 114)
Starting Time	Not included

Step 13

ASSIGNMENT COMMAND

Channel Description 2	
- Channel Type and TDMA offset	11XXX (Appropriate number of additional unidirectional TCH/FDs and SACCH/MDs or Additional bidirectional TCH/F and SACCH/M and additional unidirectional TCH/FD and SACCH/MD
- Timeslot Number	Number of downlink timeslots shall be more than in step 11) A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	RF hopping channel
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- HSN	Chosen arbitrarily from the set (1 to 63)
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequencylist IE	Not included
Cell Channel Description	Not included
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Indicates frequencies (45, 46, 73, 74, 75, 76, 108, 114)
Starting Time	Not included

Step 15

ASSIGNMENT COMMAND

Channel Description 2	
- Channel Type and TDMA offset	00000
- Timeslot Number	A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	RF hopping channel
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- HSN	Chosen arbitrarily from the set (1 to 63)
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequencylist IE	Not included
Cell Channel Description	Not included
Multislot allocation	
- Downlink assignment	Appropriate for the test. Must be more than one.
- Uplink assignment	Appropriate for the test, but as many as in downlink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Indicates frequencies (45, 46, 73, 74, 75, 76, 108, 114)
Starting Time	Not included

Step 17

ASSIGNMENT COMMAND

Channel Description 2	
- Channel Type and TDMA offset	10000 (no additional timeslots)
- Timeslot Number	A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF Channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequencylist IE	Not Included
Cell Channel Description	Bit map zero encodes (45, 46, 52, 59, 66, 73, 74, 75, 76, 108, 114)
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 19

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - ARFCN Power Command - Power level Frequency list IE Cell Channel Description Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1=<X<=8) Channel Mode - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily Single RF Channel the ARFCN of the BCCH carrier Chosen arbitrarily but with a changed value. Not Included Bit map zero encodes (45, 46, 52, 59, 66, 73, 74, 75, 76, 108, 114) Appropriate for the test, but more than one timeslot allocated and excluding timeslot 0.. Appropriate for the test according to MS Class described in Annex B 05.02. Appropriate for the test Data, 12.0 kbit/s radio interface rate Not included Not included
--	---

Step 21

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN Power Command - Power level Frequency list IE Cell Channel Description Channel Mode - Mode Mobile Allocation Starting Time	10XXX (Same number of TCH/Fs and timeslot mapping as in step 19) Same as in step 19 Chosen arbitrarily Frequency hopping Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63) Chosen arbitrarily but with a changed value. Not Included Bit map zero encodes (45, 46, 52, 59, 66, 73, 74, 75, 76, 108, 114) Data, 12.0 kbit/s radio interface rate Indicate frequencies (46, 73 74) Not included
---	--

Step 25

ASSIGNMENT COMMAND

Channel Description 2	00000
- Channel Type and TDMA offset	Same as in step 19
- Timeslot Number	Chosen arbitrarily
- Training Sequence Code	Single RF Channel
- Hopping	the ARFCN of the BCCH carrier
- ARFCN	
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Bit map zero encodes (45, 46, 52, 59, 66, 73, 74, 75, 76, 108, 114)
Multislot allocation	
- Downlink assignment	Indicate same timeslots as step 19.
- Uplink assignment	Appropriate for the test according to MS Class described in Annex B 05.02.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 28

ASSIGNMENT COMMAND

Channel Description 2	10000 (no additional timeslots)
- Channel Type and TDMA offset	Same as in step 19
- Timeslot Number	Chosen arbitrarily
- Training Sequence Code	Frequency hopping
- Hopping	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- MAIO	Chosen arbitrarily from the set (1 to 63)
- HSN	
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Not included
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Indicate frequencies (46, 73 74)
Starting Time	Chosen arbitrarily

GSM 900 end:

GSM 1800 begin:

Step 3

IMMEDIATE ASSIGNMENT:

As default message contents except Channel Description <ul style="list-style-type: none"> - Channel Type TDMA offset - Timeslot Number - Training Sequence Code - Hopping - ARFCN 	SDCCH/8 Chosen arbitrarily N, chosen arbitrarily Chosen arbitrarily Single RF Channel the ARFCN of the BCCH carrier
--	--

Step 6

ASSIGNMENT COMMAND

Channel Description 2 <ul style="list-style-type: none"> - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN Power Command <ul style="list-style-type: none"> - Power level Frequency list IE Multislot allocation <ul style="list-style-type: none"> - Downlink assignment - Uplink assignment - Channel set X (1=<X<=8) Channel Mode <ul style="list-style-type: none"> - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily RF hopping channel Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63) Chosen arbitrarily but with a changed value. Not included Maximum number of timeslots supported by the MS Maximum number of timeslots supported by the MS after specifying Downlink timeslots Appropriate for the test Data, 12.0 kbit/s radio interface rate Indicates all of the CA (broadcast on the BCCH) except for the BCCH carrier. Not included
--	---

Step 9

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset	10XXX (Maximum number of possible additional bidirectional TCH/Fs and SACCH/Ms subtracted by one, minimum being one)
- Timeslot Number	A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF Channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequencylist IE	Not Included
Cell Channel Description	Use Range 128 to encode (773, 775, 779, 782, 791, 798, 829, 832, 844)
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 11

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset	00000
- Timeslot Number	A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	RF hopping channel
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- HSN	Chosen arbitrarily from the set (1 to 63)
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequencylist IE	Not included
Cell Channel Description	Not included
Multislot allocation	
- Downlink assignment	Appropriate for the test. Depending on Multislot class, Shall not have maximum number of timeslots.
- Uplink assignment	Appropriate for the test, but as many as in downlink assignment
- Channel set X (1= \leq X \leq 8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Indicates frequencies (773, 775, 779, 829, 832, 844)
Starting Time	Not included

Step 13

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset	11XXX (Appropriate number of additional unidirectional TCH/FDs and SACCH/MDs or Additional bidirectional TCH/F and SACCH/M and additional unidirectional TCH/FD and SACCH/MD
- Timeslot Number	Number of downlink timeslots shall be more than in step 11) A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	RF hopping channel
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- HSN	Chosen arbitrarily from the set (1 to 63)
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not included
Cell Channel Description	Not included
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Indicates frequencies (773, 775, 779, 829, 832, 844)
Starting Time	Not included

Step 15

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	RF hopping channel
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- HSN	Chosen arbitrarily from the set (1 to 63)
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not included
Cell Channel Description	Not included
Multislot allocation - Downlink assignment - Uplink assignment	Appropriate for the test. Must be more than one. Appropriate for the test, but as many as in downlink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Indicates frequencies (773, 775, 779, 829, 832, 844)
Starting Time	Not included

Step 17

ASSIGNMENT COMMAND

Channel Description 2	10000 (no additional timeslots)
- Channel Type and TDMA offset	A suitable value for multislot configuration, chosen arbitrarily
- Timeslot Number	
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF Channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (773, 775, 779, 782, 791, 798, 829, 832, 844)
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 19

ASSIGNMENT COMMAND

Channel Description 2	00000
- Channel Type and TDMA offset	A suitable value for multislot configuration, chosen arbitrarily
- Timeslot Number	
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF Channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (773, 775, 779, 782, 791, 798, 829, 832, 844)
Multislot allocation	
- Downlink assignment	Appropriate for the test, but more than one timeslot allocated and excluding timeslot 0.
- Uplink assignment	Appropriate for the test according to MS Class described in Annex B 05.02.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 21

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset	10XXX (Same number of TCH/Fs and timeslot mapping as in step 19)
- Timeslot Number	Same as in step 19
- Training Sequence Code	Chosen arbitrarily
- Hopping	Frequency hopping
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- HSN	Chosen arbitrarily from the set (1 to 63)
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (773, 775, 779, 782, 791, 798, 829, 832, 844)
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Indicate frequencies (782, 791, 798)
Starting Time	Not included

Step 25

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset	00000
- Timeslot Number	Same as in step 19
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF Channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (773, 775, 779, 782, 791, 798, 829, 832, 844)
Multislot allocation - Downlink assignment	Indicate same timeslots as step 19.
- Uplink assignment	Appropriate for the test according to MS Class described in Annex B 05.02.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 28

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN	10000 (no additional timeslots) Same as in step 19 Chosen arbitrarily Frequency hopping Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63)
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequencylist IE	Not Included
Cell Channel Description	Not Included
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Indicate frequencies (782, 791, 798)
Starting Time	Chosen arbitrarily

GSM 1800 end:

26.13.1.2.2 Multislot signalling / RR / Dedicated assignment / failure / general case

This test is applicable to all MS that supports multislot configuration.

26.13.1.2.2.1 Conformance requirements

On the mobile station side, if a lower layer failure happens on the new channel before the ASSIGNMENT COMPLETE message has been sent, the mobile station deactivates the new channels, reactivates the old channels, reconnects the TCHs if any and triggers the establishment of the main signalling link. It then sends an ASSIGNMENT FAILURE message, cause "protocol error unspecified" on the main DCCH and resumes the normal operation, as if no assignment attempt had occurred. The operational parameters (e.g. ciphering mode) when returning on the old channel are those applied before the procedure.

References

Conformance requirements: GSM 04.08 sections 3.4.3, 9.1.3 and 9.1.4

26.13.1.2.2.2 Test purpose

- 1) To test that, when the MS fails to seize the new channel, the MS reactivates the old channel.
- 2) This is tested in the special cases of transition:
 - 2.1) from non-hopping SDCCH to hopping symmetric multislot configuration
 - 2.2) from hopping asymmetric multislot configuration to non-hopping symmetric
 - 2.3) from non hopping symmetric multislot configuration to non-hopping symmetric multislot configuration, resource upgrading used
 - 2.4) from non-hopping asymmetric multislot configuration to non-hopping asymmetric multislot configuration, resource upgrading used
 - 2.5) from hopping symmetric multislot configuration to hopping asymmetric multislot configuration, resource upgrading used

- 2.6) from hopping asymmetric multislot configuration to non-hopping multislot configuration, resources downgrading to one TCH/F

26.13.1.2.2.3 Method of test

Initial Conditions

System Simulator:

1 cell, default parameters.

Mobile Station:

The MS is "idle updated".

Related PICS/PIXT Statements

- Type of MS (GSM 450 or GSM 480 or P-GSM 900 or EGSM or DCS 1 800).
- Multislot class

Foreseen Final State of the MS

The MS is "idle updated".

Test Procedure

A mobile terminated RR connection is established on an SDCCH. The following is repeated six times with different parameters:

The SS sends an ASSIGNMENT COMMAND message allocating a hopping/non-hopping symmetric/asymmetric multislot configuration with or without resource upgrading/downgrading, but does not activate the assigned channels. The MS shall try to activate the new channel (this is not verified) and shall then reactivate the old channel and trigger the establishment of the main signalling link on the old channel. Then the MS shall send an ASSIGNMENT FAILURE.

The SS initiates the channel release procedure and the test ends here.

Maximum Duration of Test

30 s.

Expected Sequence

Step	Direction	Message	Comments
1	SS -> MS	PAGING REQUEST TYPE 1	
2	MS -> SS	CHANNEL REQUEST	
3	SS -> MS	IMMEDIATE ASSIGNMENT	Channel Type: SDCCH/4.
4	MS -> SS	PAGING RESPONSE	
5	SS -> MS	ASSIGNMENT COMMAND	See specific message contents below. The MS attempts (and fails) to establish a signalling link on the new channel.
6			The MS re-establishes the signalling link on the old channel.
7	MS -> SS	ASSIGNMENT FAILURE	RR cause value = "protocol error unspecified".
8	SS		The SS checks that the MS reports the old power level (prior to the Assignment command) in the layer 1 header of the SACCH message that is sent in the first SACCH multiframe following the SABM.
9	SS -> MS	ASSIGNMENT COMMAND	See specific message contents below.
10	MS -> SS	ASSIGNMENT COMPLETE	Assignment command is successfully performed.
11	SS -> MS	ASSIGNMENT COMMAND	Channel Type = TCH/F, non-hopping, symmetric multislots configuration. The MS attempts (and fails) to establish a signalling link on the new channel.
12			The MS re-establishes the signalling link on the old channel.
13	MS -> SS	ASSIGNMENT FAILURE	RR cause value = "protocol error unspecified".
14	SS -> MS	ASSIGNMENT COMMAND	Assignment command to non-hopping, symmetric multislots configuration is successfully performed.
15	MS -> SS	ASSIGNMENT COMPLETE	
16	SS -> MS	ASSIGNMENT COMMAND	Channel Type = TCH/F, non-hopping, symmetric multislots configuration, resource upgrading used. The MS attempts (and fails) to establish a signalling link on the new channel.
17			The MS re-establishes the signalling link on the old channel.
18	MS -> SS	ASSIGNMENT FAILURE	RR cause value = "protocol error unspecified".
19	SS -> MS	ASSIGNMENT COMMAND	Assignment command to non-hopping, asymmetric multislots configuration is successfully performed.
20	MS -> SS	ASSIGNMENT COMPLETE	
21	SS -> MS	ASSIGNMENT COMMAND	Channel Type = TCH/F, non-hopping, asymmetric multislots configuration, resource downgrading used. The MS attempts (and fails) to establish a signalling link on the new channel.
22			The MS re-establishes the signalling link on the old channel.
23	MS -> SS	ASSIGNMENT FAILURE	RR cause value = "protocol error unspecified".
24	SS -> MS	ASSIGNMENT COMMAND	Assignment command to hopping, symmetric multislots configuration is successfully performed.
25	MS -> SS	ASSIGNMENT COMPLETE	
26	SS -> MS	ASSIGNMENT COMMAND	Channel Type = TCH/F, hopping, asymmetric multislots configuration, resource upgrading used. The MS attempts (and fails) to establish a signalling link on the new channel.
27			The MS re-establishes the signalling link on the old channel.
28	MS -> SS	ASSIGNMENT FAILURE	RR cause value = "protocol error unspecified".
29	SS -> MS	ASSIGNMENT COMMAND	Assignment command to hopping, asymmetric multislots configuration is successfully performed.
30	MS -> SS	ASSIGNMENT COMPLETE	
31	SS -> MS	ASSIGNMENT COMMAND	Channel Type = TCH/F, non-hopping, multislots configuration, resources downgrading to one TCH/F. The MS attempts (and fails) to establish a signalling link on the new channel.

32			The MS re-establishes the signalling link on the old channel.
33	MS -> SS	ASSIGNMENT FAILURE	RR cause value = "protocol error unspecified".
34	SS -> MS	CHANNEL RELEASE	The main signalling link is released.

Specific Message Contents

GSM 450 begin:

Step 5:

ASSIGNMENT COMMAND

Channel Description 2	00000
- Channel Type and TDMA offset	A suitable value for multislot configuration, chosen arbitrarily
- Timeslot Number	Chosen arbitrarily
- Training Sequence Code	RF hopping channel
- Hopping	
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- HSN	Chosen arbitrarily from the set (1 to 63)
Power Command	Chosen arbitrarily but with a changed value.
- Power level	
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291)
Multislot allocation	Maximum number of symmetrical timeslots assigned.
- Downlink assignment	As many timeslots as downlink direction.
- Uplink assignment	Appropriate for the test
- Channel set X (1=<X<=8)	
Channel Mode	Data, 12.0 kbit/s radio interface rate
- Mode	
Mobile Allocation	Arbitrarily chosen from Cell channel description
Starting Time	Not included

Step 9:

ASSIGNMENT COMMAND

Channel Description 2 <ul style="list-style-type: none"> - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN 	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily RF hopping channel Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63)
Power Command <ul style="list-style-type: none"> - Power level 	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291)
Multislot allocation <ul style="list-style-type: none"> - Downlink assignment - Uplink assignment - Channel set X (1=\leqX\leq8) 	Maximum number of timeslots that MS supports. Less timeslots assigned than downlink direction. Appropriate for the test
Channel Mode <ul style="list-style-type: none"> - Mode 	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Arbitrarily chosen from Cell channel description
Starting Time	Not included

Step 11:

ASSIGNMENT COMMAND

Channel Description 2 <ul style="list-style-type: none"> - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - ARFCN 	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily Single RF channel the ARFCN of the BCCH carrier
Power Command <ul style="list-style-type: none"> - Power level 	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291)
Multislot allocation <ul style="list-style-type: none"> - Downlink assignment - Uplink assignment - Channel set X (1=\leqX\leq8) 	Maximum number of symmetrical timeslots supported by MS assigned. As many timeslots as in downlink direction. Appropriate for the test
Channel Mode <ul style="list-style-type: none"> - Mode 	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 14:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291)
Multislot allocation - Downlink assignment	Only one timeslot is assigned in downlink direction.
- Uplink assignment	Only one timeslot is assigned in uplink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 16:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use range 128 to encode (271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291)
Multislot allocation - Downlink assignment	Maximum number of timeslots that MS supports.
- Uplink assignment	Maximum number of timeslots that MS supports.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 19:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291)
Multislot allocation	
- Downlink assignment	More than one timeslot but less than maximum number of timeslots is assigned in downlink direction.
- Uplink assignment	Only one timeslot is assigned in uplink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 21:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291)
Multislot allocation	
- Downlink assignment	Maximum number of timeslots that MS supports.
- Uplink assignment	Less timeslots assigned than downlink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 24:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN Power Command - Power level Frequency list IE Cell Channel Description Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1= \leq X \leq 8) Channel Mode - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily RF hopping channel Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63) Chosen arbitrarily but with a changed value. Not Included Use Range 128 to encode (271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291) Only one timeslot is assigned in downlink direction. Only one timeslot is assigned in uplink direction. Appropriate for the test Data, 12.0 kbit/s radio interface rate Chosen arbitrarily from the Cell channel description Not included
---	--

Step 26:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN Power Command - Power level Frequency list IE Cell Channel Description Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1= \leq X \leq 8) Channel Mode - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily RF hopping channel Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63) Chosen arbitrarily but with a changed value. Not Included Use Range 128 to encode (271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291) Maximum number of timeslots that MS supports. Less timeslots assigned than in downlink direction. Appropriate for the test Data, 12.0 kbit/s radio interface rate Chosen arbitrarily from the Cell channel description Not included
---	--

Step 29:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN Power Command - Power level Frequency list IE Cell Channel Description Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1= X ≤8) Channel Mode - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily RF hopping channel Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63) Chosen arbitrarily but with a changed value. Not Included Use Range 128 to encode (271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291) Maximum number of timeslots that MS supports. Less timeslots assigned than in downlink direction. Appropriate for the test Data, 12.0 kbit/s radio interface rate Chosen arbitrarily from the Cell channel description Not included
--	--

Step 31:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - ARFCN Power Command - Power level Frequency list IE Cell Channel Description Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1= X ≤8) Channel Mode - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily Single RF channel the ARFCN of the BCCH carrier Chosen arbitrarily but with a changed value. Not Included Use Range 128 to encode (271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291) Only one timeslot is assigned in downlink direction. Only one timeslot is assigned in uplink direction. Appropriate for the test Data, 12.0 kbit/s radio interface rate Not included Not included
--	--

GSM 450 end:

GSM 480 begin:

Step 5:

ASSIGNMENT COMMAND

Channel Description 2 <ul style="list-style-type: none"> - Channel Type and TDMA offset - Timeslot Number 	00000 A suitable value for multislot configuration, chosen arbitrarily
<ul style="list-style-type: none"> - Training Sequence Code - Hopping 	Chosen arbitrarily RF hopping channel
<ul style="list-style-type: none"> - MAIO 	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
<ul style="list-style-type: none"> - HSN 	Chosen arbitrarily from the set (1 to 63)
Power Command <ul style="list-style-type: none"> - Power level 	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338)
Multislot allocation <ul style="list-style-type: none"> - Downlink assignment - Uplink assignment - Channel set X (1=\leqX\leq8) 	Maximum number of symmetrical timeslots assigned. As many timeslots as downlink direction. Appropriate for the test
Channel Mode <ul style="list-style-type: none"> - Mode 	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Arbitrarily chosen from Cell channel description
Starting Time	Not included

Step 9:

ASSIGNMENT COMMAND

Channel Description 2 <ul style="list-style-type: none"> - Channel Type and TDMA offset - Timeslot Number 	00000 A suitable value for multislot configuration, chosen arbitrarily
<ul style="list-style-type: none"> - Training Sequence Code - Hopping 	Chosen arbitrarily RF hopping channel
<ul style="list-style-type: none"> - MAIO 	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
<ul style="list-style-type: none"> - HSN 	Chosen arbitrarily from the set (1 to 63)
Power Command <ul style="list-style-type: none"> - Power level 	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338)
Multislot allocation <ul style="list-style-type: none"> - Downlink assignment - Uplink assignment - Channel set X (1=\leqX\leq8) 	Maximum number of timeslots that MS supports. Less timeslots assigned than downlink direction. Appropriate for the test
Channel Mode <ul style="list-style-type: none"> - Mode 	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Arbitrarily chosen from Cell channel description
Starting Time	Not included

Step 11:

ASSIGNMENT COMMAND

Channel Description 2	00000
- Channel Type and TDMA offset	A suitable value for multislot configuration, chosen arbitrarily
- Timeslot Number	Chosen arbitrarily
- Training Sequence Code	Single RF channel
- Hopping	the ARFCN of the BCCH carrier
- ARFCN	
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338)
Multislot allocation	
- Downlink assignment	Maximum number of symmetrical timeslots supported by MS assigned.
- Uplink assignment	As many timeslots as in downlink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 14:

ASSIGNMENT COMMAND

Channel Description 2	00000
- Channel Type and TDMA offset	A suitable value for multislot configuration, chosen arbitrarily
- Timeslot Number	Chosen arbitrarily
- Training Sequence Code	Single RF channel
- Hopping	the ARFCN of the BCCH carrier
- ARFCN	
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338)
Multislot allocation	
- Downlink assignment	Only one timeslot is assigned in downlink direction.
- Uplink assignment	Only one timeslot is assigned in uplink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 16:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338)
Multislot allocation	
- Downlink assignment	Maximum number of timeslots that MS supports.
- Uplink assignment	Maximum number of timeslots that MS supports.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 19:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338)
Multislot allocation	
- Downlink assignment	More than one timeslot but less than maximum number of timeslots is assigned in downlink direction.
- Uplink assignment	Only one timeslot is assigned in uplink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 21:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - ARFCN Power Command - Power level Frequency list IE Cell Channel Description Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1=<X<=8) Channel Mode - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily Single RF channel the ARFCN of the BCCH carrier Chosen arbitrarily but with a changed value. Not Included Use Range 128 to encode (318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338) Maximum number of timeslots that MS supports. Less timeslots assigned than downlink direction. Appropriate for the test Data, 12.0 kbit/s radio interface rate Not included Not included
--	---

Step 24:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN Power Command - Power level Frequency list IE Cell Channel Description Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1=<X<=8) Channel Mode - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily RF hopping channel Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63) Chosen arbitrarily but with a changed value. Not Included Use Range 128 to encode (318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338) Only one timeslot is assigned in downlink direction. Only one timeslot is assigned in uplink direction. Appropriate for the test Data, 12.0 kbit/s radio interface rate Chosen arbitrarily from the Cell channel description Not included
--	--

Step 26:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN Power Command - Power level Frequency list IE Cell Channel Description Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1=<X<=8) Channel Mode - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily RF hopping channel Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63) Chosen arbitrarily but with a changed value. Not Included Use Range 128 to encode (318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338) Maximum number of timeslots that MS supports. Less timeslots assigned than in downlink direction. Appropriate for the test Data, 12.0 kbit/s radio interface rate Chosen arbitrarily from the Cell channel description Not included
--	--

Step 29:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN Power Command - Power level Frequency list IE Cell Channel Description Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1=<X<=8) Channel Mode - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily RF hopping channel Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63) Chosen arbitrarily but with a changed value. Not Included Use Range 128 to encode (318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338) Maximum number of timeslots that MS supports. Less timeslots assigned than in downlink direction. Appropriate for the test Data, 12.0 kbit/s radio interface rate Chosen arbitrarily from the Cell channel description Not included
--	--

Step 31:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338)
Multislot allocation - Downlink assignment	Only one timeslot is assigned in downlink direction.
- Uplink assignment	Only one timeslot is assigned in uplink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

GSM 480 end:

GSM 900 begin:

Step 5:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	RF hopping channel
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- HSN	Chosen arbitrarily from the set (1 to 63)
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Bit map zero encodes (45, 46, 52, 59, 66, 73, 74, 75, 76, 108, 114)
Multislot allocation - Downlink assignment	Maximum number of symmetrical timeslots assigned.
- Uplink assignment	As many timeslots as downlink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Arbitrarily chosen from Cell channel description
Starting Time	Not included

Step 9:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN Power Command - Power level Frequency list IE Cell Channel Description Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1= X ≤8) Channel Mode - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily RF hopping channel Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63) Chosen arbitrarily but with a changed value. Not Included Bit map zero encodes (45, 46, 52, 59, 66, 73, 74, 75, 76, 108, 114) Maximum number of timeslots that MS supports. Less timeslots assigned than downlink direction. Appropriate for the test Data, 12.0 kbit/s radio interface rate Arbitrarily chosen from Cell channel description Not included
--	---

Step 11:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - ARFCN Power Command - Power level Frequency list IE Cell Channel Description Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1= X ≤8) Channel Mode - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily Single RF channel the ARFCN of the BCCH carrier Chosen arbitrarily but with a changed value. Not Included Bit map zero encodes (45, 46, 52, 59, 66, 73, 74, 75, 76, 108, 114) Maximum number of symmetrical timeslots supported by MS assigned. As many timeslots as in downlink direction. Appropriate for the test Data, 12.0 kbit/s radio interface rate Not included Not included
--	--

Step 14:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Bit map zero encodes (45, 46, 52, 59, 66, 73, 74, 75, 76, 108, 114)
Multislot allocation - Downlink assignment	Only one timeslot is assigned in downlink direction.
- Uplink assignment	Only one timeslot is assigned in uplink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 16:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Bit map zero encodes (45, 46, 52, 59, 66, 73, 74, 75, 76, 108, 114)
Multislot allocation - Downlink assignment	Maximum number of timeslots that MS supports.
- Uplink assignment	Maximum number of timeslots that MS supports.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 19:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Bit map zero encodes (45, 46, 52, 59, 66, 73, 74, 75, 76, 108, 114)
Multislot allocation - Downlink assignment	More than one timeslot but less than maximum number of timeslots is assigned in downlink direction.
- Uplink assignment	Only one timeslot is assigned in uplink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 21:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Bit map zero encodes (45, 46, 52, 59, 66, 73, 74, 75, 76, 108, 114)
Multislot allocation - Downlink assignment	Maximum number of timeslots that MS supports.
- Uplink assignment	Less timeslots assigned than downlink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 24:

ASSIGNMENT COMMAND

<p>Channel Description 2</p> <ul style="list-style-type: none"> - Channel Type and TDMA offset - Timeslot Number <ul style="list-style-type: none"> - Training Sequence Code - Hopping <ul style="list-style-type: none"> - MAIO <ul style="list-style-type: none"> - HSN <p>Power Command</p> <ul style="list-style-type: none"> - Power level <p>Frequency list IE</p> <p>Cell Channel Description</p> <p>Multislot allocation</p> <ul style="list-style-type: none"> - Downlink assignment - Uplink assignment - Channel set X (1=\leqX\leq8) <p>Channel Mode</p> <ul style="list-style-type: none"> - Mode <p>Mobile Allocation</p> <p>Starting Time</p>	<p>00000</p> <p>A suitable value for multislot configuration, chosen arbitrarily</p> <p>Chosen arbitrarily</p> <p>RF hopping channel</p> <p>Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.</p> <p>Chosen arbitrarily from the set (1 to 63)</p> <p>Chosen arbitrarily but with a changed value.</p> <p>Not Included</p> <p>Bit map zero encodes (45, 46, 52, 59, 66, 73, 74, 75, 76, 108, 114)</p> <p>Only one timeslot is assigned in downlink direction.</p> <p>Only one timeslot is assigned in uplink direction.</p> <p>Appropriate for the test</p> <p>Data, 12.0 kbit/s radio interface rate</p> <p>Chosen arbitrarily from the Cell channel description</p> <p>Not included</p>
--	---

Step 26:

ASSIGNMENT COMMAND

<p>Channel Description 2</p> <ul style="list-style-type: none"> - Channel Type and TDMA offset - Timeslot Number <ul style="list-style-type: none"> - Training Sequence Code - Hopping <ul style="list-style-type: none"> - MAIO <ul style="list-style-type: none"> - HSN <p>Power Command</p> <ul style="list-style-type: none"> - Power level <p>Frequency list IE</p> <p>Cell Channel Description</p> <p>Multislot allocation</p> <ul style="list-style-type: none"> - Downlink assignment - Uplink assignment - Channel set X (1=\leqX\leq8) <p>Channel Mode</p> <ul style="list-style-type: none"> - Mode <p>Mobile Allocation</p> <p>Starting Time</p>	<p>00000</p> <p>A suitable value for multislot configuration, chosen arbitrarily</p> <p>Chosen arbitrarily</p> <p>RF hopping channel</p> <p>Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.</p> <p>Chosen arbitrarily from the set (1 to 63)</p> <p>Chosen arbitrarily but with a changed value.</p> <p>Not Included</p> <p>Bit map zero encodes (45, 46, 52, 59, 66, 73, 74, 75, 76, 108, 114)</p> <p>Maximum number of timeslots that MS supports.</p> <p>Less timeslots assigned than in downlink direction.</p> <p>Appropriate for the test</p> <p>Data, 12.0 kbit/s radio interface rate</p> <p>Chosen arbitrarily from the Cell channel description</p> <p>Not included</p>
--	---

Step 29:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	RF hopping channel
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- HSN	Chosen arbitrarily from the set (1 to 63)
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Bit map zero encodes (45, 46, 52, 59, 66, 73, 74, 75, 76, 108, 114)
Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1= X ≤8)	Maximum number of timeslots that MS supports. Less timeslots assigned than in downlink direction. Appropriate for the test
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Chosen arbitrarily from the Cell channel description
Starting Time	Not included

Step 31:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Bit map zero encodes (45, 46, 52, 59, 66, 73, 74, 75, 76, 108, 114)
Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1= X ≤8)	Only one timeslot is assigned in downlink direction. Only one timeslot is assigned in uplink direction. Appropriate for the test
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

GSM 900 end:

GSM 1800 begin:

