

## 40 GPRS default conditions, message contents and macros

*Editor's note: From Rel-9 the PBCCH and PCCCH are removed from chapter 40.x but temporary test cases may still exist in 51.010 referencing to the macros using PBCCH and PCCCH.*

### 40.1 Default test conditions

The following default test conditions shall apply if not otherwise stated within an individual test description.

The testcases for higher layers shall use the second set of default test conditions for channel combination v), xi) and xiii) as specified in subclause 40.3.

In the tables following, decimal values will normally be used. Where a hexadecimal value is used, it indicated with an "H". A binary value will be indicated with a "B".

For MSs that cannot be configured to send an exact number of octets in RLC data blocks of uplink data transfer, test cases specifying 'uplink transfer of **n** octets data' shall be interpreted as 'uplink transfer of *at least n* octets data', unless otherwise stated in the test case.

Rel-6 network simulation shall apply unless otherwise stated in the test case.

NOTE 1: In case when NC mode is different from NC2 and PBCCH is not present in the cell and where neighbour cells are indicated in the testcase and are indeed activated, the MS shall read system information on the target cell (e.g. SI3, SI4 ) for cell reselection calculations . In these cases, the MS may temporarily suspend ongoing TBF (see 3GPP TS 04.60/3GPP TS 44.060 sub-clause 5.5.1.4.2). Test case implementation should take this into account i.e. that blocks or control messages sent by SS are missed during these SI refreshes.

NOTE 2: In addition:

- When the MS is performing autonomous cell reselection or
- when a PACKET CELL CHANGE ORDER is received by MS and the IMMEDIATE\_REL bit is set to "0" or
- when PACKET CELL CHANGE CONTINUE is received by MS and relevant PACKET NEIGHBOUR CELL DATA messages are not received

the MS may continue operation in the old cell and acquire certain system information for the target cell (as per 04.60/44.060). In cases listed above ongoing TBF might be suspended temporarily as well. Test case implementation should take this into account i.e. that blocks or control messages sent by SS are missed during these SI refreshes.

List of affected testcases (by NOTE 2):

42.4.2.3.4, 42.4.4.1, 42.4.4.2, 42.4.4.5, 42.4.5.1, 42.4.5.2, 42.4.5.4, 42.4.5.5, 42.4.5.6, 42.4.5.7, 42.4.5.9, 42.4.6.1, 42.4.8.1.4, 42.4.8.1.6, , 44.2.1.1.7, 44.2.2.1.8, , 44.2.3.1.1a, 44.2.3.1.6, 44.2.3.1.7, 44.2.3.2.8, 44.2.3.2.9, 44.2.7.3.5, 46.2.2.1.5, 47.3.1.1, 47.3.1.2, 47.3.1.3, 47.3.2.1, 47.3.2.2, 47.3.3.1.1, 47.3.3.1.2, 47.3.4.2, 47.4.1.

NOTE 3: 'One phase access' test cases may not be fully executed for MS requesting 'Two phases access'.

The resulting step "If the MS requests two phase access the Test Case is terminated" should be interpreted as "Test case is not applicable for the MS".

List of affected testcases (by NOTE 3):

41.2.3.4, 41.2.3.5, 41.2.3.6, 41.2.3.7, 41.2.3.8, 41.2.3.9, 41.2.3.10, 41.2.3.11.

## 40.1.1 Default settings for cell 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 $\mu$ Vemf( )	63 dB $\mu$ 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, PDTCH (PBCCH not present), SDCCH, TCH		
Channel ARFCN	30	650
Alternative channels	110 or 115	760 or 850
Power Control Indicator	0	0
Neighbouring cells BCCH/CCCH carriers		
Channel ARFCN	5, 80, 90,100, 110,120, 122, 124	515, 600, 700, 780, 810, 870, 875, 885
Alternative channels	15, 85, 95, 105, 115, 126, 128, 130	530, 610, 710, 790, 820, 822, 824, 880
Input level	53 dB $\mu$ Vemf( )	53 dB $\mu$ 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	Not active	Not active
DTX	Not available	Not available
IMSI Attach-detach	MS shall apply IMSI attach and detach procedure	MS shall apply IMSI attach and detach procedure
For Non Combined CCCH_CONF	000 (1 basic physical channel for CCCH)	000 (1 basic physical channel for CCCH)
BS_AG_BLKs_RES	3 blocks reserved	3 blocks reserved
For Combined CCCH_CONF	001 (1 basic physical channel for CCCH)	001 (1 basic physical channel for CCCH)
BS_AG_BLKs_RES	2 blocks reserved	2 blocks reserved
BS_PA_MFRMS	6 multiframes	6 multiframes
CELL_BAR_ACCESS	not barred	not barred
Call-reestablishment (RE)	not allowed	not allowed
Emergency Call allowed	Allowed	allowed
Access Control Class (AC)	access for all classes allowed	access for all classes allowed
Radio_Link_Time-out	8	8
T3212 Periodic	0 periodic updating shall not be used	0 periodic updating shall not be used
Access control parameters		
Max retrans	1	1
TX-integer	5	5
CELL_RESELECT_HYSTE	12dB	12dB
RESIS		
MS_TXPWR_MAX_CCH	10	10
RXLEV_ACCESS_MIN	Minimum	minimum
NECI	New establishment causes are supported	New establishment causes are supported
ACS (additional reselection param IND)	No additional cell parameters are present in	No additional cell parameters are present in SI messages 7