Step 5:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN Power Command - Power level Frequency list IE Cell Channel Description Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1= $X \leq 8$) Channel Mode - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily RF hopping channel Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63) Chosen arbitrarily but with a changed value. Not Included Use Range 128 to encode (773, 775, 779, 782, 791, 798, 829, 832, 844) Maximum number of symmetrical timeslots assigned. As many timeslots as downlink direction. Appropriate for the test Data, 12.0 kbit/s radio interface rate Arbitrarily chosen from Cell channel description Not included
---	---

Step 9:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number - Training Sequence Code - Hopping - MAIO - HSN Power Command - Power level Frequency list IE Cell Channel Description Multislot allocation - Downlink assignment - Uplink assignment - Channel set X (1= $X \leq 8$) Channel Mode - Mode Mobile Allocation Starting Time	00000 A suitable value for multislot configuration, chosen arbitrarily Chosen arbitrarily RF hopping channel Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE. Chosen arbitrarily from the set (1 to 63) Chosen arbitrarily but with a changed value. Not Included Use Range 128 to encode (773, 775, 779, 782, 791, 798, 829, 832, 844) Maximum number of timeslots that MS supports. Less timeslots assigned than downlink direction. Appropriate for the test Data, 12.0 kbit/s radio interface rate Arbitrarily chosen from Cell channel description Not included
---	---

Step 11:

ASSIGNMENT COMMAND

Channel Description 2	
- Channel Type and TDMA offset	00000
- Timeslot Number	A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (773, 775, 779, 782, 791, 798, 829, 832, 844)
Multislot allocation	
- Downlink assignment	Maximum number symmetrical of timeslots supported by MS assigned.
- Uplink assignment	As many timeslots as in downlink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 14:

ASSIGNMENT COMMAND

Channel Description 2	
- Channel Type and TDMA offset	00000
- Timeslot Number	A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (773, 775, 779, 782, 791, 798, 829, 832, 844)
Multislot allocation	
- Downlink assignment	Only one timeslot is assigned in downlink direction.
- Uplink assignment	Only one timeslot is assigned in uplink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 16:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (773, 775, 779, 782, 791, 798, 829, 832, 844)
Multislot allocation - Downlink assignment	Maximum number of timeslots that MS supports.
- Uplink assignment	Maximum number of timeslots that MS supports.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 19:

ASSIGNMENT COMMAND

Channel Description 2 - Channel Type and TDMA offset - Timeslot Number	00000 A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command - Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (773, 775, 779, 782, 791, 798, 829, 832, 844)
Multislot allocation - Downlink assignment	More than one timeslot but less than maximum number of timeslots is assigned in downlink direction.
- Uplink assignment	Only one timeslot is assigned in uplink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode - Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 21:

ASSIGNMENT COMMAND

Channel Description 2	00000
- Channel Type and TDMA offset	A suitable value for multislot configuration, chosen arbitrarily
- Timeslot Number	
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequencylist IE	Not Included
Cell Channel Description	Use Range 128 to encode (773, 775, 779, 782, 791, 798, 829, 832, 844)
Multislot allocation	
- Downlink assignment	Maximum number of timeslots that MS supports.
- Uplink assignment	Less timeslots assigned than downlink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

Step 24:

ASSIGNMENT COMMAND

Channel Description 2	00000
- Channel Type and TDMA offset	A suitable value for multislot configuration, chosen arbitrarily
- Timeslot Number	
- Training Sequence Code	Chosen arbitrarily
- Hopping	RF hopping channel
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
- HSN	Chosen arbitrarily from the set (1 to 63)
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequencylist IE	Not Included
Cell Channel Description	Use Range 128 to encode (773, 775, 779, 782, 791, 798, 829, 832, 844)
Multislot allocation	
- Downlink assignment	Only one timeslot is assigned in downlink direction.
- Uplink assignment	Only one timeslot is assigned in uplink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Chosen arbitrarily from the Cell channel description
Starting Time	Not included

Step 26:

ASSIGNMENT COMMAND

Channel Description 2 <ul style="list-style-type: none"> - Channel Type and TDMA offset - Timeslot Number 	00000 A suitable value for multislot configuration, chosen arbitrarily
<ul style="list-style-type: none"> - Training Sequence Code - Hopping 	Chosen arbitrarily RF hopping channel
<ul style="list-style-type: none"> - MAIO 	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
<ul style="list-style-type: none"> - HSN 	Chosen arbitrarily from the set (1 to 63)
Power Command <ul style="list-style-type: none"> - Power level 	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (773, 775, 779, 782, 791, 798, 829, 832, 844)
Multislot allocation <ul style="list-style-type: none"> - Downlink assignment - Uplink assignment - Channel set X (1=<X<=8) 	Maximum number of timeslots that MS supports. Less timeslots assigned than in downlink direction. Appropriate for the test
Channel Mode <ul style="list-style-type: none"> - Mode 	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Chosen arbitrarily from the Cell channel description
Starting Time	Not included

Step 29:

ASSIGNMENT COMMAND

Channel Description 2 <ul style="list-style-type: none"> - Channel Type and TDMA offset - Timeslot Number 	00000 A suitable value for multislot configuration, chosen arbitrarily
<ul style="list-style-type: none"> - Training Sequence Code - Hopping 	Chosen arbitrarily RF hopping channel
<ul style="list-style-type: none"> - MAIO 	Chosen arbitrarily from the set (0, 1 to N-1) where N is the number of frequencies in the Mobile Allocation IE.
<ul style="list-style-type: none"> - HSN 	Chosen arbitrarily from the set (1 to 63)
Power Command <ul style="list-style-type: none"> - Power level 	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (773, 775, 779, 782, 791, 798, 829, 832, 844)
Multislot allocation <ul style="list-style-type: none"> - Downlink assignment - Uplink assignment - Channel set X (1=<X<=8) 	Maximum number of timeslots that MS supports. Less timeslots assigned than in downlink direction. Appropriate for the test
Channel Mode <ul style="list-style-type: none"> - Mode 	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Chosen arbitrarily from the Cell channel description
Starting Time	Not included

Step 31:

ASSIGNMENT COMMAND

Channel Description 2	
- Channel Type and TDMA offset	00000
- Timeslot Number	A suitable value for multislot configuration, chosen arbitrarily
- Training Sequence Code	Chosen arbitrarily
- Hopping	Single RF channel
- ARFCN	the ARFCN of the BCCH carrier
Power Command	
- Power level	Chosen arbitrarily but with a changed value.
Frequency list IE	Not Included
Cell Channel Description	Use Range 128 to encode (773, 775, 779, 782, 791, 798, 829, 832, 844)
Multislot allocation	
- Downlink assignment	Only one timeslot is assigned in downlink direction.
- Uplink assignment	Only one timeslot is assigned in uplink direction.
- Channel set X (1=<X<=8)	Appropriate for the test
Channel Mode	
- Mode	Data, 12.0 kbit/s radio interface rate
Mobile Allocation	Not included
Starting Time	Not included

GSM 1800 end:

26.13.1.3 Test of handover

With the Handover procedure, it is possible to completely alter the channels allocated to a MS. This makes it possible in particular to switch a call in progress from one cell to another. The procedure is always initiated by the network and with the MS in a dedicated mode.

Sections 26.13.1.3.1 - 26.13.1.3.5 contain test procedures to be used for executing successful Handover tests in multislot configuration. Table 26.13.1.3-1 contains a summary of the different combinations of parameters that have to be tested, together with a reference to the appropriate test procedure.

Table 26.13.1.3-1

From	To	Timing Adv.	Start Time	Syn ?	State of call	Section	Exec Counter
Multislot configuration, MAX number of timeslots, no FH	Multislot configuration, MAX number of timeslots, FH	arbitrarily	none	no	U10	26.13.1.3.1	1
Multislot configuration, MIN number of timeslots, no FH	Multislot configuration, MAX number of timeslots, no FH	arbitrarily	none	no	estab*	26.13.1.3.2	1
Multislot configuration, MAX number of timeslots, FH	Multislot configuration, MIN number of timeslots, no FH	arbitrarily	none	finely	U10	26.13.1.3.3	1
Multislot configuration, FH	Multislot configuration, FH	arbitrarily	none	finely	estab *	26.13.1.3.4	1
Multislot configuration, MIN number of timeslots, FH	Multislot configuration, MAX number of timeslots, no FH	arbitrarily	none	pre	estab *	26.13.1.3.5	1

*) The MS is in the "idle, updated" state, with a TMSI allocated and camped on cell A

26.13.1.3.1 Multislot signalling / RR / Handover / successful / active call / non-synchronized

This test is applicable to all MS that supports multislot configuration.

26.13.1.3.1.1 Conformance requirements

- 1) The MS shall correctly apply the handover procedure in the non-synchronized case when a multislot connection is in progress and when handover is performed from a non-hopping multislot configuration towards a hopping multislot configuration.

References

Conformance requirement 1: GSM 04.08 sections 3.4.4 and 9.1.15. GSM 04.13 section 5.2.6.2.

26.13.1.3.1.2 Test purpose

- 1) To test that when the MS is ordered to make a non-synchronized handover from non-hopping multislot configuration to hopping multislot configuration, it continuously sends access bursts on the main DCCH until it receives a PHYSICAL INFORMATION message from the SS.
- 2) To test that the MS correctly handles the Timing Advance IE in the PHYSICAL INFORMATION message.
- 3) To test that the MS activates the new channels correctly and transmits the HANDOVER COMPLETE message without undue delay.

26.13.1.3.1.3 Method of test

Initial Conditions

System Simulator:

- 2 cells, A and B with same LAI, default parameters except:
- Early classmark sending enabled in SI3 rest octets

GSM450:

Cell A has:

- BCCH ARFCN = 263

Cell B has:

- BCCH ARFCN = 274
- Cell Allocation = (260, 262, 264, 266, 268, 270, 272, 274, 276, 279, 281, 283, 285, 287, 289, 291)
- The Cell Allocation of Cell B shall be coded using range 256 format.
- The frame numbers of cells A and B shall be different by 100.
- The timebase of cells A and B shall be such that the edges of their timeslots are not coincident at the antenna connector.

GSM480:

Cell A has:

- BCCH ARFCN = 310

Cell B has:

- BCCH ARFCN = 321
- Cell Allocation = (307, 309, 311, 313, 315, 317, 319, 321, 323, 326, 328, 330, 332, 334, 336, 338)
- The Cell Allocation of Cell B shall be coded using range 256 format.
- The frame numbers of cells A and B shall be different by 100.
- The timebase of cells A and B shall be such that the edges of their timeslots are not coincident at the antenna connector.

GSM900:

Cell A has:

- BCCH ARFCN = 20

Cell B has:

- BCCH ARFCN = 40
- Cell Allocation = (14, 18, 22, 24, 30, 31, 38, 40, 60, 66, 73, 74, 75, 76, 108, 114)
- The Cell Allocation of Cell B shall be coded using range 256 format.
- The frame numbers of cells A and B shall be different by 100.
- The timebase of cells A and B shall be such that the edges of their timeslots are not coincident at the antenna connector.

DCS 1 800:

Cell A has:

- BCCH ARFCN = 747

Cell B has:

- BCCH ARFCN = 764
- Cell Allocation = (739, 743, 746, 749, 756, 758, 761, 764, 771, 779, 782, 791, 798, 829, 832, 844)

- The Cell Allocation of Cell B shall be coded using range 256 format.
- The frame numbers of cells A and B shall be different by 100.
- The timebase of cells A and B shall be such that the edges of their timeslots are not coincident at the antenna connector.

Mobile Station:

- The MS is in the active state (U10) of a service using a multislot connection on cell A.

Related PICS/PIXT Statements

- Type of MS (GSM 450 or GSM 480 or P-GSM 900 or EGSM or DCS 1 800).
- Multislot class
- Supported teleservices/bearer services
- Classmark

Foreseen Final State of the MS

The active state (U10) of a multislot connection on cell B.

Test Procedure

The MS is in the active state (U10) of a multislot connection. The SS sends a HANDOVER COMMAND on the main DCCH. The MS shall begin to send access bursts on the new DCCH of the target cell. The SS observes the access bursts and after receiving 10-20 access bursts, the SS sends one PHYSICAL INFORMATION message with a Timing Advance arbitrarily selected. The MS shall activate the new channels that belongs to same multislot configuration. The MS shall establish a signalling link. The MS shall be ready to transmit a HANDOVER COMPLETE message, before 500 ms after the end of the PHYSICAL INFORMATION message, but not before a UA frame has been sent by the SS.

The term "ready to transmit" is defined in GSM 04.13.

Maximum Duration of Test

5 minutes, including 1 minute for any necessary operator actions.

Expected Sequence

Step	Direction	Message	Comments
0	MS, SS		The MS and SS are using a maximum multislot configuration according to the MS multislot class (highest class that MS supports) in non-hopping mode on cell A.
1	SS -> MS	HANDOVER COMMAND	See Specific message contents.
2	MS -> SS	HANDOVER ACCESS	Repeated on every burst of the uplink main DCCH until reception of PHYSICAL INFORMATION. Handover Reference as included in the HANDOVER COMMAND.
3	SS -> MS	PHYSICAL INFORMATION	Sent after reception of n HANDOVER ACCESS messages. See specific message contents.
4	MS -> SS	SABM	Sent without information field.
5	SS -> MS	UA	
6	MS -> SS	HANDOVER COMPLETE	The message shall be ready to be transmitted before 500 ms after the completion of step 3.
7	MS, SS		The MS and SS are using a maximum multislot configuration according to the MS multislot class (highest class that MS supports) in hopping mode on cell B and state U10 is reached.

Specific Message Contents

GSM 450

HANDOVER COMMAND

Information Element	value/remarks
As default message contents, except:	
Cell Description	
- Network Colour Code	1
- Base Station Colour Code	5
- BCCH Carrier Number	274
Channel Description 2	
- Channel Type	00000
- Timeslot number	A suitable value for multislot configuration, chosen arbitrarily.
- Training Sequence Code	Chosen arbitrarily
- Hopping	RF hopping channel.
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1), where N is the number of frequencies encoded in the Frequency List IE.
- HSN	Chosen arbitrarily from the set (1,2,..63).
Synchronization Indication IE is not included.	
Channel Mode IE is not included.	
Description of a multislot configuration:	
- Downlink assignment	As many timeslots assigned as before HANDOVER COMMAND
- Uplink assignment	As many timeslots assigned as before HANDOVER COMMAND
- Channel set X (1=<x<=8)	Same as before HANDOVER COMMAND
Frequency List after time	
- Frequency List	Use Range 128 to encode the following 15 frequencies (260, 262, 264, 266, 268, 270, 272, 276, 279, 281, 283, 285, 287, 289, 291).

PHYSICAL INFORMATION

Information Element	value/remarks
As default message contents, except:	
Timing advance	Arbitrarily selected but different to default value.

GSM 480

HANDOVER COMMAND

Information Element	value/remarks
As default message contents, except: Cell Description <ul style="list-style-type: none"> - Network Colour Code - Base Station Colour Code - BCCH Carrier Number Channel Description 2 <ul style="list-style-type: none"> - Channel Type - Timeslot number - Training Sequence Code - Hopping - MAIO - HSN Synchronization Indication IE is not included. Channel Mode IE is not included. Description of a multislot configuration: <ul style="list-style-type: none"> - Downlink assignment - Uplink assignment - Channel set X (1=<x<=8) Frequency List after time <ul style="list-style-type: none"> - Frequency List 	 1 5 321 00000 A suitable value for multislot configuration, chosen arbitrarily. Chosen arbitrarily RF hopping channel. Chosen arbitrarily from the set (0, 1 to N-1), where N is the number of frequencies encoded in the Frequency List IE. Chosen arbitrarily from the set (1,2,..63). As many timeslots assigned as before HANDOVER COMMAND As many timeslots assigned as before HANDOVER COMMAND Same as before HANDOVER COMMAND Use Range 128 to encode the following 15 frequencies (307, 309, 311, 313, 315, 317, 319, 323, 326, 328, 330, 332, 334, 336, 338).

PHYSICAL INFORMATION

Information Element	value/remarks
As default message contents, except: Timing advance	Arbitrarily selected but different to default value.

P-GSM 900

HANDOVER COMMAND

Information Element	value/remarks
As default message contents, except:	
Cell Description	
- Network Colour Code	1
- Base Station Colour Code	5
- BCCH Carrier Number	40
Channel Description 2	
- Channel Type	00000
- Timeslot number	A suitable value for multislot configuration, chosen arbitrarily.
- Training Sequence Code	Chosen arbitrarily
- Hopping	RF hopping channel.
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1), where N is the number of frequencies encoded in the Frequency Channel Sequence IE.
- HSN	Chosen arbitrarily from the set (1,2,..63).
Synchronization Indication IE is not included.	
Channel Mode IE is not included.	
Description of a multislot configuration:	
- Downlink assignment	As many timeslots assigned as before HANDOVER COMMAND
- Uplink assignment	As many timeslots assigned as before HANDOVER COMMAND
- Channel set X (1=<x<=8)	Same as before HANDOVER COMMAND
Frequency Channel Sequence after time	
- Frequency Channel Sequence	Allocates the following 15 frequencies (14, 18, 22, 24, 30, 31, 38, 53, 66, 73, 74, 75, 76, 108, 114).

PHYSICAL INFORMATION

Information Element	value/remarks
As default message contents, except:	
Timing advance	Arbitrarily selected but different to default value.

DCS 1 800

HANDOVER COMMAND

Information Element	value/remarks
As default message contents, except:	
Cell Description	
- Network Colour Code	1
- Base Station Colour Code	5
- BCCH Carrier Number	764
Channel Description 2	
- Channel Type	00000
- Timeslot number	A suitable value for multislot configuration, chosen arbitrarily.
- Training Sequence Code	Chosen arbitrarily.
- Hopping	RF hopping channel.
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1), where N is the number of frequencies encoded in the Frequency Short List IE.
- HSN	Chosen arbitrarily from the set (1,2,..63).
Synchronization Indication IE is not included.	
Channel Mode IE is not included.	
Description of a multislot configuration:	
- Downlink assignment	As many timeslots assigned as before HANDOVER COMMAND
- Uplink assignment	As many timeslots assigned as before HANDOVER COMMAND
- Channel set X (1=<X<=8)	Same as before HANDOVER COMMAND
Frequency List after time	
- Frequency List	Use Range 256 to encode the following 15 frequencies: (739, 743, 746, 749, 756, 758, 761, 771, 779, 782, 791, 798, 829, 832, 844).

PHYSICAL INFORMATION

Information Element	value/remarks
As default message contents, except:	
Timing advance	Arbitrarily selected but different to default value.

26.13.1.3.2 Multislot signalling / RR / Handover / successful / call under establishment / non synchronized / resource upgrading

This test is applicable to all MS that supports multislot configuration.

26.13.1.3.2.1 Conformance requirements

- 1) The MS shall correctly apply the handover procedure from non-hopping multislot configuration to non-hopping multislot configuration in the non-synchronized case during call establishment.
- 2) The MS shall activate the new channels that belongs to same multislot configuration correctly, taking into account upgraded resources.
- 3) If during call establishment a Layer 3 MM or CC message just sent by the MS is not Layer 2 acknowledged before the channel change caused by the HANDOVER COMMAND message, the MS shall send the Layer 3 message to the new cell, using the same value in the N(SD) field, after the handover procedure.

References

Conformance requirements: GSM 04.08 sections 3.4.4 and 9.1.15, GSM 04.13 section 5.2.6.2

26.13.1.3.2.2 Test purpose

- 1) To test that when the MS is ordered to make a non-synchronized handover from non-hopping multislot configuration to a non-hopping multislot configuration, it continuously sends access bursts on the main DCCH until it receives a PHYSICAL INFORMATION message from the SS.
- 2) To test that the MS correctly takes the values of the Timing Advance information element in the PHYSICAL INFORMATION message into account.
- 3) To test that the MS activates the new channels that belongs to same multislot configuration correctly, taking into account upgraded resources and transmits the HANDOVER COMPLETE message without undue delay.
- 4) To test that MS correctly retransmits Layer 3 MM or CC messages, that were not acknowledged by Layer 2 before the Handover, after completion of the Handover.

26.13.1.3.2.3 Method of test

Initial Conditions

System Simulator:

- 2 cells, A and B with same LAI, default parameters except:
- Early classmark sending enabled in SI3 rest octets

GSM450:

Cell A has:

- BCCH ARFCN = 263
- PLMN colour code, NCC = as defaults.
- BS colour code, BCC = as defaults.
- PLMN_PERM = 00001010.

Cell B has:

- BCCH ARFCN = 274
- PLMN colour code, NCC = 3.
- BS colour code, BCC = 0.
- The timebase of cells A and B shall be such that the edges of their timeslots are not coincident at the antenna connector.

GSM480:

Cell A has:

- BCCH ARFCN = 310
- PLMN colour code, NCC = as defaults.
- BS colour code, BCC = as defaults.
- PLMN_PERM = 00001010.

Cell B has:

- BCCH ARFCN = 321
- PLMN colour code, NCC = 3.

- BS colour code, BCC = 0.
- The timebase of cells A and B shall be such that the edges of their timeslots are not coincident at the antenna connector.

GSM900:

Cell A has:

- BCCH ARFCN = 20
- PLMN colour code, NCC = as defaults.
- BS colour code, BCC = as defaults.
- PLMN_PERM = 00001010.

Cell B has:

- BCCH ARFCN = 40
- PLMN colour code, NCC = 3.
- BS colour code, BCC = 0.
- The timebase of cells A and B shall be such that the edges of their timeslots are not coincident at the antenna connector.

DCS 1 800:

Cell A has:

- BCCH ARFCN = 747
- PLMN colour code, NCC = as defaults.
- BS colour code, BCC = as defaults.
- PLMN_PERM = 00001010.

Cell B has:

- BCCH ARFCN = 764
- PLMN colour code, NCC = 3.
- BS colour code, BCC = 0.
- The timebase of cells A and B shall be such that the edges of their timeslots are not coincident at the antenna connector.

Mobile Station:

- The MS is in the "idle, updated" state, with a TMSI allocated and camped on cell A..

Related PICS/PIXIT Statements

- Type of MS (GSM 450 or GSM 480 or P-GSM 900 or EGSM or DCS 1 800).
- Multislot class
- Supported teleservices/bearer services
- Classmark

Foreseen Final State of the MS

- "idle, updated" with a TMSI allocated and camped on cell B.

Test Procedure

A Mobile Originating Call is initiated on Cell A. After the MS has sent the SETUP message (and before the last L2 frame carrying the SETUP message is acknowledged by the SS) the SS sends ASSIGNMENT COMMAND message to MS defining used multislot configuration. Multislot configuration with one TCH/F is allocated. MS responds with ASSIGNMENT COMPLETE message. Then the SS sends a HANDOVER COMMAND message, ordering the MS to switch to cell B. The MS shall then begin to send access bursts on the new DCCH to cell B. The SS observes the access bursts and after receiving 10-20 access bursts, the SS sends one PHYSICAL INFORMATION message with a Timing Advance as specified in table 26.13.1.3-1 of section 26.13.1.3.6. The MS shall activate the channels that belongs to same multislot configuration correctly, taking into account upgraded resources. The MS shall establish a signalling link. The MS shall be ready to transmit a HANDOVER COMPLETE message before 650 ms after the end of the PHYSICAL INFORMATION message, but not before a UA frame has been sent by the SS. The MS shall then again send the SETUP message to the SS, using the same value in the N(SD) field. Finally the SS sends a CHANNEL RELEASE to end the test.

The term "ready to transmit" is defined in GSM 04.13.

Maximum Duration of Test

5 minutes, including 1 minute for any necessary operator actions.

Expected Sequence

Step	Direction	Message	Comments
1	-----	-----	An MO call is initiated on cell A.
2	MS -> SS	CHANNEL REQUEST	Establ. Cause = "Originating call, NECI not set to 1
3	SS -> MS	IMMEDIATE ASSIGNMENT	
4	MS -> SS	CM SERVICE REQUEST	CM Service Type = Mobile Originating Call Establishment. Multislot class
5	MS -> SS	CLASSMARK CHANGE	
6	SS -> MS	AUTHENTICATION REQUEST	Last L2 frame not acknowledged by the SS.
7	MS -> SS	AUTHENTICATION RESPONSE	
8	SS -> MS	CIPHERING MODE COMMAND	Multislot configuration is sent to MS. Multislot configuration with one TCH/F is allocated. See specific message contents below.
9	MS -> SS	CIPHERING MODE COMPLETE	
10	MS -> SS	SETUP	See specific message contents. Resource upgrading. Repeated on every burst of the uplink main DCCH until reception of PHYSICAL INFORMATION. Handover Reference as included in the HANDOVER COMMAND
11	SS -> MS	ASSIGNMENT COMMAND	
12	MS -> SS	ASSIGNMENT COMPLETE	Sent after reception of n HANDOVER ACCESS message. Timing Advance as specified in table 26.13.1.3-1 of section 26.13.1.3.6.
13	SS -> MS	HANDOVER COMMAND	
14	MS -> SS	HANDOVER ACCESS	Sent without information field.
15	SS -> MS	PHYSICAL INFORMATION	
16	MS -> SS	SABM	This message shall be ready to be transmitted before 650 ms after the completion of step 15.
17	SS -> MS	UA	
18	MS -> SS	HANDOVER COMPLETE	Same N(SD) as in step 10.
19	MS -> SS	SETUP	
20	SS -> MS	CHANNEL RELEASE	The main signalling link is released.

Specific Message Contents

GSM 450

ASSIGNMENT COMMAND

Information element	Value/remark
Channel description 2	describes non-hopping Bm+ACCHs or Lm+ACCHs as appropriate for the test
Power Command	As in section 26.1.1
Frequency list	Omitted
Cell channel description	Omitted
Description of the multislot configuration	
- Downlink assignment	Only one timeslot is allocated in downlink direction.
- Uplink assignment	Only one timeslot is allocated in uplink direction.
- Channel set X (1=<X<=8)	Appropriate for the test.
Mode of the channel set X (1=<X<=8)	Appropriate for on bearer capability chosen for the test.
Description of the second channel	Omitted
Mode of the second channel	Omitted
Mobile allocation	Omitted
Starting time	Omitted
Cipher mode setting	Omitted

HANDOVER COMMAND

Information Element	value/remarks
As default message contents, except:	
Cell Description	
- Network Colour Code	3
- Base Station Colour Code	0
- BCCH Carrier Number	274
Channel Description 2	
- Channel Type	00000
- Timeslot number	Chosen arbitrarily, but not Zero.
- Training Sequence Code	Chosen arbitrarily
- Hopping	0 (= no hopping)
- ARFCN	The ARFCN of the BCCH carrier
Synchronization Indication IE is not included.	
Channel Mode IE is not included.	
Description of a multislot configuration:	
- Downlink assignment	More timeslots are assigned than before HANDOVER COMMAND
- Uplink assignment	As many timeslots assigned as before HANDOVER COMMAND
- Channel set X (1=<x<=8)	Same as before HANDOVER COMMAND

PHYSICAL INFORMATION

Information Element	value/remarks
As default message contents, except:	
Timing advance	Arbitrarily selected but different to default value.

GSM 480

ASSIGNMENT COMMAND

Information element	Value/remark
Channel description 2	describes non-hopping Bm+ACCHs or Lm+ACCHs as appropriate for the test
Power Command	As in section 26.1.1
Frequencylist	Omitted
Cell channel description	Omitted
Description of the multislot configuration	
- Downlink assignment	Only one timeslot is allocated in downlink direction.
- Uplink assignment	Only one timeslot is allocated in uplink direction.
- Channel set X (1=<X<=8)	Appropriate for the test.
Mode of the channel set X (1=<X<=8)	Appropriate for on bearer capability chosen for the test.
Description of the second channel	Omitted
Mode of the second channel	Omitted
Mobile allocation	Omitted
Starting time	Omitted
Cipher mode setting	Omitted

HANDOVER COMMAND

Information Element	value/remarks
As default message contents, except:	
Cell Description	
- Network Colour Code	3
- Base Station Colour Code	0
- BCCH Carrier Number	321
Channel Description 2	
- Channel Type	00000
- Timeslot number	Chosen arbitrarily, but not Zero.
- Training Sequence Code	Chosen arbitrarily
- Hopping	0 (= no hopping)
- ARFCN	The ARFCN of the BCCH carrier
Synchronization Indication IE is not included.	
Channel Mode IE is not included.	
Description of a multislot configuration:	
- Downlink assignment	More timeslots are assigned than before HANDOVER COMMAND
- Uplink assignment	As many timeslots assigned as before HANDOVER COMMAND
- Channel set X (1=<x<=8)	Same as before HANDOVER COMMAND

PHYSICAL INFORMATION

Information Element	value/remarks
As default message contents, except:	
Timing advance	Arbitrarily selected but different to default value.

P-GSM 900

ASSIGNMENT COMMAND

Information element	Value/remark
Channel description 2	describes non-hopping Bm+ACCHs or Lm+ACCHs as appropriate for the test
Power Command	As in section 26.1.1
Frequencylist	Omitted
Cell channel description	Omitted
Description of the multislot configuration	
- Downlink assignment	Only one timeslot is allocated in downlink direction.
- Uplink assignment	Only one timeslot is allocated in uplink direction.
- Channel set X (1=<X<=8)	Appropriate for the test.
Mode of the channel set X (1=<X<=8)	Appropriate for on bearer capability chosen for the test.
Description of the second channel	Omitted
Mode of the second channel	Omitted
Mobile allocation	Omitted
Starting time	Omitted
Cipher mode setting	Omitted

HANDOVER COMMAND

Information Element	value/remarks
As default message contents, except:	
Cell Description	
- Network Colour Code	3
- Base Station Colour Code	0
- BCCH Carrier Number	40
Channel Description 2	
- Channel Type	00000
- Timeslot number	Chosen arbitrarily, but not Zero.
- Training Sequence Code	Chosen arbitrarily
- Hopping	0 (= no hopping)
- ARFCN	The ARFCN of the BCCH carrier
Synchronization Indication IE is not included.	
Channel Mode IE is not included.	
Description of a multislot configuration:	
- Downlink assignment	More timeslots are assigned than before HANDOVER COMMAND
- Uplink assignment	As many timeslots assigned as before HANDOVER COMMAND
- Channel set X (1=<x<=8)	Same as before HANDOVER COMMAND

PHYSICAL INFORMATION

Information Element	value/remarks
As default message contents, except:	
Timing advance	Arbitrarily selected but different to default value.

DCS 1 800

ASSIGNMENT COMMAND

Information element	Value/remark
Channel description 2	describes non-hopping Bm+ACCHs or Lm+ACCHs as appropriate for the test
Power Command	As in section 26.1.1
Frequencylist	Omitted
Cell channel description	Omitted
Description of the multislot configuration	Appropriate for the teleservice selected for the test
- Downlink assignment	Only one timeslot is allocated in downlink direction.
- Uplink assignment	Only one timeslot is allocated in uplink direction.
- Channel set X (1=<X<=8)	Appropriate for the test.
Mode of the channel set X (1=<X<=8)	Appropriate for on bearer capability chosen for the test
Description of the second channel	Omitted
Mode of the second channel	Omitted
Mobile allocation	Omitted
Starting time	Omitted
Cipher mode setting	Omitted

HANDOVER COMMAND

Information Element	value/remarks
As default message contents, except:	
Cell Description	
- Network Colour Code	3
- Base Station Colour Code	0
- BCCH Carrier Number	764
Channel Description 2	
- Channel Type	00000
- Timeslot number	Chosen arbitrarily, but not Zero.
- Training Sequence Code	Chosen arbitrarily
- Hopping	0 (= no hopping)
- ARFCN	the ARFCN of the BCCH carrier
Synchronization Indication IE is not included.	
Channel Mode IE is not included.	
Description of a multislot configuration:	
- Downlink assignment	More timeslot are assigned than before HANDOVER COMMAND
- Uplink assignment	As many timeslots assigned as before HANDOVER COMMAND
- Channel set X (1=<x<=8)	Same as before HANDOVER COMMAND

PHYSICAL INFORMATION

Information Element	value/remarks
As default message contents, except:	
Timing advance	Arbitrarily selected but different to default value.

26.13.1.3.3 Multislot signalling / RR / Handover / successful / active call / finely synchronized / resource downgrading

This test is applicable to all MS that supports multislot configuration.

26.13.1.3.3.1 Conformance requirements

- 1) The MS shall correctly apply the handover procedure from multislot configuration with frequency hopping to multislot configuration without frequency hopping in the finely synchronized case when a call is in progress. Resources are downgraded in handover procedure.

References

Conformance requirement 1: GSM 04.08 sections 3.4.4, 9.1.14, 9.1.15 and 9.1.16.

26.13.1.3.3.2 Test purpose

- 1) To test that when the MS is ordered to make a finely synchronized handover to a synchronized cell from a hopping multislot configuration to a non-hopping multislot configuration, it sends 4 access bursts on the main DCCH and then activates the channels correctly, taking into account power command, downgraded resources and correctly calculating the timing advance to use.
- 2) To test the MS activates the new channels that belongs to same multislot configuration correctly, taking into account downgraded resources and transmits the HANDOVER COMPLETE message without undue delay.

26.13.1.3.3.3 Method of test

Initial Conditions

System Simulator:

- 2 cells, A and B, with same LAI, default parameters, except:
- Early classmark sending enabled in SI3 rest octets - The BCCH of cell A is sent k bit periods before the BCCH of cell B. The timing advance in cell A sent to the MS is y bit periods. k and y are selected such that $0 < (2k+y) \bmod 256 < 60$.

GSM 450:

- Cell B has BCCH ARFCN = 274.

GSM 480:

- Cell B has BCCH ARFCN = 321.

P-GSM 900:

- Cell B has BCCH ARFCN = 40.

DCS 1 800:

- Cell B has BCCH ARFCN = 764.

Mobile Station:

- The MS is in the active state (U10) of a service using a multislot connection (on cell A). The MS is using a power level P . Where P is a power level within the supported range of that type of MS.

Related PICS/PIXIT Statements

- Type of MS (GSM 450 or GSM 480 or P-GSM 900 or EGSM or DCS 1 800).
- Multislot class
- Supported teleservices/bearer services

Foreseen Final State of the MS

The active state (U10) of a multislot connection (on cell B).

Test Procedure

The MS is in the active state (U10) of a multislot connection on cell A. Maximum number of channels supported by the MS in a HSCSD configuration, is allocated. The SS sends a HANOVER COMMAND on the main DCCH In the case that the MS supports only 1 timeslot in uplink direction the HANOVER COMMAND'S Uplink assignment shall be one timeslot. The MS shall send 4 access bursts, in 4 successive slots on the new DCCH to cell B. Then the MS shall establish a signalling link indicating the correct Timing Advance and power level and send a HANOVER COMPLETE message.

The MS shall be "ready to transmit" a HANOVER COMPLETE message before 650 ms after the end of the HANOVER COMMAND message, but not before a UA frame has been sent by the SS.

The term "ready to transmit" is defined in GSM 04.13.

Maximum Duration of Test

5 minutes, including 1 minute for any necessary operator actions.

Expected Sequence

Step	Direction	Message	Comments
0	MS, SS		The MS and SS are using a multislot configuration in hopping mode on cell A. Maximum number of channels supported by the MS in a HSCSD configuration, is allocated
1	SS -> MS	HANOVER COMMAND	See Specific Message Contents.
2	MS -> SS	HANOVER ACCESS	See specific message contents. Four messages. are transmitted to Cell B in 4 successive slots. on the new DCCH.
3	MS -> SS	HANOVER ACCESS	
4	MS -> SS	HANOVER ACCESS	
5	MS -> SS	HANOVER ACCESS	
6	MS -> SS	SABM	Sent without information field.
7	SS -> MS	UA	
8	MS -> SS	HANOVER COMPLETE	This message shall be ready to be transmitted before 650 ms after the completion of step 1.
9	SS		The header of the next uplink SACCH/M is examined and the Timing Advance and Power Level indications are examined. The correct timing advance shall be indicated. The power level indication shall indicate the power level used in the handover command.
10	MS, SS		The MS and SS are using a multislot configuration in non-hopping mode on cell B

Specific Message Contents

GSM 450

HANDOVER COMMAND

Information Element	value/remark
As default message contents, except:	
Cell Description	
- Network Colour Code	1
- Base Station Colour Code	5
- BCCH Carrier Number	274
Channel Description 2	
- Channel type	00000
- Timeslot Number	A suitable value for multislot configuration, chosen arbitrarily.
- Training Sequence Code	Chosen arbitrarily.
- Hopping	Single RF Channel.
- ARFCN	274
Handover Reference	
- Value	Chosen arbitrarily from the range (0, 1..255).
Power command	
- Power Level	Arbitrarily chosen, but different to the one already in use and within the range supported by that type of MS.
Synchronization Indication	
- Report Observed Time Difference	Shall not be included.
- Synchronization Indication	"Synchronized".
- Normal Cell Indication	Ignore out of range timing advance.
Description of the multislot connection	
- Uplink assignment	If possible fewer timeslots are allocated than before HANDOVER COMMAND
- Downlink assignment	Less timeslots are allocated than before HANDOVER COMMAND
- Channel set X (1=<X<=8)	Appropriate for the test

HANDOVER ACCESS

Information Element	value/remark
As default message contents except:	
Handover Reference	
- Value	Same as HANDOVER COMMAND

GSM 480

HANDOVER COMMAND

Information Element	value/remark
As default message contents, except:	
Cell Description	
- Network Colour Code	1
- Base Station Colour Code	5
- BCCH Carrier Number	321
Channel Description 2	
- Channel type	00000
- Timeslot Number	A suitable value for multislot configuration, chosen arbitrarily.
- Training Sequence Code	Chosen arbitrarily.
- Hopping	Single RF Channel.
- ARFCN	321
Handover Reference	
- Value	Chosen arbitrarily from the range (0, 1..255).
Power command	
- Power Level	Arbitrarily chosen, but different to the one already in use and within the range supported by that type of MS.
Synchronization Indication	
- Report Observed Time Difference	Shall not be included.
- Synchronization Indication	"Synchronized".
- Normal Cell Indication	Ignore out of range timing advance.
Description of the multislot connection	
- Uplink assignment	If possible fewer timeslots are allocated than before HANDOVER COMMAND
- Downlink assignment	Less timeslots are allocated than before HANDOVER COMMAND
- Channel set X (1=<X<=8)	Appropriate for the test

HANDOVER ACCESS

Information Element	value/remark
As default message contents except:	
Handover Reference	
- Value	Same as HANDOVER COMMAND

GSM 900

HANDOVER COMMAND

Information Element	value/remark
As default message contents, except:	
Cell Description	
- Network Colour Code	1
- Base Station Colour Code	5
- BCCH Carrier Number	40
Channel Description 2	
- Channel type	00000
- Timeslot Number	A suitable value for multislot configuration, chosen arbitrarily.
- Training Sequence Code	Chosen arbitrarily.
- Hopping	Single RF Channel.
- ARFCN	40
Handover Reference	
- Value	Chosen arbitrarily from the range (0, 1..255).
Power command	
- Power Level	Arbitrarily chosen, but different to the one already in use and within the range supported by that type of MS.
Synchronization Indication	
- Report Observed Time Difference	Shall not be included.
- Synchronization Indication	"Synchronized".
- Normal Cell Indication	Ignore out of range timing advance.
Description of the multislot connection	
- Uplink assignment	If possible fewer timeslots are allocated than before HANDOVER COMMAND
- Downlink assignment	Less timeslots are allocated than before HANDOVER COMMAND
- Channel set X (1= X ≤8)	Appropriate for the test

HANDOVER ACCESS

Information Element	value/remark
As default message contents except:	
Handover Reference	
- Value	Same as HANDOVER COMMAND

DCS 1 800

HANDOVER COMMAND

Information Element	value/remark
As default message contents, except:	
Cell Description	
- Network Colour Code	1
- Base Station Colour Code	5
- BCCH Carrier Number	764
Channel Description 2	
- Channel type	00000
- Timeslot Number	A suitable value for multislot configuration, chosen arbitrarily.
- Training Sequence Code	Chosen arbitrarily.
- Hopping	Single RF Channel.
- ARFCN	764
Handover Reference	
- Value	Chosen arbitrarily from the range (0, 1..255).
Power command	
- Power Level	Arbitrarily chosen, but different to the one already in use and within the range supported by that type of MS.
Synchronization Indication	
- Report Observed Time Difference	Shall not be included.
- Synchronization Indication	"Synchronized".
- Normal Cell Indication	Ignore out of range timing advance.
Description of the multislot connection	
- Uplink assignment	Same as before HANDOVER COMMAND or less timeslots are allocated than before HANDOVER COMMAND
- Downlink assignment	Less timeslots are allocated than before HANDOVER COMMAND
- Channel set X (1=<X<=8)	Appropriate for the test

HANDOVER ACCESS

Information Element	value/remark
As default message contents except:	
Handover Reference	
- Value	Same as HANDOVER COMMAND

26.13.1.3.4 Multislot signalling / RR / Handover / successful / call under establishment / finely synchronized / relocation of channels

This test is applicable to all MS that supports multislot configuration.

26.13.1.3.4.1 Conformance requirements

- 1) The MS shall correctly apply the handover procedure from hopping, multislot configuration, finely synchronized case to hopping, multislot configuration, synchronized case during call establishment.
- 2) The MS shall not change number of channels in multislot configuration but the place of each channel is changed.
- 3) If during call establishment a Layer 3 MM or CC message just sent by the MS is not Layer 2 acknowledged before the channel change caused by the HANDOVER COMMAND message, the MS shall send the Layer 3 message to the new cell, using the same value in the N(SD) field, after the handover procedure.

References

Conformance requirements: GSM 04.08 sections 3.4.4 and 9.1.15, GSM 04.13 section 5.2.6.2

26.13.1.3.4.2 Test purpose

- 1) To test that when the MS is ordered to make a finely synchronized handover to a synchronized cell, it sends 4 access bursts on the main DCCH and then activates the channel correctly, taking into account power command, new order of channels in multislot configuration and correctly calculating the timing advance to use. Handover is done from hopping multislot configuration to hopping multislot configuration, number of channels in multislot configuration is not changed but the place of each channel is changed.
- 2) To test that MS correctly retransmits Layer 3 MM or CC messages, that were not acknowledged by Layer 2 before the Handover, after completion of the Handover.
- 3) To verify the MS transmits the HANDOVER COMPLETE message without undue delay.

26.13.1.3.4.3 Method of test

Initial Conditions

System Simulator:

- 2 cells, A and B, with same LAI, default parameters, except:
- Early classmark sending enabled in SI3 rest octets
- The BCCH of cell A is sent k bit periods before the BCCH of cell B. The timing advance in cell A sent to the MS is y bit periods. k and y are selected such that $0 < (2k + y) \bmod 256 < 60$.
- The frame numbers of cells A and B shall be different by 100.

GSM 450:

- Cell A has:
 - BCCH ARFCN = 263.
 - Cell Allocation = (259, 261, 263, 265, 267, 269, 271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291).
- Cell B has:
 - BCCH ARFCN = 274.
 - Cell Allocation = (260, 262, 264, 266, 268, 270, 272, 274, 276, 279, 281, 283, 285, 287, 289, 291).

GSM 480:

- Cell A has:
 - BCCH ARFCN = 310.
 - Cell Allocation = (306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338).
- Cell B has:
 - BCCH ARFCN = 321.
 - Cell Allocation = (307, 309, 311, 313, 315, 317, 319, 321, 323, 326, 328, 330, 332, 334, 336, 338).

GSM 900:

- Cell A has:
 - BCCH ARFCN = 20.

- Cell Allocation = (10, 17, 20, 26, 34, 42, 45, 46, 52, 59, 66, 73, 74, 75, 76, 108, 114).
- Cell B has:
 - BCCH ARFCN = 40.
 - Cell Allocation = (14, 18, 22, 24, 30, 31, 38, 40, 60, 66, 73, 74, 75, 76, 108, 114).

DCS 1 800:

- Cell A has:
 - BCCH ARFCN = 747.
 - Cell Allocation = (734, 741, 747, 754, 759, 762, 766, 767, 773, 775, 779, 782, 791, 798, 829, 832, 844).
- Cell B has:
 - BCCH ARFCN = 764.
 - Cell Allocation = (739, 743, 746, 749, 756, 758, 761, 764, 771, 779, 782, 791, 798, 829, 832, 844).

Mobile Station:

- The MS is in the "idle, updated" state, with a TMSI allocated and camped on cell A.

Related PICS/PIXT Statements

- Type of MS (GSM 450 or GSM 480 or P-GSM 900 or EGSM or DCS 1 800).
- Multislot class.
- Supported teleservices/bearer services
- Classmark

Foreseen Final State of the MS

"Idle, updated" with TMSI allocated and camped on cell B.

Test Procedure

A Mobile Originating Call is initiated on cell A. After the MS has sent the SETUP message (and before the last L2 frame carrying the SETUP message is acknowledged by the SS) the SS sends ASSIGNMENT COMMAND message to MS defining used multislot configuration. MS responds with ASSIGNMENT COMPLETE message. Then the SS sends a HANOVER COMMAND message, ordering the MS to switch to cell B. After the handover timeslots are relocated. Timeslots are also overlapped (this is described in specific message contents). The MS shall then send 4 access bursts, in successive slots on the new DCCH to cell B. Then the MS shall establish a signalling link indicating the correct timing advance and power level (number of channels in multislot configuration is not changed but the place of each channel is changed) and send a HANOVER COMPLETE message. The MS shall be "ready to transmit" the HANOVER COMPLETE message before 1500 ms after the end of the HANOVER COMMAND message, but not before a UA frame has been sent by the SS. The MS shall then again send the SETUP message to the SS, using the same value in the N(SD) field. Finally the SS sends a CHANNEL RELEASE to end the test.

The term "ready to transmit" is defined in GSM 04.13.

Maximum Duration of Test

5 minutes, including 1 minute for any necessary operator actions.

Expected Sequence

Step	Direction	Message	Comments
1	-----	-----	An MO call is initiated.
2	MS -> SS	CHANNEL REQUEST	Establish. Cause = "Originating call, NECI not set to 1"
3	SS -> MS	IMMEDIATE ASSIGNMENT	See Specific Message contents.
4	MS -> SS	CM SERVICE REQUEST	CM Service Type = Mobile Originating Call Establishment.
5	MS -> SS	CLASSMARK CHANGE	Multislot class
6	SS -> MS	AUTHENTICATION REQUEST	
7	MS -> SS	AUTHENTICATION RESPONSE	
8	SS -> MS	CIPHERING MODE COMMAND	
9	MS -> SS	CIPHERING MODE COMPLETE	
10	MS -> SS	SETUP	Last L2 frame not acknowledged by the SS.
11	SS -> MS	ASSIGNMENT COMMAND	Multislot configuration is sent to MS. See specific message contents below.
12	MS -> SS	ASSIGNMENT COMPLETE	
13	MS -> SS	SETUP	Last L2 frame not acknowledged by the SS. Same N(SD) as in step 8.
14	SS -> MS	HANDOVER COMMAND	See Specific Message Contents below.
15	MS -> SS	HANDOVER ACCESS	
16	MS -> SS	HANDOVER ACCESS	
17	MS -> SS	HANDOVER ACCESS	See Specific message contents.
18	MS -> SS	HANDOVER ACCESS	Four messages are transmitted to cell B in 4 successive slots on the new DCCH.
19	MS -> SS	SABM	Sent without information field.
20	SS -> MS	UA	
21	MS -> SS	HANDOVER COMPLETE	The message shall be ready to be transmitted before 1500 ms after the completion of step 12.
22	SS		The header of the next uplink SACCH/M is examined and the Timing Advance and Power Level indications are examined. The correct timing advance shall be indicated. The power level indication shall indicate the power level used in the handover command.
23	MS -> SS	SETUP	Same N(SD) as in step 8.
24	SS -> MS	CHANNEL RELEASE	The main signalling link is released.

Specific Message Contents

DCS 1 800:

ASSIGNMENT COMMAND

Information element	Value/remark
Channel description 2	describes hopping Bm+ACCHs or Lm+ACCHs as appropriate for the test
Power Command	As in section 26.1.1
Frequency list	Omitted
Cell channel description	Omitted
Description of the multislot configuration	
- Uplink assignment	Appropriate for the test
- Downlink assignment	Appropriate for the test
- Channel set X (1=<X<=8)	Appropriate for the test
Mode of the channel set X (1=<X<=8)	Appropriate for the test
Description of the second channel	Omitted
Mode of the second channel	Omitted
Mobile allocation	Arbitrarily chosen from Cell channel description
Starting time	Omitted
Cipher mode setting	Omitted

IMMEDIATE ASSIGNMENT

Information Element	value/remark
As default message contents except: Channel Description <ul style="list-style-type: none">- Channel Type- TDMA offset- Timeslot number- Training Sequence Code- Hopping- MAIO - HSN Mobile Allocation	Channel Description. SDCCH/8 As default message contents. Arbitrary value, but not zero. Chosen arbitrarily. RF hopping channel. Chosen arbitrarily from the set (0, 1 to N-1), where N is the number of frequencies encoded in the Mobile Allocation. Chosen arbitrarily from the set. (1,2,..63). Indicates all of the CA of cell A except for the BCCH frequency.

HANDOVER COMMAND

Information Element	value/remark
As default message contents except:	
Cell Description	
- Network Colour Code	1
- Base Station Colour Code	5
- BCCH Carrier Number	764
Channel Description 2	
- Channel Type	00000
- TDMA offset	Chosen arbitrarily.
- Timeslot number	A suitable value for multislot configuration, chosen arbitrarily.
- Training Sequence Code	Chosen arbitrarily.
- Hopping	RF hopping channel.
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1), where N is the number of frequencies encoded in the Frequency List IE.
- HSN	Zero (this gives cyclic hopping).
Handover Reference	
- Value	Chosen arbitrarily from the range (0, 1..255).
Power command	
- Power Level	Arbitrarily chosen, but different to the one already in use and within the range supported by the MS.
Synchronization Indication	
- Report Observed Time Difference	Shall not be included.
- Synchronization Indication	"Synchronized".
- Normal Cell Indication	Ignore out of range timing advance.
Frequency List after time	
- Frequency List	Use Range 512 to encode the complete CA of Cell B.
Description of the multislot configuration	
- Downlink assignment	For Type 1 MS timeslots are shifted one position to right if timeslot 7 is not used. If timeslot 7 is used then timeslots are shifted one position to left. For type 2 MS timeslots are shifted one position to right taking into account rules of multislot capability described in 05.02 Annex B.
- Uplink assignment	For Type 1 MS timeslots are shifted one position to right if timeslot 7 is not used. If timeslot 7 is used then timeslots are shifted one position to left. For type 2 MS timeslots are shifted one position to right taking into account rules of multislot capability described in 05.02 Annex B.
- Channel set X (1=<X<=8)	Appropriate for the test.

HANDOVER ACCESS

Information Element	value/remark
As default message contents except:	
Handover Reference	
- Value	Same as HANDOVER COMMAND

GSM 450:

ASSIGNMENT COMMAND

Information element	Value/remark
Channel description 2	describes hopping Bm+ACCHs or Lm+ACCHs as appropriate for the test
Power Command	As in section 26.1.1
Frequencylist	Omitted
Cell channel description	Omitted
Description of the multislot configuration	
- Uplink assignment	Appropriate for the test
- Downlink assignment	Appropriate for the test
- Channel set X (1= X ≤8)	Appropriate for the test
Mode of the channel set X (1= X ≤8)	Appropriate for the test
Description of the second channel	Omitted
Mode of the second channel	Omitted
Mobile allocation	Omitted
Starting time	Omitted
Cipher mode setting	Omitted

IMMEDIATE ASSIGNMENT

Information Element	value/remark
As default message contents except:	
Channel Description	Channel Description.
- Channel Type	SDCCH/8
- TDMA offset	As default message contents.
- Timeslot number	Arbitrary value, but not zero.
- Training Sequence Code	Chosen arbitrarily.
- Hopping	RF hopping channel.
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1), where N is the number of frequencies encoded in the Mobile Allocation.
- HSN	Chosen arbitrarily from the set (1,2,..63).
Mobile Allocation	Indicates all of the CA of cell A except for the BCCH frequency.

HANDOVER COMMAND

Information Element	value/remark
As default message contents except:	
Cell Description	
- Network Colour Code	1
- Base Station Colour Code	5
- BCCH Carrier Number	274
Channel Description 2	
- Channel Type	00000
- TDMA offset	Chosen arbitrarily.
- Timeslot number	A suitable value for multislot configuration, chosen arbitrarily.
- Training Sequence Code	Chosen arbitrarily.
- Hopping	RF hopping channel.
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1), where N is the number of frequencies encoded in the Frequency List IE.
- HSN	Zero (this gives cyclic hopping).
Handover Reference	
- Value	Chosen arbitrarily from the range (0, 1..255).
Power command	
- Power Level	Arbitrarily chosen, but different to the one already in use and within the range supported by the MS.
Synchronization Indication	
- Report Observed Time Difference	Shall not be included.
- Synchronization Indication	"Synchronized".
- Normal Cell Indication	Ignore out of range timing advance.
Frequency List after time	
- Frequency List	Use Range 512 to encode the complete CA of Cell B.
Description of the multislot configuration	
- Downlink assignment	For Type 1 MS timeslots are shifted one position to right if timeslot 7 is not used. If timeslot 7 is used then timeslots are shifted one position to left. For type 2 MS timeslots are shifted one position to right taking into account rules of multislot capability described in 05.02 Annex B.
- Uplink assignment	For Type 1 MS timeslots are shifted one position to right if timeslot 7 is not used. If timeslot 7 is used then timeslots are shifted one position to left. For type 2 MS timeslots are shifted one position to right taking into account rules of multislot capability described in 05.02 Annex B.
- Channel set X (1=<X<=8)	Appropriate for the test.

HANDOVER ACCESS

Information Element	value/remark
As default message contents except:	
Handover Reference	
- Value	Same as HANDOVER COMMAND

GSM 480:

ASSIGNMENT COMMAND

Information element	Value/remark
Channel description 2	describes hopping Bm+ACCHs or Lm+ACCHs as appropriate for the test
Power Command	As in section 26.1.1
Frequencylist	Omitted
Cell channel description	Omitted
Description of the multislot configuration	
- Uplink assignment	Appropriate for the test
- Downlink assignment	Appropriate for the test
- Channel set X (1=<X<=8)	Appropriate for the test
Mode of the channel set X (1=<X<=8)	Appropriate for the test
Description of the second channel	Omitted
Mode of the second channel	Omitted
Mobile allocation	Omitted
Starting time	Omitted
Cipher mode setting	Omitted

IMMEDIATE ASSIGNMENT

Information Element	value/remark
As default message contents except:	
Channel Description	Channel Description.
- Channel Type	SDCCH/8
- TDMA offset	As default message contents.
- Timeslot number	Arbitrary value, but not zero.
- Training Sequence Code	Chosen arbitrarily.
- Hopping	RF hopping channel.
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1), where N is the number of frequencies encoded in the Mobile Allocation.
- HSN	Chosen arbitrarily from the set (1,2,..63).
Mobile Allocation	Indicates all of the CA of cell A except for the BCCH frequency.

HANDOVER COMMAND

Information Element	value/remark
As default message contents except:	
Cell Description	
- Network Colour Code	1
- Base Station Colour Code	5
- BCCH Carrier Number	321
Channel Description 2	
- Channel Type	00000
- TDMA offset	Chosen arbitrarily.
- Timeslot number	A suitable value for multislot configuration, chosen arbitrarily.
- Training Sequence Code	Chosen arbitrarily.
- Hopping	RF hopping channel.
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1), where N is the number of frequencies encoded in the Frequency List IE.
- HSN	Zero (this gives cyclic hopping).
Handover Reference	
- Value	Chosen arbitrarily from the range (0, 1..255).
Power command	
- Power Level	Arbitrarily chosen, but different to the one already in use and within the range supported by the MS.
Synchronization Indication	
- Report Observed Time Difference	Shall not be included.
- Synchronization Indication	"Synchronized".
- Normal Cell Indication	Ignore out of range timing advance.
Frequency List after time	
- Frequency List	Use Range 512 to encode the complete CA of Cell B.
Description of the multislot configuration	
- Downlink assignment	For Type 1 MS timeslots are shifted one position to right if timeslot 7 is not used. If timeslot 7 is used then timeslots are shifted one position to left. For type 2 MS timeslots are shifted one position to right taking into account rules of multislot capability described in 05.02 Annex B.
- Uplink assignment	For Type 1 MS timeslots are shifted one position to right if timeslot 7 is not used. If timeslot 7 is used then timeslots are shifted one position to left. For type 2 MS timeslots are shifted one position to right taking into account rules of multislot capability described in 05.02 Annex B.
- Channel set X (1=<X<=8)	Appropriate for the test.

HANDOVER ACCESS

Information Element	value/remark
As default message contents except:	
Handover Reference	
- Value	Same as HANDOVER COMMAND

GSM 900:

ASSIGNMENT COMMAND

Information element	Value/remark
Channel description 2	describes hopping Bm+ACCHs or Lm+ACCHs as appropriate for the test
Power Command	As in section 26.1.1
Frequencylist	Omitted
Cell channel description	Omitted
Description of the multislot configuration	
- Uplink assignment	Appropriate for the test
- Downlink assignment	Appropriate for the test
- Channel set X (1=<X<=8)	Appropriate for the test
Mode of the channel set X (1=<X<=8)	Appropriate for the test
Description of the second channel	Omitted
Mode of the second channel	Omitted
Mobile allocation	Arbitrarily chosen from Cell channel description
Starting time	Omitted
Cipher mode setting	Omitted

IMMEDIATE ASSIGNMENT

Information Element	value/remark
As default message contents except:	
Channel Description	Channel Description.
- Channel Type	SDCCH/8
- TDMA offset	As default message contents.
- Timeslot number	Arbitrary value, but not zero.
- Training Sequence Code	Chosen arbitrarily.
- Hopping	RF hopping channel.
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1), where N is the number of frequencies encoded in the Mobile Allocation.
- HSN	Chosen arbitrarily from the set (1,2,..63).
Mobile Allocation	Indicates all of the CA of cell A except for the BCCH frequency.

HANDOVER COMMAND

Information Element	value/remark
As default message contents except:	
Cell Description	
- Network Colour Code	1
- Base Station Colour Code	5
- BCCH Carrier Number	40
Channel Description 2	
- Channel Type	00000
- TDMA offset	Chosen arbitrarily.
- Timeslot number	A suitable value for multislot configuration, chosen arbitrarily.
- Training Sequence Code	Chosen arbitrarily.
- Hopping	RF hopping channel.
- MAIO	Chosen arbitrarily from the set (0, 1 to N-1), where N is the number of frequencies encoded in the Frequency List IE.
- HSN	Zero (this gives cyclic hopping).
Handover Reference	
- Value	Chosen arbitrarily from the range (0, 1..255).
Power command	
- Power Level	Arbitrarily chosen, but different to the one already in use and within the range supported by the MS.
Synchronization Indication	
- Report Observed Time Difference	Shall not be included.
- Synchronization Indication	"Synchronized".
- Normal Cell Indication	Ignore out of range timing advance.
Frequency List after time	
- Frequency List	Use Range 512 to encode the complete CA of Cell B.
Description of the multislot configuration	
- Downlink assignment	For Type 1 MS timeslots are shifted one position to right if timeslot 7 is not used. If timeslot 7 is used then timeslots are shifted one position to left. For type 2 MS timeslots are shifted one position to right taking into account rules of multislot capability described in 05.02 Annex B.
- Uplink assignment	For Type 1 MS timeslots are shifted one position to right if timeslot 7 is not used. If timeslot 7 is used then timeslots are shifted one position to left. For type 2 MS timeslots are shifted one position to right taking into account rules of multislot capability described in 05.02 Annex B.
- Channel set X (1=<X<=8)	Appropriate for the test.

HANDOVER ACCESS

Information Element	value/remark
As default message contents except:	
Handover Reference	
- Value	Same as HANDOVER COMMAND

26.13.1.3.5 Multislot signalling / RR /Handover / successful / call under establishment / pre-synchronized / resource upgrading

If an MS does not implement the pre-synchronized handover procedure correctly then calls may fail.

If an MS does not report the observed time difference between cells correctly then pseudo synchronized handovers might not be possible for any MS.

This test is applicable to all MS that supports multislot configuration.

26.13.1.3.5.1 Conformance requirements

- 1) If during call establishment a Layer 3 MM or CC message just sent by the MS is not Layer 2 acknowledged before the channel change caused by the HANOVER COMMAND message, the MS shall send the Layer 3 message to the new cell, using the same value in the N(SD) field, after the handover procedure.
- 2) When the Timing Advance information element is included in the HANOVER COMMAND, the MS shall access the new cell with the timing advance included in the Timing Advance IE.
- 3) The MS shall be ready to transmit the HANOVER COMPLETE message within 650 ms of the end of the HANOVER COMMAND message.
- 4) When requested to do so in the HANOVER COMMAND message, the MS shall return the Mobile Time Difference IE in the HANOVER COMPLETE message indicating the sum of the observed time difference between the cells and the timing advance used on the old cell.