	<b>GSM 900</b>	<b>DCS 1 800</b>
P1 and C2 parameters POI and POWER OFFSET	SI messages 7 and 8 C2 parameters not present N/A	and 8 C2 parameters not present POWER OFFSET Parameter not present
CELL_BAR_QUALIFY	0	0
CELL_RESELECT_OFFSET	0	0
PENALTY_TIME	0	0
TEMPORARY_OFFSET	0	0
<b>BA ARFCN</b>		
	Both P-GSM and E-GSM ARFCNs are broadcast:  GSM ARFCNs 5, 20, 80, 90, 100, 110, 120, 122, 124 broadcast in SI 2 E-GSM ARFCNs 985, 989, 995, 1010, 1014 broadcast in SI 2bis  For multiband tests, the ARFCNs 5, 20, 80, 90, 100, 110, 120, 122, 124 are broadcast in SI 2 of GSM cell and in SI 2ter of DCS cell. The ARFCNs 515, 590, 600, 700, 780, 810, 870, 875, 885 are broadcast in SI 2 of DCS cell and in SI 2ter of GSM cell	ARFCNs 515, 590, 600, 700, 780, 810, 870, 875, 885 broadcast in SI 2.
<b>GPRS Parameters</b>		
RA_CODE	00000101	00000101
ACC_BURST_TY	11 bits burst	11 bits burst
CONTROL_ACK_TYPE	RLC/MAC control block	RLC/MAC control block
NETWORK_CONTROL_ORDER	normal MS control	normal MS control
DRX_TIMER_MAX	non-DRX not supported	non-DRX not supported
PC_MEAS_CHAN	BCCH	BCCH
Network Mode of Operation	network operation mode I	network operation mode I
T3168	2 seconds	2 seconds
T3192	1.5 seconds	1.5 seconds
GPRS Ciphering	Enabled	Enabled

	<b>GSM 700, T-GSM 810</b>	<b>PCS 1 900</b>	<b>GSM 850</b>
General signalling conditions for all carriers			
Ciphering	Yes	Yes	Yes
General RF-conditions for all carriers			
Frequency hopping mode	Non-hopping	Non-hopping	Non-hopping
Propagation profile	Static	Static	Static
Downlink Input Level	63 dB $\mu$ Vemf( )	63 dB $\mu$ Vemf( )	63 dB $\mu$ Vemf( )
Uplink output power	Minimum according to MS power class	Power control level = 10	Minimum according to MS power class
Serving cell, BCCH/CCCH carrier			
Channel ARFCN	457	590	147
Alternative channels	462 or 482	690 or 730	167 or 187
Serving cell, PDTCH (PBCCH not present), SDCCH, TCH			
Channel ARFCN	467	650	157
Alternative channels	487 or 505	750 or 780	197 or 247
Power Control Indicator	0	0	0
Neighbouring cells BCCH/CCCH carriers			