References

Conformance requirement 1: GSM 04.08, sections 3.1.4.3 and 9.1.5.

Conformance requirement 2: GSM 05.10, section 6.6, GSM 04.08 section 9.1.16.

Conformance requirement 3: GSM 04.13, section 5.2.6.1.

Conformance requirement 4: GSM 04.08, section 10.5.2.39.

26.13.1.3.5.2 Test purpose

- 1) To verify that when the MS is ordered to make a pre-synchronized handover from hopping multislot configuration to non-hopping multislot configuration, it sends 4 access bursts on the main DCCH and then activates the channel correctly and correctly calculates the time to transmit.
- 2) To test that the MS activates the new channels that belong to same multislot configuration correctly, taking into account upgraded resources and transmits the HANOVER COMPLETE message without undue delay.

26.13.1.3.5.3 Method of test

Initial Conditions

System Simulator:

- 2 cells, A and B, with same LAI, default parameters, except:
- Early classmark sending enabled in SI3 rest octets
- The BCCH of cell A is sent k bit periods before the BCCH of cell B.

Mobile Station:

- The MS is in the "idle, updated" state, with a TMSI allocated and camped on cell A.

Related PICS/PIXIT Statements

- Type of MS (GSM 450 or GSM 480 or P-GSM 900 or EGSM or DCS 1 800).
- Multislot class
- Classmark

Foreseen Final State of the MS

"Idle, updated" with TMSI allocated and camped on cell B.

Test Procedure

A Mobile Originating Call is initiated. The SS sends an IMMEDIATE ASSIGNMENT message allocating an SDCCH/4. The MS is commanded to use a timing advance of y bit periods on cell A. After the MS has sent the SETUP message (and before the last L2 frame carrying the SETUP message is acknowledged by the SS) the SS sends ASSIGNMENT COMMAND message to MS specifying used multislot configuration. MS responds by sending ASSIGNMENT COMPLETE message to SS. Then the SS sends a HANDOVER COMMAND, ordering the MS to switch to cell B. The MS shall then send 4 access bursts, at the commanded power level, in 4 successive slots of the new DCCH to cell B. Then the MS shall establish a signalling link using the correct timing advance and send a HANDOVER COMPLETE message. The MS shall be ready to transmit the HANDOVER COMPLETE message before 650 ms after the end of the HANDOVER COMMAND message, but not before a UA frame has been sent by the SS.

The term "ready to transmit" is defined in GSM 04.13.

The MS shall then again send the SETUP message to the SS, using the same value in the N(SD) field. Finally the SS sends a CHANNEL RELEASE to end the test.

Maximum Duration of Test

20 seconds.

Expected Sequence

Step	Direction	Message	Comments
1	-----	-----	An MO call is initiated.
2	MS -> SS	CHANNEL REQUEST	
3	SS -> MS	IMMEDIATE ASSIGNMENT	to an SDCCH/4.
4	MS -> SS	CM SERVICE REQUEST	
5	MS -> SS	CLASSMARK CHANGE	Multislot class
6	SS -> MS	AUTHENTICATION REQUEST	
7	MS -> SS	AUTHENTICATION RESPONSE	
8	SS -> MS	CIPHERING MODE COMMAND	
9	MS -> SS	CIPHERING MODE COMPLETE	
10	MS -> SS	SETUP	Last L2 frame not acknowledged by the SS.
11	SS -> MS	ASSIGNMENT COMMAND	Multislot configuration is sent to MS. Multislot configuration shall not have the maximum number of timeslots allocated. See specific message contents below.
12	MS -> SS	ASSIGNMENT COMPLETE	
13	MS -> SS	SETUP	Last L2 frame not acknowledged by the SS. Same N(SD) as in step 10.
14	SS -> MS	HANDOVER COMMAND	See specific message contents below.
15	MS -> SS	HANDOVER ACCESS	Handover Reference as included in the
16	MS -> SS	HANDOVER ACCESS	HANDOVER COMMAND
17	MS -> SS	HANDOVER ACCESS	
18	MS -> SS	HANDOVER ACCESS	
19	MS -> SS	SABM	Sent without information field.
20	SS -> MS	UA	
21	MS -> SS	HANDOVER COMPLETE	This message shall be ready to be transmitted before 650 ms after the completion of step 14. Shall include the Mobile Time Difference IE with value $(2k+y) \bmod 2,097,152$ half bit periods. A tolerance of ± 2 half bit periods is allowed.
22	MS -> SS	SETUP	Same N(SD) as in step 10
23	SS	-	The SS checks that the timing advance reported in the layer 1 header of the SACCH/M message that is sent in the first SACCH/M multiframe following the SABM is 9 bit periods.
24	SS -> MS	CHANNEL RELEASE	The main signalling link is released.

Specific Message Contents

GSM 450

ASSIGNMENT COMMAND

Information element	Value/remark
Channel description 2	describes hopping Bm+ACCHs or Lm+ACCHs as appropriate for the test
Power Command	As in section 26.1.1
Frequency list	Omitted
Cell channel description	Omitted
Description of the multislot configuration	
- Uplink assignment	Appropriate for the test, shall not be the maximum number of timeslots.
- Downlink assignment	Appropriate for the test, but shall not be the maximum number of timeslots.
- Channel set X (1=<X<=8)	Appropriate for the test
Mode of the channel set X (1=<X<=8)	Appropriate for the test
Description of the second channel	Omitted
Mode of the second channel	Omitted
Mobile allocation	Arbitrarily chosen from Cell channel description
Starting time	Omitted
Cipher mode setting	Omitted

HANDOVER COMMAND

Information Element	value/remarks
As default message contents, except:	
Cell Description	
- Network Colour Code	1
- Base Station Colour Code	5
- BCCH Carrier Number	274
Channel Description 2	
- Channel Type	00000
- Timeslot number	A suitable value for multislot configuration, chosen arbitrarily.
- Training Sequence Code	Chosen arbitrarily
- Hopping	0 (= no hopping)
- ARFCN	Chosen arbitrarily
Synchronization Indication.	pre-synchronized; ROT=1; NCI=0.
Channel Mode IE is not included.	
Description of a multislot configuration:	
- Downlink assignment	More timeslots are allocated than before HANDOVER COMMAND
- Uplink assignment	Same as before HANDOVER COMMAND
- Channel set X (1=<x<=8)	Same as before HANDOVER COMMAND
Timing Advance	9 bit periods.

GSM 480

ASSIGNMENT COMMAND

Information element	Value/remark
Channel description 2	describes hopping Bm+ACCHs or Lm+ACCHs as appropriate for the test
Power Command	As in section 26.1.1
Frequencylist	Omitted
Cell channel description	Omitted
Description of the multislot configuration	
- Uplink assignment	Appropriate for the test, shall not be the maximum number of timeslots.
- Downlink assignment	Appropriate for the test, but shall not be the maximum number of timeslots.
- Channel set X (1=<X<=8)	Appropriate for the test
Mode of the channel set X (1=<X<=8)	Appropriate for the test
Description of the second channel	Omitted
Mode of the second channel	Omitted
Mobile allocation	Arbitrarily chosen from Cell channel description
Starting time	Omitted
Cipher mode setting	Omitted

HANDOVER COMMAND

Information Element	value/remarks
As default message contents, except:	
Cell Description	
- Network Colour Code	1
- Base Station Colour Code	5
- BCCH Carrier Number	321
Channel Description 2	
- Channel Type	00000
- Timeslot number	A suitable value for multislot configuration, chosen arbitrarily.
- Training Sequence Code	Chosen arbitrarily
- Hopping	0 (= no hopping)
- ARFCN	Chosen arbitrarily
Synchronization Indication.	pre-synchronized; ROT=1; NCI=0.
Channel Mode IE is not included.	
Description of a multislot configuration:	
- Downlink assignment	More timeslots are allocated than before HANDOVER COMMAND
- Uplink assignment	Same as before HANDOVER COMMAND
- Channel set X (1=<x<=8)	Same as before HANDOVER COMMAND
Timing Advance	9 bit periods.

P-GSM 900

ASSIGNMENT COMMAND

Information element	Value/remark
Channel description 2	describes hopping Bm+ACCHs or Lm+ACCHs as appropriate for the test
Power Command	As in section 26.1.1
Frequencylist	Omitted
Cell channel description	Omitted
Description of the multislot configuration	
- Uplink assignment	Appropriate for the test, shall not be the maximum number of timeslots.
- Downlink assignment	Appropriate for the test, but shall not be the maximum number of timeslots.
- Channel set X (1=<X<=8)	Appropriate for the test
Mode of the channel set X (1=<X<=8)	Appropriate for the test
Description of the second channel	Omitted
Mode of the second channel	Omitted
Mobile allocation	Arbitrarily chosen from Cell channel description
Starting time	Omitted
Cipher mode setting	Omitted

HANDOVER COMMAND

Information Element	value/remarks
As default message contents, except:	
Cell Description	
- Network Colour Code	1
- Base Station Colour Code	5
- BCCH Carrier Number	40
Channel Description 2	
- Channel Type	00000
- Timeslot number	A suitable value for multislot configuration, chosen arbitrarily.
- Training Sequence Code	Chosen arbitrarily
- Hopping	0 (= no hopping)
- ARFCN	Chosen arbitrarily
Synchronization Indication.	pre-synchronized; ROT=1; NCI=0.
Channel Mode IE is not included.	
Description of a multislot configuration:	
- Downlink assignment	More timeslots are allocated than before HANDOVER COMMAND
- Uplink assignment	Same as before HANDOVER COMMAND
- Channel set X (1=<x<=8)	Same as before HANDOVER COMMAND
Timing Advance	9 bit periods.

DCS 1 800

ASSIGNMENT COMMAND

Information element	Value/remark
Channel description 2	describes hopping Bm+ACCHs or Lm+ACCHs as appropriate for the test
Power Command	As in section 26.1.1
Frequencylist	Omitted
Cell channel description	Omitted
Description of the multislot configuration	
- Uplink assignment	Appropriate for the test, but shall not be the maximum number of timeslots.
- Downlink assignment	Appropriate for the test, but shall not be the maximum number of timeslots.
- Channel set X (1=<X<=8)	Appropriate for the test
Mode of the channel set X (1=<X<=8)	Appropriate for the test
Description of the second channel	Omitted
Mode of the second channel	Omitted
Mobile allocation	Arbitrarily chosen from Cell channel description
Starting time	Omitted
Cipher mode setting	Omitted

HANDOVER COMMAND

Information Element	value/remarks
As default message contents, except:	
Cell Description	
- Network Colour Code	1
- Base Station Colour Code	5
- BCCH Carrier Number	764
Channel Description 2	
- Channel Type	00000
- Timeslot number	A suitable value for multislot configuration, chosen arbitrarily.
- Training Sequence Code	Chosen arbitrarily
- Hopping	0 (= no hopping)
- ARFCN	Chosen arbitrarily
Synchronization Indication.	pre-synchronized; ROT=1; NCI=0.
Channel Mode IE is not included.	
Description of a multislot configuration:	
- Downlink assignment	More timeslots are allocated than before HANDOVER COMMAND
- Uplink assignment	Same as before HANDOVER COMMAND
- Channel set X (1=<x<=8)	Same as before HANDOVER COMMAND
Timing Advance	9 bit periods.

26.13.1.4 Multislot signalling / RR / Test of the channel mode modify procedure

This test is applicable to all MS that supports multislot configuration.

26.13.1.4.1 Conformance requirements

- 1) When the MS has received the CHANNEL MODE MODIFY message, the mobile station changes the mode for the indicated channel and then replies by a CHANNEL MODE MODIFY ACKNOWLEDGE message indicating the new channel mode.

- 2) If the mobile station does not support the indicated mode, it shall retain the old mode and return the associated channel mode information in the CHANNEL MODE MODIFY ACKNOWLEDGE message.

References

Conformance requirement: GSM 04.08, sections 3.4.6 and 9.1.5 and 9.1.6

26.13.1.4.2 Test purpose

- 1) To verify that the MS, in an RR connected state, acknowledges a CHANNEL MODE MODIFY message by sending a CHANNEL MODE MODIFY ACKNOWLEDGEMENT message specifying and switching to the correct mode for the channels in a multislot configuration
 - the new mode if that mode is supported
 - the old mode if the new mode is not supported.
- 2) This shall be verified for all existing channel modes
 - data 9.6 Kb/s
 - data 4.8 Kb/s full rate
 - data 14.4 Kb/s

26.13.1.4.3 Method of test

Initial Conditions

System Simulator:

- 1 cells, default parameters except:
- Early classmark sending enabled in SI3 rest octets

Mobile Station:

- The MS is "idle updated", with TMSI allocated.

Related PICS/PIXIT statement(s)

- Type of MS (GSM 450 or GSM 480 or P-GSM 900 or EGSM or DCS 1 800).
- Supported tesleservices/bearer services
- Channel modes supported by the MS:
 - MS supports data 9,6 Kb/s (p1 = Y/N)
 - MS supports data 4,8 Kb/s full rate (p2 = Y/N)
 - MS supports data 14.4 Kb/s (p3 = Y/N)
- Multislot class
- Classmark

Foreseen final state of the MS

“Idle, updated “ with TMSI allocated.

Test procedure

- 1) A Mobile Terminated multislot connection is initiated, however following the Channel Request received from the Mobile Station, the SS sends an Immediate Assignment to the MS commanding it to go to a TCH/F. This sets the Channel Mode automatically to "Signalling Only".
- 2) The SS then sends a series of CHANNEL MODE MODIFY messages to the MS. Each time it is checked that the MS responds with a CHANNEL MODE MODIFY ACKNOWLEDGE message specifying:
 - 2.1) the channel mode that has been specified in the CHANNEL MODE MODIFY message, if the MS supports that mode (this mode then becomes the "channel mode in use");
 - 2.2) the channel mode that was in use when the CHANNEL MODE MODIFY message has been received, if the MS does not support the channel mode specified in the CHANNEL MODE MODIFY message.

Maximum duration of test

3 minutes.

Expected Sequence

Step	Direction	Message	Comments
1	SS->MS	PAGING REQUEST TYPE 1	Sent on correct paging subchannel.
2	MS->SS	CHANNEL REQUEST	Establishment cause indicates "answer to paging".
3	SS->MS	IMMEDIATE ASSIGNMENT	Assignment to a non hopping TCH/F.
4	MS->SS	PAGING RESPONSE	
5	MS->SS	CLASSMARK CHANGE	Multislot class
6	SS->MS	ASSIGNMENT COMMAND	Multislot configuration, Channel mode = 'signalling only'
7	MS->SS	ASSIGNMENT COMPLETE	
8	SS->MS	CHANNEL MODE MODIFY	See specific message contents
9	MS->SS	CHANNEL MODE MODIFY ACKNOWLEDGE	See specific message contents
10	SS->MS	CHANNEL MODE MODIFY	See specific message contents
11	MS->SS	CHANNEL MODE MODIFY ACKNOWLEDGE	See specific message contents
12	SS->MS	CHANNEL MODE MODIFY	See specific message contents
13	MS->SS	CHANNEL MODE MODIFY ACKNOWLEDGE	See specific message contents
14	SS->MS	CHANNEL RELEASE	The main signalling link is released

Specific Message Contents

CHANNEL MODE MODIFY

Information Element	value/remark
Channel description	describes the already assigned dedicated channel.
Channel mode	
Mode	in step 8: data 9,6 Kb/s in step 10: data 4,8 Kb/s full rate in step 12: data 14,4 Kb/s

CHANNEL MODE MODIFY ACKNOWLEDGE

Channel mode Mode	in step 9: if p1 = Y: data 9,6 Kb/s if p1 = N: signalling only in step 11: if p2 = Y: data 4,8 Kb/s full rate if p2 = N: same as in step 9 in step 13: if p3 = Y: data 14,4 Kb/s full rate if p2 = N: same as in step 11
----------------------	---

26.13.1.5 Multislot signalling / RR / Early classmark sending

This test is applicable to all MS that supports multislot configuration.

26.13.1.5.1 Conformance requirement

- 1) MS uses Controlled Early Classmark Sending procedure when indicated in SYSTEM INFORMATION TYPE 3 (ES ind bit in SI 3 Rest Octets).
 - 1.1) If Controlled Early Classmark Sending is not allowed by network the MS does not send a CLASSMARK CHANGE message.
 - 1.2) If Controlled Early Classmark Sending is allowed by network the MS shall send its multislot class in Mobile Station Classmark 3 in a CLASSMARK CHANGE message.

Reference

Conformance requirement 1: GSM 04.08 sections 3.3.1.1.4 and 3.4.10

26.13.1.5.2 Test purpose

- 1) To verify that the MS sends its multislot class in Mobile Station Classmark 3 using Controlled Early Classmark Sending procedure if allowed by network
- 2) To verify that the MS does not perform Early Classmark Sending if it is not allowed

26.13.1.5.3 Method of test

Initial conditions

Mobile Station:

- The MS is in MM-state "idle, updated" with valid TMSI and CKSN.

System Simulator:

- 1 cell, default parameters except:
- Early classmark sending enabled in SI3 rest octets

Related PICS/PIXIT statement(s)

- Classmark
- Multislot class

Foreseen final state of the MS

MS is in MM-state "idle, updated" with valid TMSI and CKSN.

Test procedure

The MS is made to initiate a multislot connection. In the first case Controlled Early Classmark Sending procedure is allowed by network, the MS performs Early Classmark sending. In the second case Controlled Early Classmark Sending procedure is not allowed by network, the MS does not send a CLASSMARK CHANGE message.

SS checks Controlled Early Classmark Change procedure from CLASSMARK CHANGE message. If Controlled Early Classmark Sending procedure is allowed by the network ES ind bit in SI 3 Resr Octets is set. If this bit is not set SS sends CHANNEL RELEASE and the main signalling link is released. If ES ind bit was set then the MS's multislot class is sent in Mobile Station Classmark 3 (octet 4) in the CLASSMARK CHANGE message.

Maximum duration of test

2 minutes

Expected sequence

This test is executed with the following sequences in allowed and not allowed cases respectively.

After the first sequence Early classmark sending is disabled from SI3 rest octets.

Step	Direction	Message	Comments
	SS		Controlled Early Classmark Sending procedure is allowed by the network.
1	SS -> MS	PAGING REQUEST TYPE 1	Sent on the correct paging subchannel. Establishment cause is: answer to paging Message is contained in SABM. SS checks that MS sent its multislot class in Mobile Station Classmark 3.
2	MS -> SS	CHANNEL REQUEST	
3	SS -> MS	IMMEDIATE ASSIGNMENT	
4	MS -> SS	PAGING RESPONSE	
5	MS -> SS	CLASSMARK CHANGE	
7	SS -> MS	CHANNEL RELEASE	The main signalling link is released

Step	Direction	Message	Comments
	SS		Controlled Early Classmark Sending procedure is not allowed by the network.
1	SS -> MS	PAGING REQUEST TYPE 1	Sent on the correct paging subchannel. Establishment cause is: answer to paging Message is contained in SABM SS checks for 2 seconds that no CLASSMARK CHANGE message is sent by the MS.
2	MS -> SS	CHANNEL REQUEST	
3	SS -> MS	IMMEDIATE ASSIGNMENT	
4	MS -> SS	PAGING RESPONSE	
5	SS		
6	SS -> MS	CHANNEL RELEASE	The main signalling link is released.

NOTE: Step 5: GSM 04.08 section 3.3.1.1.4.1 states that the MS shall send CLASSMARK CHANGE as early as possible. 2 seconds are chosen as a reasonable value to verify that the MS does not send a CLASSMARK CHANGE message.

26.13.1.6 Default contents of layer 3 messages for RR tests

26.13.1.6.1 Default contents of GSM 900 layer 3 messages for RR tests

This section contains the default values of GSM 900 L3 messages, which unless indicated otherwise in section 26.13 shall be transmitted by the system simulator and which are required to be received from the GSM 900 MS under test.

The necessary L3 messages are listed in alphabetic order, with the exception of the SYSTEM INFORMATION messages, where it is the information elements that are listed in alphabetic order (this is because some information elements occur in several SYSTEM INFORMATION types).

In this section, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "H", or a binary value, indicated by a "B" is used.

Default SYSTEM INFORMATION:

NOTE 1: SYSTEM INFORMATION 2 bis, SYSTEM INFORMATION 5 bis, SYSTEM INFORMATION 7, and SYSTEM INFORMATION 8 messages are not used.

Cell A

Contents of information elements in SYSTEM INFORMATION TYPE 1 to 6 messages for cell A.

(CBCH) Channel Description	Not present.
(CBCH) Mobile Allocation	Not present.
Cell Channel Description	
- Format identifier	bit map 0.
- Cell Allocation ARFCN	Channels 20, 30, 50 and 70.
Cell Identity	
- Cell Identity Value	0001H
Cell Options	
- Power Control Indicator	Power Control Indicator is not set.
- DTX Indicator	MS shall not use DTX.
- Radio_Link_Timeout	8 SACCH blocks.
Cell Selection Parameters	
- Cell_Reselect_Hysteresis	12 dB.
- MX_TXPWR_MAX_CCH	Minimum level.
- ACS	No addition cell parameters are present in SYSTEM INFORMATION messages 7 and 8.
- NECI	New establishment causes not supported.
- RXLEV_ACCESS_MIN	Minimum level.
Control Channel Description	
- Attach-Detach allowed	No Attach/Detach.
- BS_AG_BLK_RES	0 blocks reserved for access grant.
- CCCH_CONF	1 basic physical channel used for CCCH, combined with SDCCHs.
- BS_PA_MFRMS	5 multiframe periods for transmission of paging messages.
- T3212 Time-out value	Infinite.
L2 pseudo length	
- System information 1	21
- System information 2	22
- System information 3	18
- System information 4	12
Location Area Identification	
- Mobile Country Code	001 decimal
- Mobile Network Code	01 decimal
- Location Area Code	0001H
Message Type	
- System information 1	00011001
- System information 2	00011010
- System information 3	00011011
- System information 4	00011100
- System information 5	00011101
- System information 6	00011110
Neighbour Cells Description	
- Format identifier	bit map 0.
- BCCH Allocation Sequence	0
- BCCH Allocation ARFCN	Channels 10, 20, 40, 80, 90, 100, 110 and 120.
- EXT-IND	This IE carries the complete BA.
NCC Permitted	0000 0010
RACH Control Parameters	
- Max Retrans	Max 1 retrans.
- Tx-integer	5 slots used.
- Cell Barred for Access	Cell is not barred.
- Call Reestablishment Allowed	Not allowed.
- Access Control Class	Access is not barred.
- Emergency Call allowed	Yes.
SI 1 rest octets	Not used (all bits are set to spare).
SI 2 rest octets	Not used (all bits are set to spare).
SI 3 rest octets	Not used (all bits are set to spare).
SI 4 rest octets	Not used (all bits are set to spare).

Default settings for cell A:

Downlink input level	63 dBmicroVolt emf.
Uplink output power	minimum supported by the MS's power class.
Propagation profile	static.
BCCH/CCCH carrier number	20

Cell B

The contents of SYSTEM INFORMATION TYPE 1 to 6 messages for cell B are identical to those of cell A with the following exceptions:

Cell Channel Description - Format Identifier - Cell Allocation ARFCN	Bit map 0. Channel Number 10.
--	----------------------------------

NOTE 2: This IE needs modification when used in handover tests that command the MS to go to a frequency hopping channel in cell B.

Cell Identity

- Cell Identity Value 0002H

Default settings for cell B:

Downlink input level	53 dBmicroVolt emf.
Uplink output power	minimum supported by the MS's power class.
Propagation profile	static.
BCCH/CCCH carrier number	10

Contents of ALERTING message (SS to MS):

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	As used in the SETUP message.
TI flag	1 (destination side).
Message Type	00000001
All other information elements	Not present.

Contents of ASSIGNMENT COMMAND message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101110
Channel Description 2	
- Channel Type and TDMA offset	Bm + ACCHs
- Timeslot Number	Chosen arbitrarily by the test house.
- Training Sequence Code	Chosen arbitrarily by the test house.
- Hopping	Single RF channel.
- ARFCN	Channel number 30.
Power Command	
- Power level	Chosen arbitrarily by the test house.
Multislot allocation	
- Downlink assignment	Appropriate for the test
- Uplink assignment	Appropriate for the test
- Channel set 1=<X<=8	Appropriate for the test
Channel mode	Appropriate for the test

Contents of ASSIGNMENT COMPLETE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101001
RR Cause	
- RR Cause Value	Normal event.

Contents of ASSIGNMENT FAILURE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101111
RR Cause	
- RR Cause Value	Depending on test.

Contents of AUTHENTICATION REQUEST message:

Protocol Discriminator	MM message.
Skip Indicator	0000
Message Type	00010010
Ciphering Key Sequence Number	
- Key Sequence	Chosen arbitrarily by the test house from the range 0 to 6.
Authentication Parameter RAND	
- RAND value	Chosen arbitrarily by the test house.

Contents of AUTHENTICATION RESPONSE message:

Protocol Discriminator	MM message.
Skip Indicator	0000
Message Type	0X010100
Other information element(s)	Not checked.

Contents of CALL PROCEEDING message:

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	As used in the SETUP message.
TI flag	1 (destination side).
Message Type	00000010
All other information elements	Not present.

Contents of CHANNEL MODE MODIFY message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00010000
Channel Description 2	
- Channel Type and TDMA offset	Depending on test.
- Timeslot Number	Chosen arbitrarily by the test house.
- Training Sequence Code	Chosen arbitrarily by the test house.
- Hopping	Single RF channel.
- ARFCN	Channel number 30.
Channel Mode	
- Mode	Depending on test.

Contents of CHANNEL MODE MODIFY ACKNOWLEDGE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00010111
Channel Description 2	
- Channel Type and TDMA offset	Depending on test.
- Timeslot Number	Same as in the CHANNEL MODE MODIFY message.
- Training Sequence Code	Same as in the CHANNEL MODE MODIFY message.
- Hopping	Single RF channel.
- Frequency Band	Band number 0.
- ARFCN	Channel number 30.
Channel Mode	
- Mode	Same as in the CHANNEL MODE MODIFY message.

Contents of CHANNEL RELEASE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00001101
RR Cause	
- RR Cause Value	Normal event.

Contents of CHANNEL REQUEST message

Establishment Cause	Not checked.
Random Reference	Not checked.

Contents of CIPHERING MODE COMMAND message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00110101
Cipher Mode Setting	
- algorithm identifier	cipher with A5/1.
- SC	Start ciphering.
Cipher Response	IMEI shall not be included.

Contents of CIPHERING MODE COMPLETE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00110010
Mobile Identity	Not present.

Contents of the CLASSMARK CHANGE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	000100110
Mobile Station Classmark 2	See PICS/PIXIT.
Mobile Station Classmark 3	For presence and contents see PICS/PIXIT.

Contents of CM SERVICE ACCEPT message:

Protocol Discriminator	Mobility Management.
Skip Indicator	0000
Message Type	00100001

Contents of CM SERVICE REQUEST message

Protocol Discriminator	Mobility Management.
Skip Indicator	0000
Message Type	0X100100
Other information elements	Not checked.

Contents of CONFIGURATION CHANGE COMMAND message (SS to MS)

Protocol Discriminator	Radio Resource
Skip Indicator	0000
Message type	00110000
Multislot allocation	Appropriate for the test
- Downlink assignment	Appropriate for the test
- Uplink assignment	Appropriate for the test
- Channel set 1= $X \leq 8$	Appropriate for the test
Channel mode 1= $X \leq 8$	Appropriate for the test

Contents of CONFIGURATION CHANGE ACKNOWLEDGE message (MS to SS)

Protocol Discriminator	Radio Resource
Skip Indicator	0000
Message type	00110001

Contents of CONFIGURATION CHANGE REJECT message (MS to SS)

Protocol Discriminator	Radio Resource
Skip Indicator	0000
Message type	00110011
RR Cause	Protocol Error Unspecified

Contents of CONNECT message (SS to MS)

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	As used in the SETUP message.
TI flag	1
Message Type	00000111
All other information elements	Not present.

Contents of CONNECT ACKNOWLEDGE message (MS to SS)

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	As used in the SETUP message.
TI flag	0
Message Type	0X001111

Contents of HANDOVER ACCESS message:

Handover Reference	Equal to the value included in the Handover Command message.
--------------------	--

Contents of HANDOVER COMMAND message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101011
Cell Description	
- Network Colour Code	1
- Base station Colour Code	Corresponding to target cell
- BCCH Carrier Number	Set to the BCCH carrier number of cell B. (one of 10, 20, 80, 90, 100, 110 or 120).
Channel Description 2	
- Channel Type and TDMA offset	Bm + ACCHs.
- Timeslot Number	Chosen arbitrarily by the test house.
- Training Sequence Code	Chosen arbitrarily by the test house.
- Hopping	Single RF channel.
- ARFCN	Chosen arbitrarily by the test house from those supported on the target cell.
Handover Reference	
- Handover Reference Value	Chosen arbitrarily by the test house.
Power Command	
- Power level	Chosen arbitrarily by the test house.
Multislot allocation	
- Downlink assignment	Appropriate for the test
- Uplink assignment	Appropriate for the test
- Channel set 1= $X \leq 8$	Appropriate for the test
Channel mode	Appropriate for the test

Contents of HANDOVER COMPLETE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101100
RR cause	Normal event.
Time difference	Not present.

Contents of HANDOVER FAILURE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101000
RR cause	Dependent on the test.

Contents of IMMEDIATE ASSIGNMENT message:

L2 pseudo length	This is the sum of the lengths of all the information elements present in the message except for the IA rest octets and L2 pseudo length IEs. For the default message the L2 pseudo length is 11.
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00111111
Page Mode	Normal Paging.
- Page Mode	
Channel Description	For non-combined CCCH/SDCCH (see initial conditions), SDCCH/8, with subchannel chosen arbitrarily by the test house For combined CCCH/SDCCH (default SS conditions), SDCCH/4, with subchannel chosen arbitrarily by the test house.
- Channel Type and TDMA offset	
- Timeslot Number	For non-combined CCCH/SDCCH (see initial conditions), chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, timeslot zero.
- Training Sequence Code	For non-combined CCCH/SDCCH (see initial conditions), chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, TSC=5 (same as the BCC).
- Hopping	Single RF channel.
- ARFCN	For non-combined CCCH/SDCCH (see initial conditions), Channel number 30; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, Channel number 20.
Request Reference	Pertaining to last Channel Request sent by the MS.
Timing Advance	
- Timing advance value	30 bit periods.
Mobile Allocation	
- Length	0
Starting Time	Not present.
IA rest octets	Not used (all bits set to spare).

Contents of IMMEDIATE ASSIGNMENT EXTENDED message:

L2 pseudo length	This is the sum of the lengths of all the information elements present in the message except for the IAX rest octets and L2 pseudo length IEs. For the default message the L2 pseudo length is 18.
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00111001
Page Mode	Normal Paging.
- Page Mode	
Channel Description 1	For non-combined CCCH/SDCCH (see test conditions), SDCCH/8, with subchannel chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, with subchannel chosen arbitrarily by the test house.
- Channel Type and TDMA offset	
	For non-combined CCCH/SDCCH (see test conditions), chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, timeslot zero.
- Timeslot Number	
	For non-combined CCCH/SDCCH (see initial conditions), chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, TSC=5 (same as the BCC). Single RF channel.
- Training Sequence Code	
	For non-combined CCCH/SDCCH (see initial conditions), Channel number 30; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, Channel number 20.
- Hopping	
- ARFCN	
Request Reference 1	Pertaining to last Channel Request sent by the MS.
Timing Advance 1	Chosen arbitrarily by the test house.
- Timing advance value	
Channel Description 2	Same channel type as in Channel Description 1, but different TDMA offset to that in Channel Description 1.
- Channel Type and TDMA offset	equal to the value in Channel Description 1.
	equal to the value in Channel Description 1.
- Timeslot Number	Single RF channel.
- Training Sequence Code	equal to the value in Channel Description 1.
- Hopping	
- ARFCN	
Request Reference 2	Not pertaining to any Channel Requests sent by the MS.
Timing Advance 2	Chosen arbitrarily by the test house.
- Timing advance value	
Mobile Allocation	
- Length	0
Starting Time	Not present.
IAX rest octets	Not used (all bits set to spare).

Contents of IMMEDIATE ASSIGNMENT REJECT message:

L2 pseudo length	19
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00111010
Page Mode	
- Page Mode	Normal Paging.
Request Reference	Pertaining to last Channel Request sent by the MS.
Wait Indication	0 seconds.
Request Reference	Not pertaining to the MS under test.
Wait Indication	0 seconds.
Request Reference	Not pertaining to the MS under test.
Wait Indication	0 seconds.
Request Reference	Not pertaining to the MS under test.
Wait Indication	0 seconds.
IAR rest octets	Not used (all bits set to spare).

Contents of LOCATION UPDATING REQUEST message:

Protocol Discriminator	MM message.
Skip Indicator	0000
Message Type	0X001000
Other information elements	Not checked.

Contents of PAGING REQUEST TYPE 1 message:

L2 pseudo length	This is the sum of the lengths of all the information elements present in the message except for the P1 rest octets and L2 pseudo length IEs. For the default message the L2 pseudo length is 9.
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00100001
Page Mode	
- Page Mode	Normal Paging.
Channels needed	
- first channel	any channel.
- second channel	any channel.
Mobile Identity 1	
- odd/even indication	Even.
- Type of Identity	TMSI.
- Identity Digits	TMSI previously allocated to MS.
Mobile Identity 2	Not present.
P1 rest octets	Not used (all bits set to spare).

Contents of PAGING REQUEST TYPE 2 message:

L2 pseudo length	This is the sum of the lengths of all the information elements present in the message except for the P2 rest octets and L2 pseudo length IEs. For the default message the L2 pseudo length is 11.
Protocol Discriminator	RR Management..
Skip Indicator	0000
Message Type	00100010
Page Mode	
- Page Mode	Normal Paging.
Channels needed	
- first channel	any channel.
- second channel	any channel.
Mobile Identity 1	
- TMSI value	TMSI previously allocated to MS.
Mobile Identity 2	
- TMSI value	TMSI not allocated to MS.
Mobile Identity	Not present.
P2 rest octets	Not used (all bits set to spare).

Contents of PAGING REQUEST TYPE 3 message:

L2 pseudo length	19
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00100100
Page Mode	
- Page Mode	Normal Paging.
Channels needed	
- first channel	any channel.
- second channel	any channel.
Mobile identity 1	
- TMSI value	TMSI previously allocated to MS.
Mobile identity 2	
- TMSI value	TMSI not allocated to MS.
Mobile identity 3	
- TMSI value	TMSI not allocated to MS.
Mobile identity 4	
- TMSI value	TMSI not allocated to MS.
P3 rest octets	Not used (all bits set to spare).

Contents of PAGING RESPONSE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00100111
Ciphering Key Sequence Number	
- Key Sequence	Key sequence number previously allocated to MS, or "111" if no key is available.
Mobile Station Classmark 2	
Mobile Identity	
- odd/even indication	Even
- Type of identity	TMSI
- Identity Digits	TMSI previously allocated to MS.

Contents of PHYSICAL INFORMATION message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101101
Timing advance	20 bit periods.

Contents of SETUP message; (MS to SS):

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	any value from the set {0, ..., 6}.
TI flag	0
Message Type	0X000101
Other information elements	Not checked.

26.13.1.6.2 Default contents of DCS 1 800 layer 3 messages for RR tests

This section contains the default values of DCS 1 800 L3 messages, which unless indicated otherwise in section 26.6 shall be transmitted by the system simulator and which are required to be received from the DCS 1 800 MS under test. These values are used in order to be consistent with the phase 2 version of 26.6.

The necessary L3 messages are listed in alphabetic order, with the exception of the SYSTEM INFORMATION messages, where it is the information elements that are listed in alphabetic order (this is because some information elements occur in several SYSTEM INFORMATION types).

In this section, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "H", or a binary value, indicated by a "B" is used.

Default SYSTEM INFORMATION:

NOTE 1: SYSTEM INFORMATION 2 bis, SYSTEM INFORMATION 7, and SYSTEM INFORMATION 8 messages are not used.

SYSTEM INFORMATION 5 bis is not sent as a default message. For those tests that require SYSTEM INFORMATION 5 bis see the specific message contents for that test.

Cell A

Contents of information elements in SYSTEM INFORMATION TYPE 1 to 6 messages for cell A.

(CBCH) Channel Description	Not present.
(CBCH) Mobile Allocation	Not present.
Cell Channel Description	
- Format identifier	Range 512.
- Cell Allocation ARFCN	Channel Numbers, 590, 650, 750 and 850.
Cell Identity	
- Cell Identity Value	0001H
Cell Options	
- Power Control Indicator	Power Control Indicator is not set, 0
- DTX Indicator	MS shall not use DTX.
- Radio_Link_Timeout	8 SACCH blocks.
Cell Selection Parameters	
- Cell_Reselect_Hysteresis	12 dB
- MX_TXPWR_MAX_CCH	Minimum level.
- ACS	No addition cell parameters are present in SYSTEM INFORMATION messages 7 and 8.
- NECI	New establishment causes not supported.
- RXLEV_ACCESS_MIN	Minimum level.
Control Channel Description	
- Attach-Detach allowed	MS shall not apply.
- BS_AG_BLK_RES	0 blocks reserved for access grant.
- CCCH_CONF	1 basic physical channel used for CCCH, combined with SDCCHs.
- BS_PA_MFRMS	5 multiframe periods for transmission of paging messages.
- T3212 Time-out value	Infinite.
L2 pseudo length	
- System information 1	21
- System information 2	22
- System information 3	18
- System information 4	12
Location Area Identification	
- Mobile Country Code	001 decimal.
- Mobile Network Code	01 decimal.
- Location Area Code	0001H
Message Type	
- System information 1	00011001
- System information 2	00011010
- System information 3	00011011
- System information 4	00011100
- System information 5	00011101
- System information 6	00011110
Neighbour Cells Description	
- Format identifier	Range 512.
- BCCH Allocation Sequence	0
- BCCH Allocation ARFCN	Channels numbers, 520, 590, 600, 700, 764, 780, 810, 870.
- EXT-IND	This IE carries the complete BA. EXT-IND is 0.
NCC Permitted	0000 0010
RACH Control Parameters	
- Max Retrans	Max 1 retrans.
- Tx-integer	5 slots used.
- Cell Barred for Access	Cell is not barred.
- Call Reestablishment Allowed	Not Allowed.
- Access Control Class	Access is not barred.
- Emergency Call allowed	Yes.
SI 1 rest octets	Not used (all bits are set to spare).
SI 2 rest octets	Not used (all bits are set to spare).
SI 3 rest octets	Not used (all bits are set to spare).
SI 4 rest octets	Not used (all bits are set to spare).

Default settings for cell A:

Downlink input level	63 dBmicroVolt emf().
Uplink output power	minimum supported by the MS's power class
Propagation profile	static.
BCCH/CCCH carrier number	ARFN 590.

Cell B

The contents of SYSTEM INFORMATION TYPE 1 to 6 messages for cell B are identical to those of cell A with the following exceptions:

Cell Channel Description - Format Identifier - Cell Allocation ARFCN	Range 512. Channel Number 520.
--	-----------------------------------

NOTE 2: This IE needs modification when used in handover tests that command the MS to go to a frequency hopping channel in cell B.

Cell Identity - Cell Identity Value	0002H
--	-------

Default settings for cell B:

Downlink input level	53 dBmicroVolt emf().
Uplink output power	minimum supported by the MS's power class
Propagation profile	static.
BCCH/CCCH carrier number	520

Contents of ALERTING message (SS to MS):

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	As used in the SETUP message.
TI flag	1 (destination side).
Message Type	00000001
All other information elements	Not present.

Contents of ASSIGNMENT COMMAND message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101110
Channel Description	
- Channel Type and TDMA offset	Bm + ACCHs.
- Timeslot Number	Chosen arbitrarily by the test house.
- Training Sequence Code	Chosen arbitrarily by the test house.
- Hopping	Single RF channel.
- ARFCN	Channel number 650.
Power Command	
- Power level	Chosen arbitrarily by the test house.
Multislot allocation	Appropriate for the test
- Downlink assignment	Appropriate for the test
- Uplink assignment	Appropriate for the test
- Channel set 1= $X \leq 8$	Appropriate for the test
Channel mode 1= $X \leq 8$	Appropriate for the test

Contents of ASSIGNMENT COMPLETE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101001
RR Cause	
- RR Cause Value	Normal event.

Contents of ASSIGNMENT FAILURE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101111
RR Cause	
- RR Cause Value	Depending on test.

Contents of AUTHENTICATION REQUEST message:

Protocol Discriminator	MM message.
Skip Indicator	0000
Message Type	00010010
Ciphering Key Sequence Number	
- Key Sequence	Chosen arbitrarily by the test house from the range 0 to 6.
Authentication Parameter RAND	
- RAND value	Chosen arbitrarily by the test house.

Contents of AUTHENTICATION RESPONSE message:

Protocol Discriminator	MM message.
Skip Indicator	0000
Message Type	0X010100
Other information element(s)	Not checked.

Contents of CALL PROCEEDING message:

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	As used in the SETUP message.
TI flag	1 (destination side).
Message Type	00000010
All other information elements	Not present.

Contents of CHANNEL MODE MODIFY message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00010000
Channel Description	
- Channel Type and TDMA offset	Depending on test.
- Timeslot Number	Chosen arbitrarily by the test house.
- Training Sequence Code	Chosen arbitrarily by the test house.
- Hopping	Single RF channel.
- ARFCN	Channel number 650.
Channel Mode	
- Mode	Depending on test.

Contents of CHANNEL MODE MODIFY ACKNOWLEDGE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00010111
Channel Description	
- Channel Type and TDMA offset	Depending on test.
- Timeslot Number	Same as in the CHANNEL MODE MODIFY message.
- Training Sequence Code	Same as in the CHANNEL MODE MODIFY message.
- Hopping	Single RF channel.
- Frequency Band	Band number 0.
- ARFCN	Channel number 650.
Channel Mode	
- Mode	Same as in the CHANNEL MODE MODIFY message.

Contents of CHANNEL RELEASE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00001101
RR Cause	
- RR Cause Value	Normal event.

Contents of CHANNEL REQUEST message:

Establishment Cause	Not checked.
Random Reference	Not checked.

Contents of CIPHERING MODE COMMAND message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00110101
Cipher Mode Setting	
- algorithm identifier	cipher with A5/1.
- SC	Start ciphering.
Cipher Response	IMEI shall not be included.

Contents of CIPHERING MODE COMPLETE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00110010
Mobile Identity	Not present.

Contents of the CLASSMARK CHANGE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	000100110
Mobile Station Classmark 2	
- RF Power Capability	See PICS/PIXIT.
- Frequency Capability	Set to 0.
Mobile Station Classmark 3	For presence and contents see PICS/PIXIT.

Contents of CM SERVICE ACCEPT message:

Protocol Discriminator	Mobility Management.
Skip Indicator	0000
Message Type	00100001

Contents of CM SERVICE REQUEST message:

Protocol Discriminator	Mobility Management.
Skip Indicator	0000
Message Type	0X100100
Other information elements	Not checked.

Contents of CONFIGURATION CHANGE COMMAND message (SS to MS)

Protocol Discriminator	Radio Resource
Skip Indicator	0000
Message type	00110000
Multislot allocation	Appropriate for the test
- Downlink assignment	Appropriate for the test
- Uplink assignment	Appropriate for the test
- Channel set 1= $X \leq 8$	Appropriate for the test
Channel mode 1= $X \leq 8$	Appropriate for the test

Contents of CONFIGURATION CHANGE ACKNOWLEDGE message (MS to SS)

Protocol Discriminator	Radio Resource
Skip Indicator	0000
Message type	00110001

Contents of CONFIGURATION CHANGE REJECT message (MS to SS)

Protocol Discriminator	Radio Resource
Skip Indicator	0000
Message type	00110011
RR Cause	Protocol Error Unspecified

Contents of CONNECT message (SS to MS):

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	As used in the SETUP message.
TI flag	1
Message Type	00000111
All other information elements	Not present.

Contents of CONNECT ACKNOWLEDGE message (MS to SS):

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	As used in the SETUP message.
TI flag	0
Message Type	0X001111

Contents of HANDOVER ACCESS message:

Handover Reference	Equal to the value included in the Handover Command message.
--------------------	--

Contents of HANDOVER COMMAND message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101011
Cell Description	
- Network Colour Code	1
- Base station Colour Code	Corresponding to target cell
- BCCH Carrier Number	Set to the BCCH carrier number of cell B. (one of 520, 590, 600, 700, 780, 810 or 870).
Channel Description	
- Channel Type and TDMA offset	Bm + ACCHs.
- Timeslot Number	Chosen arbitrarily by the test house.
- Training Sequence Code	Chosen arbitrarily by the test house.
- Hopping	Single RF channel.
- ARFCN	Chosen arbitrarily by the test house from those supported on the target cell.
Handover Reference	
- Handover Reference Value	Chosen arbitrarily by the test house.
Power Command	
- Power level	Chosen arbitrarily by the test house.
All other information elements	Not present.

Contents of HANDOVER COMPLETE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101100
RR cause	Normal event.
Time difference	Not present.

Contents of HANDOVER FAILURE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101000
RR cause	Dependent on the test.

Contents of IMMEDIATE ASSIGNMENT message:

L2 pseudo length	This is the sum of the lengths of all the information elements present in the message except for the IA rest octets and L2 pseudo length IEs. For the default message the L2 pseudo length is 11.
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00111111
Page Mode	
- Page Mode	Normal Paging.
Channel Description	
- Channel Type and TDMA offset	For non-combined CCCH/SDCCH (see initial conditions), SDCCH/8, with subchannel chosen arbitrarily by the test house For combined CCCH/SDCCH (default SS conditions), SDCCH/4, with subchannel chosen arbitrarily by the test house.
- Timeslot Number	For non-combined CCCH/SDCCH (see initial conditions), chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, timeslot zero.
- Training Sequence Code	For non-combined CCCH/SDCCH (see initial conditions), chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, TSC=5 (same as the BCC). Single RF channel.
- Hopping	For non-combined CCCH/SDCCH (see initial conditions), Channel number 650; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, Channel number 590.
- ARFCN	
Request Reference	Pertaining to last Channel Request sent by the MS.
Timing Advance	
- Timing advance value	30 bit periods.
Mobile Allocation	
- Length	0
Starting Time	Not present.
IA rest octets	Not used (all bits set to spare).

Contents of IMMEDIATE ASSIGNMENT EXTENDED message:

L2 pseudo length	This is the sum of the lengths of all the information elements present in the message except for the IAX rest octets and L2 pseudo length IEs. For the default message the L2 pseudo length is 18.
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00111001
Page Mode	Normal Paging.
- Page Mode	
Channel Description 1	For non-combined CCCH/SDCCH (see test conditions), SDCCH/8, with subchannel chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, with subchannel chosen arbitrarily by the test house.
- Channel Type and TDMA offset	
	For non-combined CCCH/SDCCH (see test conditions), chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, timeslot zero.
- Timeslot Number	
	For non-combined CCCH/SDCCH (see initial conditions), chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, TSC=5 (same as the BCC). Single RF channel.
- Training Sequence Code	
	For non-combined CCCH/SDCCH (see initial conditions), Channel number 650; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, Channel number 590.
- Hopping	
- ARFCN	
Request Reference 1	Pertaining to last Channel Request sent by the MS.
Timing Advance 1	Chosen arbitrarily by the test house.
- Timing advance value	
Channel Description 2	Same channel type as in Channel Description 1, but different TDMA offset to that in Channel Description 1.
- Channel Type and TDMA offset	equal to the value in Channel Description 1.
	equal to the value in Channel Description 1.
- Timeslot Number	Single RF channel.
- Training Sequence Code	equal to the value in Channel Description 1.
- Hopping	
- ARFCN	Not pertaining to any Channel Requests sent by the MS.
Request Reference 2	
Timing Advance 2	Chosen arbitrarily by the test house.
- Timing advance value	
Mobile Allocation	
- Length	0
Starting Time	Not present.
IAX rest octets	Not used (all bits set to spare).

Contents of IMMEDIATE ASSIGNMENT REJECT message:

L2 pseudo length	19
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00111010
Page Mode	
- Page Mode	Normal Paging.
Request Reference	Pertaining to last Channel Request sent by the MS.
Wait Indication	0 seconds.
Request Reference	Not pertaining to the MS under test.
Wait Indication	0 seconds.
Request Reference	Not pertaining to the MS under test.
Wait Indication	0 seconds.
Request Reference	Not pertaining to the MS under test.
Wait Indication	0 seconds.
IAR rest octets	Not used (all bits set to spare).

Contents of LOCATION UPDATING REQUEST message:

Protocol Discriminator	MM message.
Skip Indicator	0000
Message Type	0X001000
Other information elements	Not checked.

Contents of PAGING REQUEST TYPE 1 message:

L2 pseudo length	This is the sum of the lengths of all the information elements present in the message except for the P1 rest octets and L2 pseudo length IEs. For the default message the L2 pseudo length is 9.
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00100001
Page Mode	
- Page Mode	Normal Paging.
Channels needed	
- first channel	any channel.
- second channel	any channel.
Mobile Identity 1	
- odd/even indication	Even.
- Type of Identity	TMSI.
- Identity Digits	TMSI previously allocated to MS.
Mobile Identity 2	Not present.
P1 rest octets	Not used (all bits set to spare).

Contents of PAGING REQUEST TYPE 2 message:

L2 pseudo length	This is the sum of the lengths of all the information elements present in the message except for the P2 rest octets and L2 pseudo length IEs. For the default message the L2 pseudo length is 11.
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00100010
Page Mode	
- Page Mode	Normal Paging.
Channels needed	
- first channel	any channel.
- second channel	any channel.
Mobile Identity 1	
- TMSI value	TMSI previously allocated to MS.
Mobile Identity 2	
- TMSI value	TMSI not allocated to MS.
Mobile Identity	Not present.
P2 rest octets	Not used (all bits set to spare).

Contents of PAGING REQUEST TYPE 3 message:

L2 pseudo length	19
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00100100
Page Mode	
- Page Mode	Normal Paging.
Channels needed	
- first channel	any channel.
- second channel	any channel.
Mobile identity 1	
- TMSI value	TMSI previously allocated to MS.
Mobile identity 2	
- TMSI value	TMSI not allocated to MS.
Mobile identity 3	
- TMSI value	TMSI not allocated to MS.
Mobile identity 4	
- TMSI value	TMSI not allocated to MS.
P3 rest octets	Not used (all bits set to spare).

Contents of PAGING RESPONSE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00100111
Ciphering Key Sequence Number	
- Key Sequence	Key sequence number previously allocated to MS, or "111" if no key is available.
Mobile Station Classmark 2	
Mobile Identity	
- odd/even indication	Even.
- Type of identity	TMSI
- Identity Digits	TMSI previously allocated to MS.

Contents of PHYSICAL INFORMATION message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101101
Timing advance	20 bit periods.

Contents of SETUP message; (MS to SS):

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	any value from the set {0, ..., 6}.
TI flag	0
Message Type	0X000101
Other information elements	Not checked.

26.13.1.6.3 Default contents of GSM 450 layer 3 messages for RR tests

This section contains the default values of GSM 450 L3 messages, which unless indicated otherwise in section 26.13 shall be transmitted by the system simulator and which are required to be received from the GSM 450 MS under test.

The necessary L3 messages are listed in alphabetic order, with the exception of the SYSTEM INFORMATION messages, where it is the information elements that are listed in alphabetic order (this is because some information elements occur in several SYSTEM INFORMATION types).

In this section, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "H", or a binary value, indicated by a "B" is used.

Default SYSTEM INFORMATION:

NOTE 1: SYSTEM INFORMATION 2 bis, SYSTEM INFORMATION 5 bis, SYSTEM INFORMATION 7, and SYSTEM INFORMATION 8 messages are not used.

Cell A

Contents of information elements in SYSTEM INFORMATION TYPE 1 to 6 messages for cell A.

(CBCH) Channel Description	Not present.
(CBCH) Mobile Allocation	Not present.
Cell Channel Description	
- Format identifier	Range 128.
- Cell Allocation ARFCN	Channels 263, 267, 275 and 279.
Cell Identity	
- Cell Identity Value	0001H
Cell Options	
- Power Control Indicator	Power Control Indicator is not set.
- DTX Indicator	MS shall not use DTX.
- Radio_Link_Timeout	8 SACCH blocks.
Cell Selection Parameters	
- Cell_Reselect_Hysteresis	12 dB.
- MX_TXPWR_MAX_CCH	Minimum level.
- ACS	No addition cell parameters are present in SYSTEM INFORMATION messages 7 and 8.
- NECI	New establishment causes not supported.
- RXLEV_ACCESS_MIN	Minimum level.
Control Channel Description	
- Attach-Detach allowed	No Attach/Detach.
- BS_AG_BLK_RES	0 blocks reserved for access grant.
- CCCH_CONF	1 basic physical channel used for CCCH, combined with SDCCHs.
- BS_PA_MFRMS	5 multiframe periods for transmission of paging messages.
- T3212 Time-out value	Infinite.
L2 pseudo length	
- System information 1	21
- System information 2	22
- System information 3	18
- System information 4	12
Location Area Identification	
- Mobile Country Code	001 decimal
- Mobile Network Code	01 decimal
- Location Area Code	0001H
Message Type	
- System information 1	00011001
- System information 2	00011010
- System information 3	00011011
- System information 4	00011100
- System information 5	00011101
- System information 6	00011110
Neighbour Cells Description	
- Format identifier	Range 128.
- BCCH Allocation Sequence	0
- BCCH Allocation ARFCN	Channels 262, 263, 274, 282, 284, 287, 290 and 293.
- EXT-IND	This IE carries the complete BA.
NCC Permitted	0000 0010
RACH Control Parameters	
- Max Retrans	Max 1 retrans.
- Tx-integer	5 slots used.
- Cell Barred for Access	Cell is not barred.
- Call Reestablishment Allowed	Not allowed.
- Access Control Class	Access is not barred.
- Emergency Call allowed	Yes.
SI 1 rest octets	Not used (all bits are set to spare).
SI 2 rest octets	Not used (all bits are set to spare).
SI 3 rest octets	Not used (all bits are set to spare).
SI 4 rest octets	Not used (all bits are set to spare).

Default settings for cell A:

Downlink input level	63 dBmicroVolt emf.
Uplink output power	minimum supported by the MS's power class.
Propagation profile	static.
BCCH/CCCH carrier number	263

Cell B

The contents of SYSTEM INFORMATION TYPE 1 to 6 messages for cell B are identical to those of cell A with the following exceptions:

Cell Channel Description - Format Identifier - Cell Allocation ARFCN	Range 128. Channel Number 261.
--	-----------------------------------

NOTE 2: This IE needs modification when used in handover tests that command the MS to go to a frequency hopping channel in cell B.

Cell Identity

- Cell Identity Value 0002H

Default settings for cell B:

Downlink input level	53 dBmicroVolt emf.
Uplink output power	minimum supported by the MS's power class.
Propagation profile	static.
BCCH/CCCH carrier number	261

Contents of ALERTING message (SS to MS):

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	As used in the SETUP message.
TI flag	1 (destination side).
Message Type	00000001
All other information elements	Not present.

Contents of ASSIGNMENT COMMAND message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101110
Channel Description 2	
- Channel Type and TDMA offset	Bm + ACCHs
- Timeslot Number	Chosen arbitrarily by the test house.
- Training Sequence Code	Chosen arbitrarily by the test house.
- Hopping	Single RF channel.
- ARFCN	Channel number 267.
Power Command	
- Power level	Chosen arbitrarily by the test house.
Multislot allocation	
- Downlink assignment	Appropriate for the test
- Uplink assignment	Appropriate for the test
- Channel set 1=<X<=8	Appropriate for the test
Channel mode	Appropriate for the test

Contents of ASSIGNMENT COMPLETE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101001
RR Cause	
- RR Cause Value	Normal event.

Contents of ASSIGNMENT FAILURE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101111
RR Cause	
- RR Cause Value	Depending on test.

Contents of AUTHENTICATION REQUEST message:

Protocol Discriminator	MM message.
Skip Indicator	0000
Message Type	00010010
Ciphering Key Sequence Number	
- Key Sequence	Chosen arbitrarily by the test house from the range 0 to 6.
Authentication Parameter RAND	
- RAND value	Chosen arbitrarily by the test house.

Contents of AUTHENTICATION RESPONSE message:

Protocol Discriminator	MM message.
Skip Indicator	0000
Message Type	0X010100
Other information element(s)	Not checked.

Contents of CALL PROCEEDING message:

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	As used in the SETUP message.
TI flag	1 (destination side).
Message Type	00000010
All other information elements	Not present.

Contents of CHANNEL MODE MODIFY message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00010000
Channel Description 2	
- Channel Type and TDMA offset	Depending on test.
- Timeslot Number	Chosen arbitrarily by the test house.
- Training Sequence Code	Chosen arbitrarily by the test house.
- Hopping	Single RF channel.
- ARFCN	Channel number 267.
Channel Mode	
- Mode	Depending on test.

Contents of CHANNEL MODE MODIFY ACKNOWLEDGE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00010111
Channel Description 2	
- Channel Type and TDMA offset	Depending on test.
- Timeslot Number	Same as in the CHANNEL MODE MODIFY message.
- Training Sequence Code	Same as in the CHANNEL MODE MODIFY message.
- Hopping	Single RF channel.
- Frequency Band	Band number 0.
- ARFCN	Channel number 267.
Channel Mode	
- Mode	Same as in the CHANNEL MODE MODIFY message.

Contents of CHANNEL RELEASE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00001101
RR Cause	
- RR Cause Value	Normal event.

Contents of CHANNEL REQUEST message

Establishment Cause	Not checked.
Random Reference	Not checked.

Contents of CIPHERING MODE COMMAND message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00110101
Cipher Mode Setting	
- algorithm identifier	cipher with A5/1.
- SC	Start ciphering.
Cipher Response	IMEI shall not be included.

Contents of CIPHERING MODE COMPLETE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00110010
Mobile Identity	Not present.

Contents of the CLASSMARK CHANGE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	000100110
Mobile Station Classmark 2	See PICS/PIXIT.
Mobile Station Classmark 3	For presence and contents see PICS/PIXIT.

Contents of CM SERVICE ACCEPT message:

Protocol Discriminator	Mobility Management.
Skip Indicator	0000
Message Type	00100001

Contents of CM SERVICE REQUEST message

Protocol Discriminator	Mobility Management.
Skip Indicator	0000
Message Type	0X100100
Other information elements	Not checked.

Contents of CONFIGURATION CHANGE COMMAND message (SS to MS)

Protocol Discriminator	Radio Resource
Skip Indicator	0000
Message type	00110000
Multislot allocation	Appropriate for the test
- Downlink assignment	Appropriate for the test
- Uplink assignment	Appropriate for the test
- Channel set 1= $X \leq 8$	Appropriate for the test
Channel mode 1= $X \leq 8$	Appropriate for the test

Contents of CONFIGURATION CHANGE ACKNOWLEDGE message (MS to SS)

Protocol Discriminator	Radio Resource
Skip Indicator	0000
Message type	00110001

Contents of CONFIGURATION CHANGE REJECT message (MS to SS)

Protocol Discriminator	Radio Resource
Skip Indicator	0000
Message type	00110011
RR Cause	Protocol Error Unspecified

Contents of CONNECT message (SS to MS)

Protocol Discriminator	Call Control.
Transaction Identifier	As used in the SETUP message.
TI value	1
TI flag	
Message Type	00000111
All other information elements	Not present.

Contents of CONNECT ACKNOWLEDGE message (MS to SS)

Protocol Discriminator	Call Control.
Transaction Identifier	As used in the SETUP message.
TI value	0
TI flag	
Message Type	0X001111

Contents of HANDOVER ACCESS message:

Handover Reference	Equal to the value included in the Handover Command message.
--------------------	--

Contents of HANDOVER COMMAND message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101011
Cell Description	
- Network Colour Code	1
- Base station Colour Code	Corresponding to target cell
- BCCH Carrier Number	Set to the BCCH carrier number of cell B. (one of 261, 263, 282, 284, 287, 290 or 293).
Channel Description 2	
- Channel Type and TDMA offset	Bm + ACCHs.
- Timeslot Number	Chosen arbitrarily by the test house.
- Training Sequence Code	Chosen arbitrarily by the test house.
- Hopping	Single RF channel.
- ARFCN	Chosen arbitrarily by the test house from those supported on the target cell.
Handover Reference	
- Handover Reference Value	Chosen arbitrarily by the test house.
Power Command	
- Power level	Chosen arbitrarily by the test house.
Multislot allocation	
- Downlink assignment	Appropriate for the test
- Uplink assignment	Appropriate for the test
- Channel set 1= $X \leq 8$	Appropriate for the test
Channel mode	Appropriate for the test

Contents of HANDOVER COMPLETE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101100
RR cause	Normal event.
Time difference	Not present.