Channel ARFCN	438, 447, 467, 477, 487, 497, 502, 507	515, 600, 655, 700, 710, 740, 780, 810	137, 157, 177, 197, 207, 217, 227, 237
Alternative channels	452, 465, 485, 495, 505, 492, 496, 509	530, 610, 710, 740, 743, 746, 770, 790	142, 212, 222, 232, 236, 239, 242, 249
Input level	53 dB $\mu$ Vemf( )	53 dB $\mu$ Vemf( )	53 dB $\mu$ Vemf( )
Network dependent parameters			
Cell identity	0001H	0001H	0001H
Mobile country code, MCC	001 (decimal)	001 (decimal)	001 (decimal)
Mobile network code, MNC	011 (decimal)	011 (decimal)	011 (decimal)
Location area code, LAC	0001H	0001H	0001H
Frequency List	Range 128	Range 512	Range 128
BCCH allocation sequence number(BA_IND)	0	0	0
Cell Channel Descriptor	Range 128	Range 512	Range 128
PLMN colour code, NCC	1	1	1
BS colour code, BCC	5	5	5
SMS Cell Broadcast DTX	Not active	Not active	Not active
IMSI Attach-detach	Not available	Not available	Not available
	MS shall apply IMSI attach and detach procedure	MS shall apply IMSI attach and detach procedure	MS shall apply IMSI attach and detach procedure
For Non Combined CCCH_CONF	000 (1 basic physical channel for CCCH)	1 basic physical channel for CCCH	000 (1 basic physical channel for CCCH)
BS_AG_BLKRES	3 blocks reserved	3 blocks reserved	3 blocks reserved
For Combined CCCH_CONF	001 (1 basic physical channel for CCCH)		001 (1 basic physical channel for CCCH)
BS_AG_BLKRES	2 blocks reserved		2 blocks reserved
BS_PA_MFRMS	6 multiframe	6 multiframe	6 multiframe
CELL_BAR_ACCESS	not barred	Not barred	not barred
Call-reestablishment (RE)	not allowed	Not allowed	not allowed
Emergency Call allowed	Allowed	Allowed	allowed
Access Control Class (AC)	access for all classes allowed	Access for all classes allowed	access for all classes allowed
Radio_Link_Time-out	8	8	8
T3212 Periodic	0 periodic updating shall not be used	0 periodic updating shall not be used	0 periodic updating shall not be used
Access control parameters			

Max retrans TX-integer	1 5	1 5	1 5
CELL_RESELECT_HYSTE RESIS	12dB	12dB	12dB
MS_TXPWR_MAX_CCH RXLEV_ACCESS_MIN NECI	10 Minimum New establishment causes are supported	10 Minimum New establishment causes are supported	10 minimum New establishment causes are supported
ACS (additional reselection param IND)	No additional cell parameters are present in SI messages 7 and 8	No additional cell parameters are present in SI messages 7 and 8	No additional cell parameters are present in SI messages 7 and 8
C2 parameters POWER OFFSET	C2 parameters not present N/A	C2 parameters not present Parameter not present	C2 parameters not present N/A
CELL_BAR_QUALIFY	0	0	0
CELL_RESELECT_OFFSE T	0	0	0
PENALTY_TIME	0	0	0
TEMPORARY_OFFSET	0	0	0
<b>BA ARFCN</b>			
	ARFCNs 438, 447, 457, 467, 477, 487, 497, 502, 507 broadcast in SI 2	ARFCNs 515, 590, 600, 655, 700, 710, 740, 780, 810 broadcast in SI 2	ARFCNs 137, 147, 157, 177, 197, 207, 217, 227, 237 broadcast in SI 2.
	For multiband tests, the ARFCNs 438, 447, 457, 467, 477, 487, 497, 502, 507 are broadcast in SI 2 of the GSM 700 cell and in SI 2ter of the PCS1900 cell. The 515, 590, 600, 655, 700, 710, 740, 780, 810 are broadcast in SI 2 of the PCS1900 cell and SI 2ter of the GSM700 cell.		For multiband tests, the ARFCNs 137, 147, 157, 177, 197, 207, 217, 227, 237 are broadcast in SI 2 of the GSM 850 cell and SI2ter of the PCS1900 cell. The 515, 590, 600, 655, 700, 710, 740, 780, 810 are broadcast in SI 2 of the PCS1900 cell and SI 2ter of the GSM850 cell.
<b>GPRS Parameters</b>			
RA_CODE	00000101	00000101	00000101
ACC_BURST_TY	11 bits burst	11 bits burst	11 bits burst
CONTROL_ACK_TYPE	RLC/MAC control block	RLC/MAC control block	RLC/MAC control block
NETWORK_CONTROL_O RDER	normal MS control	normal MS control	normal MS control
DRX_TIMER_MAX	non-DRX not supported	non-DRX not supported	non-DRX not supported
PC_MEAS_CHAN	BCCH	BCCH	BCCH
Network Mode of Operation	network operation mode I	network operation mode I	network operation mode I
T3168	2 seconds	2 seconds	2 seconds
T3192	1.5 seconds	1.5 seconds	1.5 seconds
GPRS Ciphering	Enabled	Enabled	Enabled

## 40.1.2 Default settings for cell B

The default settings for cell B are identical to those of cell A with the following exceptions:

	<b>GSM 900</b>	<b>DCS 1 800</b>
Downlink Input Level	53 dB $\mu$ Vemf()	53 dB $\mu$ Vemf()
Serving cell, BCCH/CCCH carrier		
Channel ARFCN	5	515
Serving cell, PDTCH (PBCCH not present), SDCCH, TCH		
Channel ARFCN	60	750
Cell identity	0002H	0002H
Neighbouring cells BCCH/CCCH carriers		
Channel ARFCN	20, 80, 90,100, 110,120,122,124	590, 600, 700, 780, 810, 870, 875, 885
Input level	53 dB $\mu$ Vemf( )	53 dB $\mu$ Vemf( )
BA ARFCN		
	Both P-GSM and E-GSM ARFCNs are broadcast:  GSM 5, 20, 80, 90,100, 110,120, 122, 124 broadcast in SI 2 E-GSM ARFCNs 985, 989, 995, 1010, 1014 broadcast in SI 2bis For multiband tests, the ARFCNs 5, 20, 80, 90,100, 110,120, 122, 124 are broadcast in SI 2 of GSM cell and in SI 2ter of DCS cell. The ARFCNs 515, 590, 600, 700, 780, 810, 870, 875, 885 are broadcast in SI 2 of DCS cell and in SI 2ter of GSM cell	515, 590, 600, 700, 780, 810, 870, 875, 885 broadcast in SI 2.

	<b>GSM 700, T-GSM 810</b>	<b>PCS 1 900</b>	<b>GSM 850</b>
Downlink Input Level	53 dB $\mu$ Vemf()	53 dB $\mu$ Vemf()	53 dB $\mu$ Vemf()
Serving cell, BCCH/CCCH carrier			
Channel ARFCN	447	515	137
Serving cell, PDTCH (PBCCH not present), SDCCH			
Channel ARFCN	438	755	242
Cell identity	0002H	0002H	0002H
Neighbouring cells BCCH/CCCH carriers			
Channel ARFCN	438, 457, 467, 477, 487, 497, 502, 507	590, 600, 655, 700, 710, 740, 780, 810	147, 157, 177, 197, 207, 217, 227, 237
Input level	53 dB $\mu$ Vemf( )	53 dB $\mu$ Vemf( )	53 dB $\mu$ Vemf( )
BA ARFCN			
	ARFCNs 438, 447, 457, 467, 477, 487, 497, 502, 507, 510 broadcast in SI 2	ARFCNs 515, 590, 600, 655, 700, 710, 740, 780, 810 broadcast in SI 2	ARFCNs 137, 147, 157, 177, 197, 207, 217, 227, 237 broadcast in SI 2.
	For multiband tests, the ARFCNs 438, 447, 457, 467, 477, 487, 497, 502, 507 are broadcast in SI 2 of the GSM 700 cell and SI2ter of the PCS1900 cell. The 515, 590, 600, 655, 700, 710, 740, 780, 810 are broadcast in SI 2 of the PCS1900 cell and SI 2ter of the GSM850 cell.		
		For multiband tests, the ARFCNs 137, 147, 157, 177, 197, 207, 217, 227, 237 are broadcast in SI 2 of the GSM 850 cell and SI2ter of the PCS1900 cell. The 515, 590, 600, 655, 700, 710, 740, 780, 810 are broadcast in SI 2 of the PCS1900 cell and SI 2ter of the GSM850 cell.	

## 40.1.3 Default settings for cell C

The default settings for cell C are identical to those of cell A with the following exceptions:

	<b>GSM 900</b>	<b>DCS 1 800</b>
Downlink Input Level	53 dBµVemf()	53 dBµVemf()
Serving cell, BCCH/CCCH carrier		
Channel ARFCN	80	600
Serving cell, PDTCH (PBCCH not present), SDCCH, TCH		
Channel ARFCN	25	675
Cell identity	0003H	0003H
Neighbouring cells BCCH/CCCH carriers		
Channel ARFCN	5, 20, 90,100, 110,120,122,124	515, 590, 700, 780, 810, 870, 875, 885
Input level	53 dBµVemf( )	53 dBµVemf( )
BA ARFCN		
	Both P-GSM and E-GSM ARFCNs are broadcast:  GSM 5, 20, 80, 90, 100, 110,120, 122, 124 broadcast in SI 2 E-GSM ARFCNs 985, 989, 995, 1010, 1014 broadcast in SI 2bis	ARFCNs 515, 590, 600, 700, 780, 810, 870, 875, 885 broadcast in SI 2.
	For multiband tests, the ARFCNs 5, 20, 80, 90,100, 110,120, 122, 124 are broadcast in SI 2 of GSM cell and in SI 2ter of DCS cell. The ARFCNs 515, 590, 600, 700, 780, 810, 870, 875, 885 are broadcast in SI 2 of DCS cell and in SI 2ter of GSM cell	