Contents of HANDOVER FAILURE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101000
RR cause	Dependent on the test.

Contents of IMMEDIATE ASSIGNMENT message:

L2 pseudo length	This is the sum of the lengths of all the information elements present in the message except for the IA rest octets and L2 pseudo length IEs. For the default message the L2 pseudo length is 11.
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00111111
Page Mode	
- Page Mode	Normal Paging.
Channel Description	
- Channel Type and TDMA offset	For non-combined CCCH/SDCCH (see initial conditions), SDCCH/8, with subchannel chosen arbitrarily by the test house For combined CCCH/SDCCH (default SS conditions), SDCCH/4, with subchannel chosen arbitrarily by the test house.
- Timeslot Number	For non-combined CCCH/SDCCH (see initial conditions), chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, timeslot zero.
- Training Sequence Code	For non-combined CCCH/SDCCH (see initial conditions), chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, TSC=5 (same as the BCC).
- Hopping	Single RF channel.
- ARFCN	For non-combined CCCH/SDCCH (see initial conditions), Channel number 30; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, Channel number 263.
Request Reference	Pertaining to last Channel Request sent by the MS.
Timing Advance	
- Timing advance value	30 bit periods.
Mobile Allocation	
- Length	0
Starting Time	Not present.
IA rest octets	Not used (all bits set to spare).

Contents of IMMEDIATE ASSIGNMENT EXTENDED message:

L2 pseudo length	This is the sum of the lengths of all the information elements present in the message except for the IAX rest octets and L2 pseudo length IEs. For the default message the L2 pseudo length is 18.
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00111001
Page Mode	Normal Paging.
- Page Mode	
Channel Description 1	For non-combined CCCH/SDCCH (see test conditions), SDCCH/8, with subchannel chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, with subchannel chosen arbitrarily by the test house.
- Channel Type and TDMA offset	
	For non-combined CCCH/SDCCH (see test conditions), chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, timeslot zero.
- Timeslot Number	
	For non-combined CCCH/SDCCH (see initial conditions), chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, TSC=5 (same as the BCC). Single RF channel.
- Training Sequence Code	
	For non-combined CCCH/SDCCH (see initial conditions), Channel number 30; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, Channel number 263.
- Hopping	
- ARFCN	
Request Reference 1	Pertaining to last Channel Request sent by the MS.
Timing Advance 1	Chosen arbitrarily by the test house.
- Timing advance value	
Channel Description 2	Same channel type as in Channel Description 1, but different TDMA offset to that in Channel Description 1.
- Channel Type and TDMA offset	equal to the value in Channel Description 1.
	equal to the value in Channel Description 1.
- Timeslot Number	Single RF channel.
- Training Sequence Code	equal to the value in Channel Description 1.
- Hopping	Not pertaining to any Channel Requests sent by the MS.
- ARFCN	
Request Reference 2	
Timing Advance 2	Chosen arbitrarily by the test house.
- Timing advance value	
Mobile Allocation	
- Length	0
Starting Time	Not present.
IAX rest octets	Not used (all bits set to spare).

Contents of IMMEDIATE ASSIGNMENT REJECT message:

L2 pseudo length	19
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00111010
Page Mode	
- Page Mode	Normal Paging.
Request Reference	Pertaining to last Channel Request sent by the MS.
Wait Indication	0 seconds.
Request Reference	Not pertaining to the MS under test.
Wait Indication	0 seconds.
Request Reference	Not pertaining to the MS under test.
Wait Indication	0 seconds.
Request Reference	Not pertaining to the MS under test.
Wait Indication	0 seconds.
IAR rest octets	Not used (all bits set to spare).

Contents of LOCATION UPDATING REQUEST message:

Protocol Discriminator	MM message.
Skip Indicator	0000
Message Type	0X001000
Other information elements	Not checked.

Contents of PAGING REQUEST TYPE 1 message:

L2 pseudo length	This is the sum of the lengths of all the information elements present in the message except for the P1 rest octets and L2 pseudo length IEs. For the default message the L2 pseudo length is 9.
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00100001
Page Mode	
- Page Mode	Normal Paging.
Channels needed	
- first channel	any channel.
- second channel	any channel.
Mobile Identity 1	
- odd/even indication	Even.
- Type of Identity	TMSI.
- Identity Digits	TMSI previously allocated to MS.
Mobile Identity 2	Not present.
P1 rest octets	Not used (all bits set to spare).

Contents of PAGING REQUEST TYPE 2 message:

L2 pseudo length	This is the sum of the lengths of all the information elements present in the message except for the P2 rest octets and L2 pseudo length IEs. For the default message the L2 pseudo length is 11.
Protocol Discriminator	RR Management..
Skip Indicator	0000
Message Type	00100010
Page Mode	
- Page Mode	Normal Paging.
Channels needed	
- first channel	any channel.
- second channel	any channel.
Mobile Identity 1	
- TMSI value	TMSI previously allocated to MS.
Mobile Identity 2	
- TMSI value	TMSI not allocated to MS.
Mobile Identity	Not present.
P2 rest octets	Not used (all bits set to spare).

Contents of PAGING REQUEST TYPE 3 message:

L2 pseudo length	19
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00100100
Page Mode	
- Page Mode	Normal Paging.
Channels needed	
- first channel	any channel.
- second channel	any channel.
Mobile identity 1	
- TMSI value	TMSI previously allocated to MS.
Mobile identity 2	
- TMSI value	TMSI not allocated to MS.
Mobile identity 3	
- TMSI value	TMSI not allocated to MS.
Mobile identity 4	
- TMSI value	TMSI not allocated to MS.
P3 rest octets	Not used (all bits set to spare).

Contents of PAGING RESPONSE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00100111
Ciphering Key Sequence Number	
- Key Sequence	Key sequence number previously allocated to MS, or "111" if no key is available.
Mobile Station Classmark 2	
Mobile Identity	
- odd/even indication	Even
- Type of identity	TMSI
- Identity Digits	TMSI previously allocated to MS.

Contents of PHYSICAL INFORMATION message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101101
Timing advance	20 bit periods.

Contents of SETUP message; (MS to SS):

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	any value from the set {0, ..., 6}.
TI flag	0
Message Type	0X000101
Other information elements	Not checked.

26.13.1.6.4 Default contents of GSM 480 layer 3 messages for RR tests

This section contains the default values of GSM 480 L3 messages, which unless indicated otherwise in section 26.13 shall be transmitted by the system simulator and which are required to be received from the GSM 480 MS under test.

The necessary L3 messages are listed in alphabetic order, with the exception of the SYSTEM INFORMATION messages, where it is the information elements that are listed in alphabetic order (this is because some information elements occur in several SYSTEM INFORMATION types).

In this section, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "H", or a binary value, indicated by a "B" is used.

Default SYSTEM INFORMATION:

NOTE 1: SYSTEM INFORMATION 2 bis, SYSTEM INFORMATION 5 bis, SYSTEM INFORMATION 7, and SYSTEM INFORMATION 8 messages are not used.

Cell A

Contents of information elements in SYSTEM INFORMATION TYPE 1 to 6 messages for cell A.

(CBCH) Channel Description	Not present.
(CBCH) Mobile Allocation	Not present.
Cell Channel Description	
- Format identifier	Range 128
- Cell Allocation ARFCN	Channels 310, 315, 322 and 326.
Cell Identity	
- Cell Identity Value	0001H
Cell Options	
- Power Control Indicator	Power Control Indicator is not set.
- DTX Indicator	MS shall not use DTX.
- Radio_Link_Timeout	8 SACCH blocks.
Cell Selection Parameters	
- Cell_Reselect_Hysteresis	12 dB.
- MX_TXPWR_MAX_CCH	Minimum level.
- ACS	No addition cell parameters are present in SYSTEM INFORMATION messages 7 and 8.
- NECI	New establishment causes not supported.
- RXLEV_ACCESS_MIN	Minimum level.
Control Channel Description	
- Attach-Detach allowed	No Attach/Detach.
- BS_AG_BLK_RES	0 blocks reserved for access grant.
- CCCH_CONF	1 basic physical channel used for CCCH, combined with SDCCHs.
- BS_PA_MFRMS	5 multiframe periods for transmission of paging messages.
- T3212 Time-out value	Infinite.
L2 pseudo length	
- System information 1	21
- System information 2	22
- System information 3	18
- System information 4	12
Location Area Identification	
- Mobile Country Code	001 decimal
- Mobile Network Code	01 decimal
- Location Area Code	0001H
Message Type	
- System information 1	00011001
- System information 2	00011010
- System information 3	00011011
- System information 4	00011100
- System information 5	00011101
- System information 6	00011110
Neighbour Cells Description	
- Format identifier	Range 128
- BCCH Allocation Sequence	0
- BCCH Allocation ARFCN	Channels 308, 310, 321, 329, 331, 334, 337 and 340.
- EXT-IND	This IE carries the complete BA.
NCC Permitted	0000 0010
RACH Control Parameters	
- Max Retrans	Max 1 retrans.
- Tx-integer	5 slots used.
- Cell Barred for Access	Cell is not barred.
- Call Reestablishment Allowed	Not allowed.
- Access Control Class	Access is not barred.
- Emergency Call allowed	Yes.
SI 1 rest octets	Not used (all bits are set to spare).
SI 2 rest octets	Not used (all bits are set to spare).
SI 3 rest octets	Not used (all bits are set to spare).
SI 4 rest octets	Not used (all bits are set to spare).

Default settings for cell A:

Downlink input level	63 dBmicroVolt emf.
Uplink output power	minimum supported by the MS's power class.
Propagation profile	static.
BCCH/CCCH carrier number	310

Cell B

The contents of SYSTEM INFORMATION TYPE 1 to 6 messages for cell B are identical to those of cell A with the following exceptions:

Cell Channel Description - Format Identifier - Cell Allocation ARFCN	Range 128 Channel Number 308.
--	----------------------------------

NOTE 2: This IE needs modification when used in handover tests that command the MS to go to a frequency hopping channel in cell B.

Cell Identity

- Cell Identity Value 0002H

Default settings for cell B:

Downlink input level	53 dBmicroVolt emf.
Uplink output power	minimum supported by the MS's power class.
Propagation profile	static.
BCCH/CCCH carrier number	308

Contents of ALERTING message (SS to MS):

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	As used in the SETUP message.
TI flag	1 (destination side).
Message Type	00000001
All other information elements	Not present.

Contents of ASSIGNMENT COMMAND message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101110
Channel Description 2	
- Channel Type and TDMA offset	Bm + ACCHs
- Timeslot Number	Chosen arbitrarily by the test house.
- Training Sequence Code	Chosen arbitrarily by the test house.
- Hopping	Single RF channel.
- ARFCN	Channel number 315.
Power Command	
- Power level	Chosen arbitrarily by the test house.
Multislot allocation	
- Downlink assignment	Appropriate for the test
- Uplink assignment	Appropriate for the test
- Channel set 1=<X<=8	Appropriate for the test
Channel mode	Appropriate for the test

Contents of ASSIGNMENT COMPLETE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101001
RR Cause	
- RR Cause Value	Normal event.

Contents of ASSIGNMENT FAILURE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101111
RR Cause	
- RR Cause Value	Depending on test.

Contents of AUTHENTICATION REQUEST message:

Protocol Discriminator	MM message.
Skip Indicator	0000
Message Type	00010010
Ciphering Key Sequence Number	
- Key Sequence	Chosen arbitrarily by the test house from the range 0 to 6.
Authentication Parameter RAND	
- RAND value	Chosen arbitrarily by the test house.

Contents of AUTHENTICATION RESPONSE message:

Protocol Discriminator	MM message.
Skip Indicator	0000
Message Type	0X010100
Other information element(s)	Not checked.

Contents of CALL PROCEEDING message:

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	As used in the SETUP message.
TI flag	1 (destination side).
Message Type	00000010
All other information elements	Not present.

Contents of CHANNEL MODE MODIFY message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00010000
Channel Description 2	
- Channel Type and TDMA offset	Depending on test.
- Timeslot Number	Chosen arbitrarily by the test house.
- Training Sequence Code	Chosen arbitrarily by the test house.
- Hopping	Single RF channel.
- ARFCN	Channel number 315.
Channel Mode	
- Mode	Depending on test.

Contents of CHANNEL MODE MODIFY ACKNOWLEDGE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00010111
Channel Description 2	
- Channel Type and TDMA offset	Depending on test.
- Timeslot Number	Same as in the CHANNEL MODE MODIFY message.
- Training Sequence Code	Same as in the CHANNEL MODE MODIFY message.
- Hopping	Single RF channel.
- Frequency Band	Band number 0.
- ARFCN	Channel number 315.
Channel Mode	
- Mode	Same as in the CHANNEL MODE MODIFY message.

Contents of CHANNEL RELEASE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00001101
RR Cause	
- RR Cause Value	Normal event.

Contents of CHANNEL REQUEST message

Establishment Cause	Not checked.
Random Reference	Not checked.

Contents of CIPHERING MODE COMMAND message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00110101
Cipher Mode Setting	
- algorithm identifier	cipher with A5/1.
- SC	Start ciphering.
Cipher Response	IMEI shall not be included.

Contents of CIPHERING MODE COMPLETE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00110010
Mobile Identity	Not present.

Contents of the CLASSMARK CHANGE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	000100110
Mobile Station Classmark 2	See PICS/PIXIT.
Mobile Station Classmark 3	For presence and contents see PICS/PIXIT.

Contents of CM SERVICE ACCEPT message:

Protocol Discriminator	Mobility Management.
Skip Indicator	0000
Message Type	00100001

Contents of CM SERVICE REQUEST message

Protocol Discriminator	Mobility Management.
Skip Indicator	0000
Message Type	0X100100
Other information elements	Not checked.

Contents of CONFIGURATION CHANGE COMMAND message (SS to MS)

Protocol Discriminator	Radio Resource
Skip Indicator	0000
Message type	00110000
Multislot allocation	Appropriate for the test
- Downlink assignment	Appropriate for the test
- Uplink assignment	Appropriate for the test
- Channel set 1= $X \leq 8$	Appropriate for the test
Channel mode 1= $X \leq 8$	Appropriate for the test

Contents of CONFIGURATION CHANGE ACKNOWLEDGE message (MS to SS)

Protocol Discriminator	Radio Resource
Skip Indicator	0000
Message type	00110001

Contents of CONFIGURATION CHANGE REJECT message (MS to SS)

Protocol Discriminator	Radio Resource
Skip Indicator	0000
Message type	00110011
RR Cause	Protocol Error Unspecified

Contents of CONNECT message (SS to MS)

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	As used in the SETUP message.
TI flag	1
Message Type	00000111
All other information elements	Not present.

Contents of CONNECT ACKNOWLEDGE message (MS to SS)

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	As used in the SETUP message.
TI flag	0
Message Type	0X001111

Contents of HANDOVER ACCESS message:

Handover Reference	Equal to the value included in the Handover Command message.
--------------------	--

Contents of HANDOVER COMMAND message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101011
Cell Description	
- Network Colour Code	1
- Base station Colour Code	Corresponding to target cell
- BCCH Carrier Number	Set to the BCCH carrier number of cell B. (one of 308, 310, 329, 331, 334, 337 or 340).
Channel Description 2	
- Channel Type and TDMA offset	Bm + ACCHs.
- Timeslot Number	Chosen arbitrarily by the test house.
- Training Sequence Code	Chosen arbitrarily by the test house.
- Hopping	Single RF channel.
- ARFCN	Chosen arbitrarily by the test house from those supported on the target cell.
Handover Reference	
- Handover Reference Value	Chosen arbitrarily by the test house.
Power Command	
- Power level	Chosen arbitrarily by the test house.
Multislot allocation	
- Downlink assignment	Appropriate for the test
- Uplink assignment	Appropriate for the test
- Channel set 1= $X \leq 8$	Appropriate for the test
Channel mode	Appropriate for the test

Contents of HANDOVER COMPLETE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101100
RR cause	Normal event.
Time difference	Not present.

Contents of HANDOVER FAILURE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101000
RR cause	Dependent on the test.

Contents of IMMEDIATE ASSIGNMENT message:

L2 pseudo length	This is the sum of the lengths of all the information elements present in the message except for the IA rest octets and L2 pseudo length IEs. For the default message the L2 pseudo length is 11.
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00111111
Page Mode	
- Page Mode	Normal Paging.
Channel Description	
- Channel Type and TDMA offset	For non-combined CCCH/SDCCH (see initial conditions), SDCCH/8, with subchannel chosen arbitrarily by the test house For combined CCCH/SDCCH (default SS conditions), SDCCH/4, with subchannel chosen arbitrarily by the test house.
- Timeslot Number	For non-combined CCCH/SDCCH (see initial conditions), chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, timeslot zero.
- Training Sequence Code	For non-combined CCCH/SDCCH (see initial conditions), chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, TSC=5 (same as the BCC).
- Hopping	Single RF channel.
- ARFCN	For non-combined CCCH/SDCCH (see initial conditions), Channel number 30; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, Channel number 310.
Request Reference	Pertaining to last Channel Request sent by the MS.
Timing Advance	
- Timing advance value	30 bit periods.
Mobile Allocation	
- Length	0
Starting Time	Not present.
IA rest octets	Not used (all bits set to spare).

Contents of IMMEDIATE ASSIGNMENT EXTENDED message:

L2 pseudo length	This is the sum of the lengths of all the information elements present in the message except for the IAX rest octets and L2 pseudo length IEs. For the default message the L2 pseudo length is 18.
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00111001
Page Mode	Normal Paging.
- Page Mode	
Channel Description 1	For non-combined CCCH/SDCCH (see test conditions), SDCCH/8, with subchannel chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, with subchannel chosen arbitrarily by the test house.
- Channel Type and TDMA offset	
	For non-combined CCCH/SDCCH (see test conditions), chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, timeslot zero.
- Timeslot Number	
	For non-combined CCCH/SDCCH (see initial conditions), chosen arbitrarily by the test house; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, TSC=5 (same as the BCC). Single RF channel.
- Training Sequence Code	
	For non-combined CCCH/SDCCH (see initial conditions), Channel number 30; For combined CCCH/SDCCH (default SS conditions), SDCCH/4, Channel number 310.
- Hopping	
- ARFCN	
Request Reference 1	Pertaining to last Channel Request sent by the MS.
Timing Advance 1	Chosen arbitrarily by the test house.
- Timing advance value	
Channel Description 2	Same channel type as in Channel Description 1, but different TDMA offset to that in Channel Description 1.
- Channel Type and TDMA offset	equal to the value in Channel Description 1.
	equal to the value in Channel Description 1.
- Timeslot Number	Single RF channel.
- Training Sequence Code	equal to the value in Channel Description 1.
- Hopping	Not pertaining to any Channel Requests sent by the MS.
- ARFCN	
Request Reference 2	
Timing Advance 2	Chosen arbitrarily by the test house.
- Timing advance value	
Mobile Allocation	
- Length	0
Starting Time	Not present.
IAX rest octets	Not used (all bits set to spare).

Contents of IMMEDIATE ASSIGNMENT REJECT message:

L2 pseudo length	19
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00111010
Page Mode	
- Page Mode	Normal Paging.
Request Reference	Pertaining to last Channel Request sent by the MS.
Wait Indication	0 seconds.
Request Reference	Not pertaining to the MS under test.
Wait Indication	0 seconds.
Request Reference	Not pertaining to the MS under test.
Wait Indication	0 seconds.
Request Reference	Not pertaining to the MS under test.
Wait Indication	0 seconds.
IAR rest octets	Not used (all bits set to spare).

Contents of LOCATION UPDATING REQUEST message:

Protocol Discriminator	MM message.
Skip Indicator	0000
Message Type	0X001000
Other information elements	Not checked.

Contents of PAGING REQUEST TYPE 1 message:

L2 pseudo length	This is the sum of the lengths of all the information elements present in the message except for the P1 rest octets and L2 pseudo length IEs. For the default message the L2 pseudo length is 9.
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00100001
Page Mode	
- Page Mode	Normal Paging.
Channels needed	
- first channel	any channel.
- second channel	any channel.
Mobile Identity 1	
- odd/even indication	Even.
- Type of Identity	TMSI.
- Identity Digits	TMSI previously allocated to MS.
Mobile Identity 2	Not present.
P1 rest octets	Not used (all bits set to spare).

Contents of PAGING REQUEST TYPE 2 message:

L2 pseudo length	This is the sum of the lengths of all the information elements present in the message except for the P2 rest octets and L2 pseudo length IEs. For the default message the L2 pseudo length is 11.
Protocol Discriminator	RR Management..
Skip Indicator	0000
Message Type	00100010
Page Mode	
- Page Mode	Normal Paging.
Channels needed	
- first channel	any channel.
- second channel	any channel.
Mobile Identity 1	
- TMSI value	TMSI previously allocated to MS.
Mobile Identity 2	
- TMSI value	TMSI not allocated to MS.
Mobile Identity	Not present.
P2 rest octets	Not used (all bits set to spare).

Contents of PAGING REQUEST TYPE 3 message:

L2 pseudo length	19
Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00100100
Page Mode	
- Page Mode	Normal Paging.
Channels needed	
- first channel	any channel.
- second channel	any channel.
Mobile identity 1	
- TMSI value	TMSI previously allocated to MS.
Mobile identity 2	
- TMSI value	TMSI not allocated to MS.
Mobile identity 3	
- TMSI value	TMSI not allocated to MS.
Mobile identity 4	
- TMSI value	TMSI not allocated to MS.
P3 rest octets	Not used (all bits set to spare).

Contents of PAGING RESPONSE message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00100111
Ciphering Key Sequence Number	
- Key Sequence	Key sequence number previously allocated to MS, or "111" if no key is available.
Mobile Station Classmark 2	
Mobile Identity	
- odd/even indication	Even
- Type of identity	TMSI
- Identity Digits	TMSI previously allocated to MS.

Contents of PHYSICAL INFORMATION message:

Protocol Discriminator	RR Management.
Skip Indicator	0000
Message Type	00101101
Timing advance	20 bit periods.

Contents of SETUP message; (MS to SS):

Protocol Discriminator	Call Control.
Transaction Identifier	
TI value	any value from the set {0, ..., 6}.
TI flag	0
Message Type	0X000101
Other information elements	Not checked.

26.13.2 Multislot signalling / CC

26.13.2.1 Multislot signalling / CC / In-call functions

26.13.2.1.1 Multislot signalling / CC / In-call functions / User initiated service level upgrade / successful

This test is applicable to all MS that supports multislot configuration.

26.13.2.1.1.1 Definition and applicability

Multislot connection is established. Multislot configuration with one TCH/F is allocated. User initiated service level upgrade is successfully performed.

This test is applicable for any equipment supporting multislot connection.

26.13.2.1.1.2 Conformance requirements

- 1) MS shall send MODIFY message to SS indicating that User initiated service level upgrade is initiated.
- 2) MS enters CC state 'Mobile originating modify (U26)' after sending MODIFY.
- 3) MS enters CC state 'Active (U10)' when MODIFY COMPLETE is received.

References

- Conformance requirement 1: GSM 04.08, section 9.3.13
- Conformance requirement 2: GSM 04.08, section 5.3.5.1
- Conformance requirement 3: GSM 04.08, section 5.3.5.2

26.13.2.1.1.3 Test purpose

- 1) To verify that the procedure is initiated by the MS in the "active" state of a multislot connection. It sends a MODIFY message including the wanted value of the "maximum number of traffic channels" and/or the "wanted air interface" parameters; and enters the "mobile originating modify" state. Other parameters of the bearer capability given in MODIFY message and already negotiated and agreed during the establishment phase of the call, may not be changed.
- 2) To verify that upon receipt of the MODIFY COMPLETE message with bearer capability negotiated at call setup in the MS enters the "active" state.

26.13.2.1.1.4 Method of test

Initial conditions

Mobile station:

- MS in the active state of a service using a multislot connection.

System simulator:

- 1 cell, default parameters except:
- Early classmark sending enabled in SI3 rest octets

Related PICS/PIXIT statement(s)

- Supported teleservices/bearer services
- Classmark
- Multislot class

Foreseen final state of the MS

MS is in the active state of a service using a multislot connection.

Test procedure

MS is in the active state of a multislot connection. Multislot configuration with one TCH/F is allocated. User initiates User initiated service level upgrade by sending MODIFY message including the wanted value of the Maximum number of traffic channels, this being one supported by the MS and channel modes supported by the MS. The MS enters 'mobile originating modify' state. This is verified by a status enquiry procedure.

MS receives MODIFY COMPLETE message from SS and enters the 'active' state. This is verified by a status enquiry procedure.

Maximum duration of test

3 min

Expected sequence

Step	Direction	Message	Comments
1	MS -> SS	MODIFY	User initiated service level upgrade is initiated.
2	MS		MS enters the Mobile originating modify state
3	SS -> MS	STATUS ENQUIRY	
4	MS -> SS	STATUS	Cause shall be 30# (response to enq.) and state U26 Mobile originated modify.
5	SS -> MS	MODIFY COMPLETE	
6	MS		MS enters the active state
7	SS -> MS	STATUS ENQUIRY	
8	MS -> SS	STATUS	Cause shall be 30# (response to enq.) and state U10 Active.

Specific message contents

MODIFY

Information element	Value/remark
Bearer capability	Maximum number of TCH/F's the MS is able to support and channel modes supported by the MS
Low layer comp.	Appropriate for the basic service selected for the test
High layer comp.	Appropriate for the basic service selected for the test
Reverse call setup direction	Presence and value not checked

26.13.2.1.2 Multislot signalling / CC / In-call functions / User initiated service level downgrade / successful

25.13.2.1.2.1 Definition and applicability

Multislot connection is established. Multislot configuration has the maximum number of timeslots supported by the MS. User initiated service level downgrade is successfully performed.

This test is applicable for any equipment supporting multislot configuration.

26.13.2.1.2.2 Conformance requirements

- 1) MS shall send MODIFY message to SS indicating that User initiated service level downgrade is initiated.
- 2) MS enters CC state 'Mobile originating modify (U26)' after sending MODIFY.
- 3) MS enters CC state 'Active (U10)' when MODIFY COMPLETE is received.

References

- Conformance requirement 1: GSM 04.08, section 9.3.13
- Conformance requirement 2: GSM 04.08, section 5.3.5.1
- Conformance requirement 3: GSM 04.08, section 5.3.5.2

26.13.2.1.2.3 Test purpose

- 1) To verify that the procedure is initiated by the MS in the "active" state of a multislot connection. It sends a MODIFY message including the wanted value of the "maximum number of traffic channels" and/or the "wanted air interface" parameters; and enters the "mobile originating modify" state. Other parameters of the bearer capability given in MODIFY message and already negotiated and agreed during the establishment phase of the call, may not be changed.
- 2) To verify that upon receipt of the MODIFY COMPLETE message with bearer capability negotiated at call setup in the MS enters the "active" state.

26.13.2.1.2.4 Method of test

Initial conditions

Mobile station:

- MS in the active state of a service using a multislot connection. Multislot configuration has maximum number of timeslots supported by the MS.

System simulator:

- 1 cell, default parameters except:

- Early classmark sending enabled in SI3 rest octets

Related PICS/PIXIT statement(s)

- Supported teleservices/bearer services
- Classmark
- Multislot class

Foreseen final state of the MS

MS is in the active state of a service using a multislot connection.

Test procedure

MS in the active state of a multislot connection. Multislot configuration has maximum number of timeslots supported by the MS. User initiates User initiated service level downgrade by sending MODIFY message including the wanted value of the Maximum number of traffic channels, this being one supported by the MS and channel modes supported by the MS. The MS enters 'mobile originating modify' state. This is verified by a status enquiry procedure. MS receives MODIFY COMPLETE message from SS and enters the active state. This is verified by a status enquiry procedure.

Maximum duration of test

3 min

Expected sequence

Step	Direction	Message	Comments
1	MS -> SS	MODIFY	User initiated service level downgrade is initiated.
2	MS		MS enters the Mobile originating modify state
3	SS -> MS	STATUS ENQUIRY	
4	MS -> SS	STATUS	Cause shall be 30# (response to enq.) and state U26 Mobile originated modify.
5	SS -> MS	MODIFY COMPLETE	
6	MS		MS enters the active state
7	SS -> MS	STATUS ENQUIRY	
8	MS -> SS	STATUS	Cause shall be 30# (response to enq.) and state U10 Active.

Specific message contents

MODIFY

Information element	Value/remark
Bearer capability	One TCH/F is indicated and the channel modes supported by the MS
Low layer comp.	Appropriate for the basic service selected for the test
High layer comp.	Appropriate for the basic service selected for the test
Reverse call setup direction	Presence and value not checked

26.13.2.1.3 Multislot signalling / CC / In-call functions / User initiated service level upgrade / Time-out of timer T323

26.13.2.1.3.1 Definition and applicability

Multislot connection is established. Multislot configuration with one TCH/F is allocated. User initiated service level upgrade is requested. Timer T323 expires. Call is cleared.

This test is applicable for any equipment supporting multislot configuration.

26.13.2.1.3.2 Conformance requirements

- 1) MS shall send MODIFY message to SS indicating that User initiated service level upgrade is initiated.
- 2) After timer T323 has expired MS starts call clearing by sending DISCONNECT message.
- 3) After receipt of RELEASE message the MS sends RELEASE COMPLETE message and goes to idle updated state.

References

Conformance requirement 1: GSM 04.08, section 9.3.13

Conformance requirement 2: GSM 04.08, section 9.3.7

Conformance requirement 3: GSM 04.08, sections 9.3.18 and 9.1.7 and 5.4.4.2.2

26.13.2.1.3.3 Test purpose

- 1) To verify that upon expiration of T323 (accuracy +/- 10%) the MS shall initiate the procedures for call clearing with cause #102 "recovery on timer expiry".

26.13.2.1.3.4 Method of test

Initial conditions

Mobile station:

- MS in the active state of a service using a multislot connection.

System simulator:

- 1 cell, default parameters

Related PICS/PIXIT statement(s)

- Supported teleservices/bearer services
- Classmark
- Multislot class

Foreseen final state of the MS

"Idle, updated", with TMSI allocated.

Test procedure

MS is in the active state of a multislot connection. Multislot configuration with one TCH/F is allocated. User initiates User initiated service level upgrade by sending MODIFY message including the wanted value of the Maximum number of traffic channels, this being one supported by the MS and channel modes supported by the MS.

Timer T323 expires and MS starts call clearing procedure by sending DISCONNECT message to SS. After MS receives RELEASE message it sends RELEASE COMPLETE message. SS sends CHANNEL RELEASE message to MS and the main signalling link is released.

Maximum duration of test

3 min

Expected sequence

Step	Direction	Message	Comments
1	MS -> SS	MODIFY	User initiated service level upgrade is initiated.
2	MS		Timer T323 expires
3	MS -> SS	DISCONNECT	Cause = #102 "recovery on timer expiry"
4	SS -> MS	RELEASE	
5	MS -> SS	RELEASE COMPLETE	
6	SS -> MS	CHANNEL RELEASE	The main signalling link is released

Specific message contents

MODIFY

Information element	Value/remark
Bearer capability	Maximum number of TCH/F's the MS is able to support and channel modes supported by the MS
Low layer comp.	Appropriate for the basic service selected for the test
High layer comp.	Appropriate for the basic service selected for the test
Reverse call setup direction	Presence and value not checked

26.13.2.1.4 Multislot signalling / CC / In-call functions / User initiated service level upgrade / modify reject

26.13.2.1.4.1 Definition and applicability

Multislot connection is established. Multislot configuration with one TCH/F is allocated. User initiated service level upgrade is requested. SS responds to upgrade request by rejecting it. MS enters the active multislot connection state.

This test is applicable for any equipment supporting multislot configuration.

26.13.2.1.4.2 Conformance requirements

- 1) MS shall send MODIFY message to SS indicating that User initiated service level upgrade is initiated.
- 2) MS enters CC state 'Mobile originating modify (U26)' after sending MODIFY.
- 3) MS enters CC state 'Active (U10)' when MODIFY REJECT is received.

References

- Conformance requirement 1: GSM 04.08, section 9.3.13
- Conformance requirement 2: GSM 04.08, section 5.3.5.1
- Conformance requirement 3: GSM 04.08, section 5.3.5.3

26.13.2.1.4.3 Test purpose

- 1) To verify that upon receipt of the MODIFY REJECT message with the bearer capability negotiated at the call setup, the MS is continuously sending user information according to current call mode.

26.13.2.1.4.4 Method of test

Initial conditions

Mobile station:

- MS in the active state of a service using a multislot connection.

System simulator:

- 1 cell, default parameters

Related PICS/PIXIT statement(s)

- Supported teleservices/bearer services
- Classmark
- Multislot class

Foreseen final state of the MS

MS is in the active state of a service using a multislot connection.

Test procedure

MS is in the active state of a multislot connection. Multislot configuration with one TCH/F is allocated. Then user initiates User initiated service level upgrade by sending MODIFY message including the wanted value of the Maximum number of traffic channels, this being one supported by the MS and channel modes supported by the MS. The MS enters 'mobile originating modify' state. This is verified by a status enquiry procedure. SS responds to MODIFY message by sending MODIFY REJECT message to MS. MS enters the active state. This is verified by a status enquiry procedure. Maximum duration of test

1 min

Expected sequence

Step	Direction	Message	Comments
1	MS -> SS	MODIFY	User initiated service level upgrade is initiated.
2	SS -> MS	STATUS ENQUIRY	Cause shall be 30# (response to enq.) and state U26 Mobile originated modify.
3	MS -> SS	STATUS	
4	SS -> MS	MODIFY REJECT	
5	MS		Cause = #58 "bearer capability not presently available". MS enters in the active state of multislot call
6	SS -> MS	STATUS ENQUIRY	Cause shall be 30# (response to enq.) and state U10 Active.
7	MS -> SS	STATUS	

Specific message contents

MODIFY

Information element	Value/remark
Bearer capability	Maximum number of TCH/F's the MS is able to support and channel modes supported by the MS
Low layer comp.	Appropriate for the basic service selected for the test
High layer comp.	Appropriate for the basic service selected for the test
Reverse call setup direction	Presence and value not checked

26.13.2.1.5 Multislot signalling / CC / In call functions / contents of some of the messages

The following messages are used for testing in-call modification procedures, test cases 26.13.2.1.*, as default messages for those ones defined below. If any other values are defined in the expected sequence of the actual test cases, those values take precedence over the ones defined hereafter.

SETUP (MS to SS)

Information element	Value/remark
BC Repeat indicator	Omitted
Bearer capability 1	Appropriate for the teleservice/Bearer Service selected as an initial call mode
Bearer capability 2	Omitted
Facility	Omitted
Calling party subaddress	Omitted
Called party BCD number	As entered
Called party subaddress	Omitted
LLC repeat indicator	Omitted
Low layer compatibility I	See note 1
Low layer compatibility II	Omitted
HLC repeat indicator	Omitted
High layer compatibility I	See note 1
High layer compatibility ii	Omitted
User-user	Omitted
SS version	Omitted
CLIR suppression	Omitted
CC Capabilities	present, but contents not checked

NOTE 1: HLC/LLC may or may not be present. The contents of HLC/LLC are not verified.

CALL PROCEEDING

Information element	Value/remark
Repeat Indicator	Omitted
Bearer Capability 1	GSM 04.08 section 10.5.4.5
Bearer Capability 2	Omitted
Facility	Omitted
Progress indicator	Omitted

MODIFY

Information element	Value/remark
Bearer capability	Appropriate for the selected test
Low layer comp.	Appropriate for the basic service selected for the test
High layer comp.	Appropriate for the basic service selected for the test
Reverse call setup direction	Presence and value not checked

MODIFY COMPLETE

Information element	Value/remark
Bearer capability	Appropriate for the selected test
Low layer comp.	Appropriate for the basic service selected for the test
High layer comp.	Appropriate for the basic service selected for the test
Reverse call setup direction	Presence and value not checked

MODIFY REJECT

Information element	Value/remark
Bearer capability	Appropriate for the selected test
Cause	#58 "bearer capability not presently available".
Low layer compatibility	Appropriate for the basic service selected for the test
High layer compatibility	Appropriate for the basic service selected for the test

26.13.3 Multislot signalling / Structured procedures

26.13.3.1 Multislot signalling / Structured procedures / MS originated call / early assignment / HSCSD / non-transparent

This test is applicable to all MS that supports multislot configuration.

26.13.3.1.1 Conformance requirements

- 1) An MS in MM state "idle, updated" and in RR idle mode, when made to initiate a call, if it provides a human interface, shall display the dialled number.
- 2) An MS in MM state "idle, updated" and in RR idle mode, when made to initiate a call for a selected teleservice/bearer service for HSCSD that is supported by the MS, starts to initiate the immediate assignment procedure by sending a CHANNEL REQUEST message with correct establishment cause.
- 3) Subsequently after establishment of a MM connection, after MS sends its multislot class in CLASSMARK CHANGE message, the MS shall send a SETUP message with correct parameters.
- 4) The call control entity of the Mobile Station in the "call initiated" state, in the "mobile originating call proceeding" state or in the "call delivered" state, shall, upon receipt of a CONNECT message:
 - 4.1) attach the user connection to the radio path;
 - 4.2) return a CONNECT ACKNOWLEDGE message;
 - 4.3) establish the RLP link.
- 5) User initiated service level upgrade is initiated by sending MODIFY message. After receipt of MODIFY COMPLETE message MS enters the active state.

- 6) After receipt of a CONFIGURATION CHANGE COMMAND message MS sends CONFIGURATION CHANGE ACKNOWLEDGE message.
- 7) Subsequently when the network initiates call clearing by sending a DISCONNECT message, the MS shall proceed to release the call by sending a RELEASE message.
- 8) On receipt of a CHANNEL RELEASE message, the MS shall disconnect the main signalling link.

Reference

- Conformance requirement 1: GSM 02.07
- Conformance requirement 2: GSM 04.08 sections 3.3.1.1 and 9.1.8 and 9.1.18
- Conformance requirement 3: GSM 04.08 sections 3.4.10 and 9.1.11 and 9.3.23
- Conformance requirement 4: GSM 04.08 sections 9.3.5 and 9.3.6, GSM 07.01 section 8
- Conformance requirement 5: GSM 04.08 sections 9.3.13 and 9.3.14
- Conformance requirement 6: GSM 04.08 sections 9.1.12b and 9.1.12c
- Conformance requirement 7: GSM 04.08 sections 5.4.4.2.2 and 9.3.7 and 9.3.18
- Conformance requirement 8: GSM 04.08 section 9.1.7

26.13.3.1.2 Test purpose

- 1) To verify that the MS in MM state "idle, updated" with a TMSI assigned, when made to initiate a call for a selected teleservice/bearer service for HSCSD that is supported by the MS as declared in a PICS/PIXIT statement, displays the dialled number in the way described in a PICS/PIXIT statement.
- 2) To verify that the MS in MM state "idle, updated" and in RR idle mode, with a TMSI assigned, when made to initiate a call for a selected teleservice/bearer service for HSCSD that is supported by the MS as declared in a PICS/PIXIT statement, starts to initiate an immediate assignment procedure by sending the CHANNEL REQUEST message with correct establishment cause.
- 3) To verify that subsequently after receipt of an IMMEDIATE ASSIGNMENT message allocating an SDCCH, after completion of establishment of the main signalling link, after having sent a CM SERVICE REQUEST message, after MS sends its multislot class in CLASSMARK CHANGE message, after having successfully performed the authentication and cipher mode setting procedures, the MS sends a SETUP message with correct parameters.
- 4) Multislot configuration with one TCH/F is allocated. To verify that subsequently, after receipt of a CALL PROCEEDING message and of an ASSIGNMENT COMMAND message allocating an appropriate TCH, after having completed the early assignment procedure by replying with the ASSIGNMENT COMPLETE message, after receipt of an ALERTING message and a CONNECT message, the MS returns a CONNECT ACKNOWLEDGE message.
- 5) To verify that subsequently the MS has attached the user connection to the radio path. This is verified by checking that the MS establishes the RLP link correctly and sends and receives correct RLP frames in each data block.
- 6) To verify that subsequently upon user requests User initiated service level upgrade, the MS sends MODIFY message and after receipt of MODIFY COMPLETE message the MS enters the active state.
- 7) To verify that subsequently, after receipt of a CONFIGURATION CHANGE COMMAND, after MS sends CONFIGURATION CHANGE ACKNOWLEDGE, MS through connects all bi-directional channel(s) in multislot configuration in both directions and all uni-directional channels in downlink direction. Multislot configuration is upgraded from the simplest case up to the maximum number of channels supported by MS in the HSCSD configuration. This is verified by checking that the MS sends and receives correct RLP frames in each data block.
- 8) To verify that subsequently upon the network initiating call clearing by sending a DISCONNECT message, the MS proceed to release the call with RELEASE.

- 9) To verify that subsequently, on receipt of a RELEASE COMPLETE message followed by a CHANNEL RELEASE message, the MS disconnects the main signalling link.

26.13.3.1.3 Method of test

Initial conditions

Mobile Station:

- The MS is in MM-state "idle, updated" with valid TMSI and CKSN.

System Simulator:

- 1 cell, default parameters except:
- Early classmark sending enabled in SI3 rest octets

Related PICS/PIXIT statement(s)

- Interface to human user (p1 = Y/N)
- Way to display the called number (only applicable if the MS has an interface to human user)
- Supported teleservices/bearer services
- Classmark
- Multislot class

Foreseen final state of the MS

MS is in MM-state "idle, updated" with valid TMSI and CKSN.

Test procedure

The MS is made to initiate a HSCSD connection. The call is established with early assignment. MS enters the active state. Multislot configuration with one TCH/F is allocated. User initiated service level upgrade is successfully performed. The SS sends CONFIGURATION CHANGE COMMAND message to MS and it reply's with CONFIGURATION CHANGE ACKNOWLEDGE message. This is repeated from simplest case up to the maximum number of channels supported by the MS in the HSCSD configuration (this is performed within highest multislot class that the MS supports).

Maximum duration of test

7 min

Expected Sequence

Step	Direction	Message	Comments
1	MS		The "called number" is entered
2	MS		If p1 = Y, the MS must display the called number in the way defined in PICS/PIXIT.
3	MS -> SS	CHANNEL REQUEST	Establishment cause is "Originating call and TCH/F is needed, or originating call and the network does not set NECI bit to 1"
4	SS -> MS	IMMEDIATE ASSIGNMENT	
5	MS -> SS	CM SERVICE REQUEST	Message is contained in SABM
6	MS -> SS	CLASSMARK CHANGE	Multislot class
7	SS -> MS	AUTHENTICATION REQUEST	
8	MS -> SS	AUTHENTICATION RESPONSE	SRES specifies correct value.
9	SS -> MS	CIPHERING MODE COMMAND	SS starts deciphering after sending the message.
10	MS -> SS	CIPHERING MODE COMPLETE	Shall be sent enciphered. All following messages shall be sent enciphered.
11	SS		SS starts ciphering.
12	MS -> SS	SETUP	Non-transparent connection
13	SS -> MS	CALL PROCEEDING	
14	SS -> MS	ASSIGNMENT COMMAND	In multislot allocation only one timeslot is allocated.
15	MS -> SS	ASSIGNMENT COMPLETE	
16	SS -> MS	ALERTING	
17	MS		
18	SS -> MS	CONNECT	
19	MS -> SS	CONNECT ACKNOWLEDGE	
20	MS		The appropriate bearer channel is through connected in both directions. The RLP link establishment is initiated by the MS.
21	MS -> SS	MODIFY	User initiated service level upgrade is initiated
22	SS -> MS	MODIFY COMPLETE	
23	MS		MS enters the active state
24			Next three steps are performed as many times as used multislot class has different channel combinations. Timeslot allocation starts from simplest case and is upgraded up to the maximum that MS multislot class supports, one step at the time (within highest multislot class that the MS supports).
24A	SS -> MS	CONFIGURATION CHANGE COMMAND	Appropriate number of timeslots is selected.
24B	MS -> SS	CONFIGURATION CHANGE ACKNOWLEDGE	
24C	MS		TCH(s) shall be through connected in both directions
25	SS -> MS	DISCONNECT	
26	MS -> SS	RELEASE	
27	SS -> MS	RELEASE COMPLETE	
28	SS -> MS	CHANNEL RELEASE	The main signalling link is released

26.13.3.2 Multislot signalling / Structured procedures / MS originated call / late assignment / HSCSD / non-transparent

This test is applicable to all MS that supports multislot configuration.

26.13.3.2.1 Conformance requirements

- 1) An MS in MM state "idle, updated" and in RR idle mode with a TMSI assigned, when made to initiate a call for a selected teleservice/bearer service for HSCSD that is supported by the MS, shall start to initiate an immediate assignment procedure by sending the CHANNEL REQUEST message with correct establishment cause.

- 2) Subsequently after establishment of a MM connection, after MS sends its multislot class in CLASSMARK CHANGE message, the MS shall send a SETUP message with correct parameters.
- 3) Upon receipt of the ASSIGNMENT COMMAND message, the Mobile Station initiates a local end release of link layer connections, disconnects the physical channels, commands the switching to the assigned channels and initiates the establishment of lower layer connections (this includes the activation of the channels, their connection and the establishment of the data links). After the main signalling link is successfully established, the MS returns an ASSIGNMENT COMPLETE message, specifying cause "normal event", to the network on the main DCCH.
- 4) The call control entity of the Mobile Station in the "call initiated" state, in the "mobile originating call proceeding" state or in the "call delivered" state, shall, upon receipt of a CONNECT message:
 - 4.1) attach the user connection to the radio path;
 - 4.2) return a CONNECT ACKNOWLEDGE message;
- 4.3) establish the RLP link.
- 5) MS sends User initiated service level upgrade with MODIFY message and after receipt of MODIFY COMPLETE message the MS enters the active state.
- 6) MS receives CONFIGURATION CHANGE COMMAND and answers to it by sending CONFIGURATION CHANGE ACKNOWLEDGE message.
- 7) Subsequently when the network initiates call clearing by sending a DISCONNECT message, the MS shall proceed to release the call by sending a RELEASE message.
- 8) On receipt of a CHANNEL RELEASE message, the MS shall disconnect the main signalling link.

Reference

- Conformance requirement 1: GSM 02.07 and GSM 04.08 sections 3.3.1.1 and 9.1.8
- Conformance requirement 2: GSM 04.08 sections 9.1.11 and 9.3.23
- Conformance requirement 3: GSM 04.08 sections 3.4.3, 9.1.2 and 9.1.3
- Conformance requirement 4: GSM 04.08 sections 9.3.5 and 9.3.6, GSM 07.01 section 8
- Conformance requirement 5: GSM 04.08 sections 9.3.13 and 9.3.14
- Conformance requirement 6: GSM 04.08 sections 9.1.12b and 9.1.12c
- Conformance requirement 7: GSM 04.08 sections 9.3.7 and 9.3.18 and 5.4.4.2.2
- Conformance requirement 8: GSM 04.08 section 9.1.7

26.13.3.2.2 Test purpose

- 1) To verify that the MS in MM state "idle, updated" and in RR idle mode with a TMSI assigned, when made to initiate a call for a selected teleservice/bearer service for HSCSD that is supported by the MS as declared in a PICS/PIXIT statement, starts to initiate an immediate assignment procedure by sending the CHANNEL REQUEST message.
- 2) Multislot configuration with one TCH/F is allocated. To verify that subsequently after receipt of an IMMEDIATE ASSIGNMENT message allocating an SDCCH, after completion of establishment of the main signalling link, after having sent a CM SERVICE REQUEST message, after MS sends its multislot class in CLASSMARK CHANGE message, after having successfully performed the authentication and cipher mode setting procedures, after having sent a SETUP message, after having received of a CALL PROCEEDING message followed by an ALERTING message and an ASSIGNMENT COMMAND message allocating an appropriate TCH, the MS sends an ASSIGNMENT COMPLETE message.

- 3) To verify that subsequently, after the suite of actions specified in test purposes 1 and 2, the MS after receiving a CONNECT message returns a CONNECT ACKNOWLEDGE message.
- 4) To verify that subsequently the MS has attached the user connection to the radio path. This is verified by checking that the MS establishes the RLP link correctly and sends and receives correct RLP frames in each data block.
- 5) To verify that subsequently upon user requests User initiated service level upgrade, the MS sends MODIFY message and after receipt of MODIFY COMPLETE message the MS enters the active state.
- 6) To verify that subsequently, after receipt of a CONFIGURATION CHANGE COMMAND, after MS sends CONFIGURATION CHANGE ACKNOWLEDGE, MS through connects all bi-directional channel(s) in multislot configuration in both directions and all uni-directional channels in downlink direction. Multislot configuration is upgraded from the simplest case up to the maximum number of channels supported by MS in the HSCSD configuration. This is verified by checking that the MS sends and receives correct RLP frames in each data block.
- 7) To verify that subsequently upon the network initiating call clearing by sending a DISCONNECT message, the MS proceed to release the call with RELEASE.
- 8) To verify that subsequently, on receipt of a RELEASE COMPLETE message followed by a CHANNEL RELEASE message, the MS disconnects the main signalling link.

26.13.3.2.3 Method of test

Initial conditions

Mobile Station:

- The MS is in MM-state "idle, updated" with valid TMSI and CKSN.

System Simulator:

- 1 cell, default parameters except:
- Early classmark sending enabled in SI3 rest octets

Related PICS/PIXT statement(s)

- Interface to human user (p1 = Y/N)
- Way to display the called number (only applicable if the MS has an interface to human user)
- Supported teleservices/bearer services
- Classmark
- Multislot class

Foreseen final state of the MS

MS is in MM-state "idle, updated" with valid TMSI and CKSN.

Test procedure

The MS is made to initiate a HSCSD connection. The call is established with late assignment. MS enters the active state. Multislot configuration with one TCH/F is allocated. User initiated service level upgrade is successfully performed. The SS sends CONFIGURATION CHANGE COMMAND message to MS and it reply's with CONFIGURATION CHANGE ACKNOWLEDGE message. This is done from simplest case up to the maximum number of channels supported by the MS in the HSCSD configuration (this is performed within highest multislot class that MS supports).

Maximum duration of test

7 min

Expected Sequence

Step	Direction	Message	Comments
1	MS		The "called number" is entered
2	MS		If p1 = Y, the MS must display the called number in the way defined in PICS/PIXIT.
3	MS -> SS	CHANNEL REQUEST	Establishment cause is "Originating call and TCH/F is needed, or originating call and the network does not set NECI bit to 1"
4	SS -> MS	IMMEDIATE ASSIGNMENT	
5	MS -> SS	CM SERVICE REQUEST	Message is contained in SABM
6	MS -> SS	CLASSMARK CHANGE	Multislot class
7	SS -> MS	AUTHENTICATION REQUEST	
8	MS -> SS	AUTHENTICATION RESPONSE	SRES specifies correct value.
9	SS -> MS	CIPHERING MODE COMMAND	SS starts deciphering after sending the message.
10	MS -> SS	CIPHERING MODE COMPLETE	Shall be sent enciphered. All following messages shall be sent enciphered.
11	SS		SS starts ciphering.
12	MS -> SS	SETUP	Non-transparent connection
13	SS -> MS	CALL PROCEEDING	
14	SS -> MS	ALERTING	
15	MS		
16	SS -> MS	ASSIGNMENT COMMAND	In multislot allocation only one timeslot is allocated.
17	MS -> SS	ASSIGNMENT COMPLETE	
18	SS -> MS	CONNECT	
19	MS -> SS	CONNECT ACKNOWLEDGE	
20	MS		The appropriate bearer channel is through connected in both directions. The RLP link establishment is initiated by the MS.
21	MS -> SS	MODIFY	User initiated service level upgrade is initiated
22	SS -> MS	MODIFY COMPLETE	
23	MS		MS enter the active state
24			Next three steps are performed as many times as used multislot class has different channel combinations. Timeslot allocation starts from simplest case and is upgraded up to the maximum that MS multislot class supports, one step at the time (within highest multislot class that the MS supports).
24A	SS -> MS	CONFIGURATION CHANGE COMMAND	Appropriate number of timeslots is selected.
24B	MS -> SS	CONFIGURATION CHANGE ACKNOWLEDGE	
24C	MS		TCH(s) shall be through connected in both directions
25	SS -> MS	DISCONNECT	
26	MS -> SS	RELEASE	
27	SS -> MS	RELEASE COMPLETE	
28	SS -> MS	CHANNEL RELEASE	The main signalling link is released

26.13.3.3 Multislot signalling / Structured procedures / MS originated call / early assignment / HSCSD / Transparent

This test is applicable to all MS that supports multislot configuration.

26.13.3.3.1 Conformance requirement

- 1) An MS in MM state "idle, updated" and in RR idle mode, when made to initiate a call, if it provides a human interface, shall display the dialled number.
- 2) An MS in MM state "idle, updated" and in RR idle mode, when made to initiate a call for a selected teleservice/bearer service for HSCSD that is supported by the MS, starts to initiate the immediate assignment procedure by sending a CHANNEL REQUEST message with correct establishment cause.
- 3) Subsequently after establishment of a MM connection, after MS sends its multislot class in CLASSMARK CHANGE message, the MS shall send a SETUP message with correct parameters.
- 4) The call control entity of the Mobile Station in the "call initiated" state, in the "mobile originating call proceeding" state or in the "call delivered" state, shall, upon receipt of a CONNECT message:
 - 4.1) attach the user connection to the radio path;
 - 4.2) return a CONNECT ACKNOWLEDGE message.
 - 4.3) establish the TDS link.
- 5) Subsequently when the network initiates call clearing by sending a DISCONNECT message, the MS shall proceed to release the call by sending a RELEASE message.
- 6) On receipt of a CHANNEL RELEASE message, the MS shall disconnect the main signalling link.

Reference

- Conformance requirement 1: GSM 02.07
- Conformance requirement 2: GSM 02.07 and GSM 04.08 sections 3.3.1.1 and 9.1.8
- Conformance requirement 3: GSM 04.08 sections 9.1.11 and 9.3.23
- Conformance requirement 4: GSM 04.08 sections 9.3.5 and 9.3.6, GSM 07.01 section 8
- Conformance requirement 5: GSM 04.08 sections 9.3.7 and 9.3.18 and 5.4.4.2.2
- Conformance requirement 6: GSM 04.08 section 9.1.7

26.13.3.3.2 Test purpose

- 1) To verify that the MS in MM state "idle, updated" with a TMSI assigned, when made to initiate a call for a selected teleservice/bearer service for HSCSD that is supported by the MS as declared in a PICS/PIXIT statement, displays the dialled number in the way described in a PICS/PIXIT statement.
- 2) To verify that the MS in MM state "idle, updated" and in RR idle mode, with a TMSI assigned, when made to initiate a call for a selected teleservice/bearer service for HSCSD that is supported by the MS as declared in a PICS/PIXIT statement, starts to initiate an immediate assignment procedure by sending the CHANNEL REQUEST message with correct establishment cause.
- 3) To verify that subsequently after receipt of an IMMEDIATE ASSIGNMENT message allocating an SDCCH, after completion of establishment of the main signalling link, after having sent a CM SERVICE REQUEST message, after MS sends its multislot class in CLASSMARK CHANGE message, after having successfully performed the authentication and cipher mode setting procedures, the MS sends a SETUP message with correct parameters.
- 4) Multislot configuration with maximum number of channels supported by MS in a HSCSD configuration, is allocated. To verify that subsequently, after receipt of a CALL PROCEEDING message and of an ASSIGNMENT COMMAND message allocating an appropriate TCHs, after having completed the early assignment procedure for all traffic channel in multislot configuration by replying with the ASSIGNMENT COMPLETE message, after receipt of an ALERTING message and a CONNECT message, the MS returns a CONNECT ACKNOWLEDGE message.

- 5) To verify that subsequently the MS has attached the user connection to the radio path. This is verified by checking that the MS synchronises correctly to the TCHs and sends and receives correct data frames in each data block.
- 6) To verify that subsequently upon the network initiating call clearing by sending a DISCONNECT message, the MS proceed to release the call with RELEASE.
- 7) To verify that subsequently, on receipt of a RELEASE COMPLETE message followed by a CHANNEL RELEASE message, the MS disconnects the main signalling link.

26.13.3.3.3 Method of test

Initial conditions

Mobile Station:

- The MS is in MM-state "idle, updated" with valid TMSI and CKSN.

System Simulator:

- 1 cell, default parameters except:
- Early classmark sending enabled in SI3 rest octets

Related PICS/PIXIT statement(s)

- Interface to human user (p1 = Y/N)
- Way to display the called number (only applicable if the MS has an interface to human user)
- Supported teleservices/bearer services - Classmark
- Multislot class

Foreseen final state of the MS

MS is in MM-state "idle, updated" with valid TMSI and CKSN.

Test procedure

The MS is made to initiate a HSCSD connection. Maximum number of channels supported by the MS in a HSCSD configuration, is allocated. The call is established with early assignment. Having reached the active state, the call is cleared by the SS.

Maximum duration of test

7 min

Expected sequence

Step	Direction	Message	Comments
1	MS		The "called number" is entered
2	MS		If p1 = Y, the MS must display the called number in the way defined in PICS/PIXIT.
3	MS -> SS	CHANNEL REQUEST	Establishment cause is "Originating call and TCH/F is needed, or originating call and the network does not set NECI bit to 1"
4	SS -> MS	IMMEDIATE ASSIGNMENT	
5	MS -> SS	CM SERVICE REQUEST	Message is contained in SABM
6	MS -> SS	CLASSMARK CHANGE	Multislot class
7	SS -> MS	AUTHENTICATION REQUEST	
8	MS -> SS	AUTHENTICATION RESPONSE	SRES specifies correct value.
9	SS -> MS	CIPHERING MODE COMMAND	SS starts deciphering after sending the message.
10	MS -> SS	CIPHERING MODE COMPLETE	Shall be sent enciphered. All following messages shall be sent enciphered.
11	SS		SS starts ciphering.
12	MS -> SS	SETUP	Transparent connection
13	SS -> MS	CALL PROCEEDING	
14	SS -> MS	ASSIGNMENT COMMAND	In multislot allocation maximum number of timeslots, that MS supports, is allocated.
15	MS -> SS	ASSIGNMENT COMPLETE	
16	SS -> MS	ALERTING	
17	MS		
18	SS -> MS	CONNECT	
19	MS -> SS	CONNECT ACKNOWLEDGE	
20	MS		The appropriate bearer channel is through connected in both directions
21	SS -> MS	DISCONNECT	
22	MS -> SS	RELEASE	
23	SS -> MS	RELEASE COMPLETE	
24	SS -> MS	CHANNEL RELEASE	The main signalling link is released

26.13.3.4 Multislot signalling / Structured procedures / MS Terminated call / early assignment / HSCSD / non-transparent

This test is applicable to all MS that supports multislot configuration.

26.13.3.4.1 Conformance requirement

- 1) The MS is in MM state "idle, updated" and in RR idle mode when being paged by the network.
- 2) The MS sends CHANNEL REQUEST message to the network and after that it receives IMMEDIATE ASSIGNMENT message from the network
- 3) The MS sends PAGING RESPONSE message to network and after that MS sends its multislot class in CLASSMARK CHANGE message to the network.
- 4) The MS performs successfully authentication and cipher mode setting procedures.
- 5) The MS shall acknowledge the SETUP message with a CALL CONFIRMED message, if compatibility checking was successful, the MS is not busy, and the user does not refuse the call.
- 6) Upon receipt of the ASSIGNMENT COMMAND message the MS continues a mobile terminating call establishment with early establishment of the traffic channel(s)
 - 6.1) by replying to the ASSIGNMENT COMMAND with an ASSIGNMENT COMPLETE message, and

- 6.2) if the MS supports immediate connect, by continuing the call establishment by through-connecting the traffic channel(s) in both directions, or if the MS does not support immediate connect, by sending an ALERTING message
- 7) An MS indicates acceptance of a MT call by sending CONNECT.
 - 8) After receiving the CONNECT ACKNOWLEDGE message from the network the MS shall establish the RLP link.
 - 9) User requests User initiated service level upgrade. MS sends MODIFY message and after receipt of MODIFY COMPLETE message the MS enters the active state.
 - 10) MS receives CONFIGURATION CHANGE COMMAND message and reply's to SS by sending CONFIGURATION CHANGE ACKNOWLEDGE message.
 - 11) The MS initiates call clearing of an active call by sending a DISCONNECT message.
 - 12) The MS in this phase of call release, upon receipt of a RELEASE message, shall return a RELEASE COMPLETE message.
 - 13) Subsequently the MS, upon receipt of a CHANNEL RELEASE message, shall disconnect the main signalling link.

Reference

- | | |
|-----------------------------|--|
| Conformance requirement 1: | GSM 02.07 |
| Conformance requirement 2: | GSM 04.08 sections 3.3.1.1 and 9.1.8 |
| Conformance requirement 3: | GSM 04.08 sections 3.3.2.2, 9.1.25 and 9.1.11 |
| Conformance requirement 4: | GSM 04.08 sections 4.3.2, 9.2.2, 9.2.3, 3.4.7, 9.1.9, 9.1.10 |
| Conformance requirement 5: | GSM 04.08, sections 9.3.23 and 9.3.2 |
| Conformance requirement 6: | GSM 04.08 sections 9.1.2 and 9.1.3 and 5.2.1.5 and 9.3.1 |
| Conformance requirement 7: | GSM 04.08 section 9.3.5 |
| Conformance requirement 8: | GSM 04.08 section 9.3.6, GSM 07.01 section 8 |
| Conformance requirement 9: | GSM 04.08 sections 9.3.13 and 9.3.14 |
| Conformance requirement 10: | GSM 04.08 sections 9.1.12b and 9.1.12c |
| Conformance requirement 11: | GSM 04.08 section 9.3.7 |
| Conformance requirement 12: | GSM 04.08 sections 9.3.18 and 9.3.19 and 5.4.4.2.2 |
| Conformance requirement 13: | GSM 04.08 section 9.1.7 |

26.13.3.4.2 Test purpose

- 1) To verify that the MS in MM state "idle, updated" and in RR idle mode with a TMSI assigned, after being paged by the network on the correct paging subchannel, after initiating the immediate assignment procedure by sending the CHANNEL REQUEST message, after receipt of an IMMEDIATE ASSIGNMENT message allocating an SDCCH, after having sent a PAGING RESPONSE message on the allocated SDCCH, after having sent multislot class in CLASSMARK CHANGE message, after having performed successful authentication and cipher mode setting procedures, after receipt of a SETUP message not containing a signal information element, returns a CALL CONFIRMED message.
- 2) Multislot configuration with one TCH/F is allocated. To verify that subsequently, the SS sending an ASSIGNMENT COMMAND message, the MS successfully continues a mobile terminating call establishment with early assignment of traffic channel(s):
 - 2.1) by replying to the ASSIGNMENT COMMAND with an ASSIGNMENT COMPLETE message, and

- 2.2) by continuing the call establishment by either sending a CONNECT message or sending an ALERTING message depending on PICS/PIXIT statement.
- 3) To verify that the MS generates an alerting indication if an ALERTING message had to be sent.
 - 4) To verify that if an ALERTING had been sent, subsequently, when the user accepts the call (possibly internal action as declared in PICS/PIXIT statement), the MS returns a CONNECT message.
 - 5) To verify that the MS after receipt of a CONNECT ACKNOWLEDGE message subsequently attaches the user connection to the radio path. This is verified by checking that the MS establishes the RLP link correctly and sends and receives correct RLP frames in each data block.
 - 6) To verify that subsequently upon user requests User initiated service level upgrade, the MS send MODIFY message and after receipt of MODIFY COMPLETE message the MS enters the active state.
 - 7) To verify that subsequently, after receipt of a CONFIGURATION CHANGE COMMAND, after MS sends CONFIGURATION CHANGE ACKNOWLEDGE, MS through connects all bi-directional channel(s) in multislot configuration in both directions and all uni-directional channels in downlink direction. Multislot configuration is upgraded from simplest case up to the maximum number of channels supported by MS in the HSCSD configuration. This is verified by checking that the MS sends and receives correct RLP frames in each data block.
 - 8) To verify that subsequently, the MS can initiate call clearing by sending DISCONNECT message.
 - 9) To verify that the MS in this phase of call release, upon receipt of a RELEASE message, returns a RELEASE COMPLETE message.
 - 10) To verify that subsequently the MS, upon receipt of a CHANNEL RELEASE message, disconnects the main signalling link.

26.13.3.4.3 Method of test

Initial conditions

Mobile Station:

- The MS is in MM-state "idle, updated" with valid TMSI and CKSN.

System Simulator:

- 1 cell, default parameters except:
- Early classmark sending enabled in SI3 rest octets

Related PICS/PIXIT statement(s)

- Interface to the human user (p1= Y/N)
- Way to indicate alerting (only applicable if the MS supports the feature).
- Way to make the MS accept an incoming call after alerting (possibly dependent on teleservice/bearer service and configuration)
- Supported teleservices/bearer service
- Classmark
- Immediate connect supported (Y/N)
- Multislot class

Foreseen final state of the MS

MS is in MM-state "idle, updated" with valid TMSI and CKSN.

Test procedure

The MS is paged and the resulting HSCSD connection is established. Multislot configuration with one TCH/F is allocated. User service level upgrade is performed. MS enters the active state. Then CONFIGURATION CHANGE COMMAND message is sent to MS and it reply's with CONFIGURATION CHANGE ACKNOWLEDGE message. This is done from simplest case up to the maximum number of channels supported by the MS in the HSCSD configuration (this is performed within highest multislot class that MS supports).

Maximum duration of test

7 min

Expected sequence

Step	Direction	Message	Comments
1	SS -> MS	PAGING REQUEST TYPE 1	Sent on the correct paging subchannel.
2	MS -> SS	CHANNEL REQUEST	Establishment cause indicates "answer to paging".
3	SS -> MS	IMMEDIATE ASSIGNMENT	
4	MS -> SS	PAGING RESPONSE	Message is contained in SABM.
5	MS -> SS	CLASSMARK CHANGE	Multislot class
6	SS -> MS	AUTHENTICATION REQUEST	
7	MS -> SS	AUTHENTICATION RESPONSE	SRES specifies correct value.
8	SS -> MS	CIPHERING MODE COMMAND	SS starts deciphering after sending the message.
9	MS -> SS	CIPHERING MODE COMPLETE	Shall be sent enciphered. All following messages shall be sent enciphered.
10	SS		SS starts ciphering.
11	SS -> MS	SETUP	Message does not contain the signal IE. Setup indicates non-transparent connection.
12	MS -> SS	CALL CONFIRMED	If the MS supports immediate connect then branch A applies. If the MS does not support immediate connect then branch B applies
A13	SS -> MS	ASSIGNMENT COMMAND	In multislot allocation only one timeslot is allocated.
A14	MS -> SS	ASSIGNMENT COMPLETE	
A15	MS -> SS	CONNECT	
B13	SS -> MS	ASSIGNMENT COMMAND	In multislot allocation only one timeslot is allocated.
B14	MS -> SS	ASSIGNMENT COMPLETE	
B15	MS -> SS	ALERTING	
B16	MS		An alerting indication as defined in a PICS/PIXIT statement is given by the MS
B17	MS		The MS is made to accept the call in the way described in a PICS/PIXIT statement
B18	MS -> SS	CONNECT	
19	SS -> MS	CONNECT ACKNOWLEDGE	TCH shall be through connected in both directions. The RLP link establishment is initiated by the MS. User initiated service level upgrade is initiated MS enters the active state Next three steps are performed as many times as used multislot class has different channel combinations. Timeslot allocation starts from simplest case and is upgraded up to the maximum that MS multislot class supports, one step at the time (within the highest multislot class that MS supports).
20	MS		
21	MS -> SS	MODIFY	
22	SS -> MS	MODIFY COMPLETE	
23	MS		
24			
24A	SS -> MS	CONFIGURATION CHANGE COMMAND	
24B	MS -> SS	CONFIGURATION CHANGE ACKNOWLEDGE	
24C	MS		MS connects all bi-directional channels in both directions and all uni-directional channels in downlink direction.
25	MS		The MS is made to release the call.
26	MS -> SS	DISCONNECT	
27	SS -> MS	RELEASE	
28	MS -> SS	RELEASE COMPLETE	
29	SS -> MS	CHANNEL RELEASE	

26.13.3.5 Multislot signalling / Structured procedures / MS Terminated call / early assignment / HSCSD / Transparent

This test is applicable to all MS that supports multislot configuration.

26.13.3.5.1 Conformance requirement

- 1) The MS is in MM state "idle, updated" and in RR idle mode when being paged by the network.
- 2) The MS sends CHANNEL REQUEST message to the network and after that it receives IMMEDIATE ASSIGNMENT message from the network
- 3) The MS sends PAGING RESPONSE message to network and after that MS sends its multislot class in CLASSMARK CHANGE message to the network.
- 4) The MS performs successfully authentication and cipher mode setting procedures.
- 5) The MS shall acknowledge the SETUP message with a CALL CONFIRMED message, if compatibility checking was successful, the MS is not busy, and the user does not refuse the call.
- 6) Upon receipt of the ASSIGNMENT COMMAND message the MS continues a mobile terminating call establishment with early establishment of the traffic channel(s)
 - 6.1) by replying to the ASSIGNMENT COMMAND with an ASSIGNMENT COMPLETE message, and
 - 6.2) if the MS supports immediate connect, by continuing the call establishment by through-connecting the traffic channel(s) in both directions, or if the MS does not support immediate connect, by sending an ALERTING message
- 7) An MS indicates acceptance of a MT call by sending CONNECT.
- 8) The mobile station shall attach the user connection and establish the TDS link when receiving the CONNECT ACKNOWLEDGE message from the network.
- 9) MS correctly uses different ciphering bit streams on the different timeslots in a multislot configuration.
- 10) The MS initiates call clearing of an active call by sending a DISCONNECT message.
- 11) The MS in this phase of call release, upon receipt of a RELEASE message, shall return a RELEASE COMPLETE message.
- 12) Subsequently the MS, upon receipt of a CHANNEL RELEASE message, shall disconnect the main signalling link.

Reference

- | | |
|-----------------------------|--|
| Conformance requirement 1: | GSM 02.07 |
| Conformance requirement 2: | GSM 04.08 sections 3.3.1.1 and 9.1.8 |
| Conformance requirement 3: | GSM 04.08 sections 3.3.2.2, 9.1.25 and 9.1.11 |
| Conformance requirement 4: | GSM 04.08 sections 4.3.2, 9.2.2, 9.2.3, 3.4.7, 9.1.9, 9.1.10 |
| Conformance requirement 5: | GSM 04.08, sections 9.3.23 and 9.3.2 |
| Conformance requirement 6: | GSM 04.08 sections 9.1.2 and 9.1.3 |
| Conformance requirement 7: | GSM 04.08 section 9.3.5 |
| Conformance requirement 8: | GSM 04.08 section 9.3.6, GSM 07.01 section 8 |
| Conformance requirement 9: | GSM 03.34 section 5.2.5, GSM 04.08 sections 3.4.7 and 9.1.9 |
| Conformance requirement 10: | GSM 04.08 section 9.3.7 |
| Conformance requirement 11: | GSM 04.08 section 9.3.19 |
| Conformance requirement 12: | GSM 04.08 section 9.1.7 |

26.13.3.5.2 Test purpose

- 1) To verify that the MS in MM state "idle, updated" and in RR idle mode with a TMSI assigned, after being paged by the network on the correct paging subchannel, after initiating the immediate assignment procedure by sending the CHANNEL REQUEST message, after receipt of an IMMEDIATE ASSIGNMENT message allocating an SDCCH, after having sent a PAGING RESPONSE message on the allocated SDCCH, after having sent multislot class in CLASMARK CHANGE message which has been explicitly accepted by the network, as indicated in the last reception in the accessed cell of the SYSTEM INFORMATION TYPE 3 message, after having performed successful authentication and cipher mode setting procedures, after receipt of a SETUP message not containing a signal information element, returns a CALL CONFIRMED message.
- 2) Multislot configuration with maximum number of channels supported by MS in a HSCSD configuration, is allocated. To verify that subsequently, the SS sending an ASSIGNMENT COMMAND message, the MS successfully continues a mobile terminating call establishment with early assignment of traffic channel(s):
 - 2.1) by replying to the ASSIGNMENT COMMAND with an ASSIGNMENT COMPLETE message, and
 - 2.2) by continuing the call establishment by either sending a CONNECT messages or sending an ALERTING message depending on PICS/PIXIT statement.
- 3) To verify that the MS generates an alerting indication if an ALERTING message had to be sent.
- 4) To verify that if an ALERTING had been sent, subsequently, when the user accepts the call (possibly internal action as declared in PICS/PIXIT statement), the MS returns a CONNECT message.
- 5) To verify that the MS after receipt of a CONNECT ACKNOWLEDGE message subsequently attaches the user connection to the radio path. This is verified by checking that the MS synchronises correctly to the TCHs and sends and receives correct data frames in each data block.
- 6) To verify that the MS correctly uses different ciphering bit streams on the different timeslots in a multislot configuration.
- 7) To verify that subsequently, the MS can initiate call clearing by sending a DISCONNECT message.
- 8) To verify that the MS in this phase of call release, upon receipt of a RELEASE message, returns a RELEASE COMPLETE message.
- 9) To verify that subsequently the MS, upon receipt of a CHANNEL RELEASE message, disconnects the main signalling link.

These test purposes are tested for all rates supported by the MS (full rate).

26.13.3.5.3 Method of test

Initial conditions

Mobile Station:

- The MS is in MM-state "idle, updated" with valid TMSI and CKSN.

System Simulator:

- 1 cell, default parameters except:
- Early classmark sending enabled in SI3 rest octets

Related PICS/PIXIT statement(s)

- Interface to the human user (p1= Y/N)
- Way to indicate alerting (only applicable if the MS supports the feature).

- Way to make the MS accept an incoming call after alerting (possibly dependent on teleservice/bearer service and configuration)
- Supported teleservices/bearer service
- Classmark
- Immediate connect supported (Y/N)
- Multislot class

Foreseen final state of the MS

MS is in MM-state "idle, updated" with valid TMSI and CKSN.

Test procedure

The MS is paged and the resulting HSCSD connection is established. Maximum number of channels supported by the MS in a HSCSD configuration, is allocated. Having reached the active state, the MS is made to clear the call.

Maximum duration of test

7 min

Expected sequence

Step	Direction	Message	Comments
1	SS -> MS	PAGING REQUEST TYPE 1	Sent on the correct paging subchannel.
2	MS -> SS	CHANNEL REQUEST	Establishment cause indicates "answer to paging".
3	SS -> MS	IMMEDIATE ASSIGNMENT	
4	MS -> SS	PAGING RESPONSE	Message is contained in SABM.
5	MS -> SS	CLASSMARK CHANGE	Early classmark sending Multislot class indicated
6	SS -> MS	AUTHENTICATION REQUEST	
7	MS -> SS	AUTHENTICATION RESPONSE	SRES specifies correct value.
8	SS -> MS	CIPHERING MODE COMMAND	SS starts deciphering after sending the message.
9	MS -> SS	CIPHERING MODE COMPLETE	Shall be sent enciphered. All following messages shall be sent enciphered.
10	SS		SS starts ciphering.
11	SS -> MS	SETUP	Message does not contain the signal IE.
12	MS -> SS	CALL CONFIRMED	If the MS supports immediate connect then branch A applies. If the MS does not support immediate connect then branch B applies
A13	SS -> MS	ASSIGNMENT COMMAND	In multislot allocation maximum number of timeslots that MS supports, is allocated.
A14	MS -> SS	ASSIGNMENT COMPLETE	
A15	MS -> SS	CONNECT	
B13	SS -> MS	ASSIGNMENT COMMAND	In multislot allocation maximum number of timeslots that MS supports, is allocated. sent on the TCH/Sm channel
B14	MS -> SS	ASSIGNMENT COMPLETE	
B15	MS -> SS	ALERTING	An alerting indication as defined in a PICS/PIXIT statement is given by the MS The MS is made to accept the call in the way described in a PICS/PIXIT statement
B16	MS		
B17	MS		
B18	MS -> SS	CONNECT	
19	SS -> MS	CONNECT ACKNOWLEDGE	The appropriate bearer channel is through connected in both directions and the MS correctly uses different ciphering bit streams on the different timeslots. The MS is made to release the call.
20	MS		
21	MS		
22	MS -> SS	DISCONNECT	
23	SS -> MS	RELEASE	
24	MS -> SS	RELEASE COMPLETE	
25	SS -> MS	CHANNEL RELEASE	

26.13.3.6 Default test conditions during layer 3 tests

During tests in section 26.13 the following default test conditions shall apply if not otherwise stated within the test description. In the table below, decimal values are normally used. Sometimes a hexadecimal value, indicated with a "H", or a binary value, indicated with a "B" is given.

	GSM 450	GSM 480
General signalling conditions for all carriers		
Ciphering	yes	yes
General RF-conditions for all carriers		
Frequency hopping mode	Non-hopping	Non-hopping
Propagation profile	Static	Static
Downlink Input Level	63 dB μ Vemf()	63 dB μ Vemf()
Uplink output power	Minimum according to MS power class	Minimum according to MS power class
Serving cell, BCCH/CCCH carrier		
Channel ARFCN	263	310
Alternative channels	274 or 276	321 or 323
Serving cell, Traffic channel, SDCCH		
Channel ARFCN	267	315
Alternative channels	275 or 279	322 or 326
Power Control Indicator	0	0
Neighbouring cells BCCH/CCCH carriers		
Channel ARFCN	261, 282, 284, 287, 290, 293	308, 329, 331, 334, 337, 340
Alternative channels	262, 283, 285, 288, 291, 292	309, 330, 332, 335, 338, 339
Input level	53 dB μ Vemf()	53 dB μ Vemf()
Network dependent parameters		
Cell identity	0001H	0001H
Mobile country code, MCC	001 (decimal)	001 (decimal)
Mobile network code, MNC	01 (decimal)	01 (decimal)
Location area code, LAC	0001H	0001H
Frequency List	Range 128	Range 128
BCCH allocation sequence number(BA_IND)	0	0
Cell Channel Descriptor	Range 128	Range 128
PLMN colour code, NCC	1	1
BS colour code, BCC	5	5
SMS Cell Broadcast DTX	not active	not active
IMSI Attach-detach	MS must not use	MS must not use
CCCH_CONF	MS shall not apply	MS shall not apply
BS_AG_BLKS_RES	1 basic physical channel for CCCH combined with SDCCH	1 basic physical channel for CCCH combined with SDCCH
BS_PA_MFRMS	0 blocks reserved	0 blocks reserved
CELL_BAR_ACCESS	5 paging subgroups	5 paging subgroups
Call-re-establishment (RE)	(not barred)	(not barred)
Emergency Call allowed	(allowed)	(allowed)
Access Control Class (AC) (0..9, 11..15)	allowed	same
	allowed	same

	GSM 900	DCS 1 800
Network dependent timers		
Radio_Link_Time-out	8	8
T3212 Periodic updating in decihours	Infinite	Infinite
Access control parameters		
Max retrans	1	1
Tx-integer, nr. of slots	5	5
CELL_RESELECT_HYSTERESIS	12 dB	12 dB
MS_TXPWR_MAX_CCH	minimum level	minimum level
RXLEV_ACCESS_MIN	minimum	minimum
NECI	New establishment causes are not supported	same
ACS (ADDITIONAL RESELECTION PARAM IND)	No additional cell parameters are present in SI messages 7 and 8	same
P1 and C2 parameters	C2 parameters not present	same
POI and POWER OFFSET	N/A	N/A

	GSM 900	DCS 1 800
General signalling conditions for all carriers		
Ciphering	yes	yes
General RF-conditions for all carriers		
Frequency hopping mode	Non-hopping	Non-hopping
Propagation profile	Static	Static
Downlink Input Level	63 dB μ Vemf()	63 dB μ Vemf()
Uplink output power	Minimum according to MS power class	Minimum according to MS power class
Serving cell, BCCH/CCCH carrier		
Channel ARFCN	20	590
Alternative channels	40 or 60	690 or 830
Serving cell, Traffic channel, SDCCH		
Channel ARFCN	30	650
Alternative channels	50 or 70	750 or 850
Power Control Indicator	0	0
Neighbouring cells BCCH/CCCH carriers		
Channel ARFCN	10, 80, 90, 100, 110, 120	520, 600, 700, 780, 810, 870
Alternative channels	15, 85, 95, 105, 115, 122	530, 610, 710, 790, 820, 880
Input level	53 dB μ Vemf()	53 dB μ Vemf()
Network dependent parameters		
Cell identity	0001H	0001H
Mobile country code, MCC	001 (decimal)	001 (decimal)
Mobile network code, MNC	01 (decimal)	01 (decimal)
Location area code, LAC	0001H	0001H
Frequency List	Bit Map 0	Range 512
BCCH allocation sequence number(BA_IND)	0	0
Cell Channel Descriptor	Bit Map 0	Range 512
PLMN colour code, NCC	1	1
BS colour code, BCC	5	5
SMS Cell Broadcast DTX	not active	not active
IMSI Attach-detach	MS must not use	MS must not use
CCCH_CONF	MS shall not apply	MS shall not apply
BS_AG_BLKS_RES	1 basic physical channel for CCCH combined with SDCCH	1 basic physical channel for CCCH combined with SDCCH
BS_PA_MFRMS	0 blocks reserved	0 blocks reserved
CELL_BAR_ACCESS	5 paging subgroups	5 paging subgroups
Call-re-establishment (RE)	(not barred)	(not barred)
Emergency Call allowed	(allowed)	(allowed)
Access Control Class (AC) (0..9, 11..15)	allowed	same

	GSM 900	DCS 1 800
Network dependent timers		
Radio_Link_Time-out	8	8
T3212 Periodic updating in decihours	Infinite	Infinite
Access control parameters		
Max retrans	1	1
Tx-integer, nr. of slots	5	5
CELL_RESELECT_HYSTERESIS	12 dB	12 dB
MS_TXPWR_MAX_CCH	minimum level	minimum level
RXLEV_ACCESS_MIN	minimum	minimum
NECI	New establishment causes are not supported	same
ACS (ADDITIONAL RESELECTION PARAM IND)	No additional cell parameters are present in SI messages 7 and 8	same
P1 and C2 parameters	C2 parameters not present	same
POI and POWER OFFSET	N/A	POWER OFFSET Parameter not present.

These information's are provided by system information 1, 2, 3 and 4 messages.

The system information elements that are broadcast on the SACCH/M during the dedicated mode should be consistent with those sent on the BCCH when the MS was in idle mode prior to the channel request.

In addition, all fill paging messages sent on the paging sub-channels will have by default, their page mode set to NORMAL PAGING.

26.13.3.7 Default contents of messages

ALERTING (mobile station to network direction)

Information element	Value/remark
Facility	Not checked
User-user	Not checked
SS version	Not checked

ALERTING (network to mobile station direction)

Information element	Value/remark
Facility	Omitted
Progress indicator	Omitted
User-user	Omitted

ASSIGNMENT COMMAND

Information element	Value/remark
Description of the first channel	describes non-hopping Bm+ACCHs or Lm+ACCHs as appropriate for the test
Power Command	As in section 26.1.1
Frequency list	Omitted
Cell channel description	Omitted
Description of the multislot configuration	Appropriate for the teleservice selected for the test
Mode of the channel set X (1=<X<=8)	Appropriate for on bearer capability chosen for the test
Description of the second channel	Omitted
Mode of the second channel	Omitted
Mobile allocation	Omitted
Starting time	Omitted
Cipher mode setting	Omitted

ASSIGNMENT COMPLETE

Information element	Value/remark
RR cause	normal event

AUTHENTICATION REQUEST

Information element	Value/remark
Ciphering key sequence number	Arbitrary
Spare half octet	(spare bits)
Authentication parameter RAND	Arbitrary

AUTHENTICATION RESPONSE

Information element	Value/remark
Authentication parameter SRES	Correct for given SRES

CALL CONFIRMED

Information element	Value/remark
Repeat indicator	Omitted
Bearer capability 1	GSM 04.08 section 10.5.4.5
Bearer capability 2	Omitted
Cause	Omitted

CALL PROCEEDING

Information element	Value/remark
Repeat Indicator	Omitted
Bearer Capability 1	GSM 04.08 section 10.5.4.5
Bearer Capability 2	Omitted
Facility	Omitted
Progress indicator	Omitted

CHANNEL RELEASE

Information element	Value/remark
RR cause	Normal event

CHANNEL REQUEST

Information element	Value/remark
Establishment cause	Answer to paging (100)
Random reference	Arbitrary value of 5 bits length

CIPHERING MODE COMMAND

Information element	Value/remark
Cipher mode setting	indicates a supported algorithm
algorithm identifier	
SC	Start ciphering
Cipher response	IMEI must not be included
CR	

CIPHERING MODE COMPLETE

Information element	Value/remark
Mobile equipment identity	Omitted

CLASSMARK CHANGE

Information element	Value/remark
MS classmark	Multislot classmark value appropriate for the test
Additional mobile station classmark information	Omitted

CM SERVICE ACCEPT

Information element	Value/remark
none but message head	

CM SERVICE REQUEST

Information element	Value/remark
CM service type	Mobile originating call establishment or packet mode connection establishment
Ciphering key sequence number	CKSN of the MS
Mobile station classmark 2	as given by PICS.
Mobile identity	TMSI of MS

CONFIGURATION CHANGE COMMAND

Information element	Value/remark
Description of the multislot configuration	Appropriate for the teleservice selected for the test
Mode of channel set X (1=<X<=8)	Appropriate channel mode is selected

CONFIGURATION CHANGE REJECT

Information element	Value/remark
RR Cause	Cause = "Channel mode unacceptable"

CONNECT (network to mobile station direction)

Information element	Value/remark
Facility	Omitted
Progress indicator	Omitted
Connected number	Omitted
Connected subaddress	Omitted
User-user	Omitted

CONNECT (mobile station to network direction)

Information element	Value/remark
Facility	Not checked
Connected subaddress	Not checked
User-user	Not checked
SS version	Not checked

CONNECT ACKNOWLEDGE

Information element	Value/remark
none but message head	

DISCONNECT (network to mobile station direction)

Information element	Value/remark
Cause	
Coding standard	GSM
Location	User
Cause value	Normal clearing
Facility	Omitted
Progress indicator	Omitted
User-user	Omitted

DISCONNECT (mobile station to network direction)

Information element	Value/remark
Cause	
Coding standard	GSM
Location	User
Cause value	Normal clearing
Facility	Not checked
User-user	Not checked
SS version	Not checked

IMMEDIATE ASSIGNMENT

Information element	Value/remark
Page mode	Normal paging
Channel description	describes a valid SDCCH+SACCH in non-hopping mode
Request reference	As received from MS
Random access information	Corresponding to frame number of the CHANNEL REQUEST
N51, N32, N26	
Timing advance	Arbitrary
Mobile allocation	Empty (L=0)
Starting time	Omitted

MODIFY

Information element	Value/remark
Bearer capability	
Connection element (octet 6c)	Transparent for cases: 26.13.3.3, 26.13.3.5 Non-transparent for cases: 26.13.3.1, 26.13.3.2, 26.13.3.4
Low layer comp.	Appropriate for the basic service selected for the test
High layer comp.	Appropriate for the basic service selected for the test
Reverse call setup direction	Presence and value not checked

MODIFY COMPLETE

Information element	Value/remark
Bearer capability	
Connection element (octet 6c)	Transparent for cases: 26.13.3.3, 26.13.3.5 Non-transparent for cases: 26.13.3.1, 26.13.3.2, 26.13.3.4
Low layer comp.	Appropriate for the basic service selected for the test
High layer comp.	Appropriate for the basic service selected for the test
Reverse call setup direction	Presence and value not checked

MODIFY REJECT

Information element	Value/remark
Bearer capability	
Connection element (octet 6c)	Transparent for cases: 26.13.3.3, 26.13.3.5 Non-transparent for cases: 26.13.3.1, 26.13.3.2, 26.13.3.4
Cause	Cause = Channel Unacceptable
Low layer comp.	Appropriate for the basic service selected for the test
High layer comp.	Appropriate for the basic service selected for the test

PAGING REQUEST TYPE 1

Information element	Value/remark
L2 pseudo length	L2 pseudo length of the message
Page Mode	Normal Paging
Channels needed for Mobiles 1 and 2	
channel (first)	any channel
channel (second)	any channel
Mobile identity 1	TMSI of MS under test
Mobile identity 2	Omitted
P1 rest octets	(spare octets)

PAGING RESPONSE

Information element	Value/remark
Ciphering key sequence number	Value assigned to MS in the initial conditions
Spare half octet	(spare bits)
Mobile station classmark 2	as given by PICS
Mobile identity	specifies TMSI of MS

RELEASE (network to mobile station direction)

Information element	Value/remark
Cause	Omitted
Second cause	Omitted
Facility	Omitted
User-user	Omitted

RELEASE (mobile station to network direction)

Information element	Value/remark
Cause	Not checked
Second cause	Not checked
Facility	Not checked
User-user	Not checked
SS version	Not checked

RELEASE COMPLETE (network to mobile station direction)

Information element	Value/remark
Cause	Omitted
Facility	Omitted
User-user	Omitted

RELEASE COMPLETE (mobile station to network direction)

Information element	Value/remark
Cause	Not checked
Facility	Not checked
User-user	Not checked
SS version	Not checked

SETUP (MS to SS)

Information element	Value/remark
BC Repeat indicator	Omitted
Bearer capability 1	Appropriate for the teleservice selected for the test
Bearer capability 2	Omitted
Facility	Not checked
Calling party subaddress	Not checked
Called party BCD number	As entered
Called party subaddress	Omitted
LLC repeat indicator	Omitted
Low layer compatibility I	Appropriate for teleservice selected for the test
Low layer compatibility II	Omitted
HLC repeat indicator	Omitted
High layer compatibility i	Appropriate for teleservice selected for the test
High layer compatibility ii	Omitted
User-user	Not checked
SS version	Not checked
CLIR suppression	Not checked
CC Capabilities	Not checked

SETUP (SS to MS)

Information element	Value/remark
BC repeat indicator	Omitted
Bearer capability 1	Appropriate for teleservice selected for the test
Bearer capability 2	Omitted
Facility	Omitted
Progress indicator	Omitted
Signal	Omitted
Calling party BCD number	Omitted
Calling party subaddress	Omitted
Called party BCD number	Omitted
Called party subaddress	Omitted
LLC repeat indicator	Omitted
Low layer compatibility I	Appropriate for the teleservice selected for the test
Low layer compatibility II	Omitted
HLC repeat indicator	Omitted
High layer compatibility i	Appropriate for the teleservice selected for the test
High layer compatibility ii	Omitted
User-user	Omitted