	<b>GSM 700, T-GSM 810</b>	<b>PCS 1 900</b>	<b>GSM 850</b>
Downlink Input Level	53 dBµVemf()	53 dBµVemf()	53 dBµVemf()
Serving cell, BCCH/CCCH carrier			
Channel ARFCN	438	600	207
Serving cell, PDTCH (PBCCH not present), SDCCH			
Channel ARFCN	447	675	167
Cell identity	0003H	0003H	0003H
Neighbouring cells BCCH/CCCH carriers			
Channel ARFCN	447, 457, 467, 477, 487, 497, 502, 507	515, 590, 655, 700, 710, 740, 780, 810	137, 147, 157, 177, 197, 217, 227, 237
Input level	53 dBµVemf( )	53 dBµVemf( )	53 dBµVemf( )
BA ARFCN			
	ARFCNs 438, 447, 457, 467, 477, 487, 497, 502, 507 broadcast in SI 2  For multiband tests, the ARFCNs 438, 447, 457, 467, 477, 487, 497, 502, 507 are broadcast in SI 2 of the GSM 700 cell and SI2ter of the PCS1900 cell. The 515, 590, 600, 655, 700, 710, 740, 780, 810 are broadcast in SI 2 of the PCS1900 cell and SI 2ter of the GSM850 cell.	ARFCNs 515, 590, 600, 655, 700, 710, 740, 780, 810 broadcast in SI 2  For multiband tests, the ARFCNs 137, 147, 157, 177, 197, 207, 217, 227, 237 are broadcast in SI 2 of the GSM 850 cell and SI2ter of the PCS1900 cell. The 515, 590, 600, 655, 700, 710, 740, 780, 810 are broadcast in SI 2 of the PCS1900 cell and SI 2ter of the GSM850 cell.	ARFCNs 137, 147, 157, 177, 197, 207, 217, 227, 237 broadcast in SI 2.

#### 40.1.4 Default settings for cell D

The default settings for cell D are identical to those of cell A with the following exceptions:

	<b>GSM 900</b>	<b>DCS 1 800</b>
Downlink Input Level	53 dB $\mu$ Vemf()	53 dB $\mu$ Vemf()
Serving cell, BCCH/CCCH carrier		
Channel ARFCN	110	700
Serving cell, PDTCH (PBCCH not present), SDCCH, TCH		
Channel ARFCN	35	725
Cell identity	0004H	0004H
Neighbouring cells BCCH/CCCH carriers		
Channel ARFCN	5, 20, 80, 90,100,120,122,124	515, 590, 600, 700, 780, 810, 870, 875, 885
Input level	53 dB $\mu$ Vemf( )	53 dB $\mu$ Vemf( )
BA ARFCN		
	Both P-GSM and E-GSM ARFCNs are broadcast:  P-GSM 5, 20, 80, 90, 100, 110, 120, 122, 124 broadcast in SI 2  E-GSM ARFCNs 985, 989, 995, 1010, 1014 broadcast in SI 2bis	ARFCNs 515, 590, 600, 780, 810, 870, 875, 885 broadcast in SI 2.
	For multiband tests, the ARFCNs 5, 20, 80, 90,100, 110, 120, 122, 124 are broadcast in SI 2 of GSM cell and in SI 2ter of DCS cell. The ARFCNs 515, 590, 600, 700, 780, 810, 870, 875, 885 are broadcast in SI 2 of DCS cell and in SI 2ter of GSM cell	

	<b>GSM 700, T-GSM 810</b>	<b>PCS 1 900</b>	<b>GSM 850</b>
Downlink Input Level	53 dB $\mu$ Vemf()	53 dB $\mu$ Vemf()	53 dB $\mu$ Vemf()
Serving cell, BCCH/CCCH carrier			
Channel ARFCN	477	700	217
Serving cell, PDTCH (PBCCH not present), SDCCH			
Channel ARFCN	457	725	222
Cell identity	0004H	0004H	0004H
Neighbouring cells BCCH/CCCH carriers			
Channel ARFCN	438, 447, 457, 467, 487, 497, 502, 507	515, 590, 600, 655, 710, 740, 780, 810	137, 147, 157, 177, 197, 207, 227, 237
Input level	53 dB $\mu$ Vemf( )	53 dB $\mu$ Vemf( )	53 dB $\mu$ Vemf( )
BA ARFCN			
	ARFCNs 438, 447, 457, 467, 477, 487, 497, 502, 507 broadcast in SI 2	ARFCNs 515, 590, 600, 655, 700, 710, 740, 780, 810 broadcast in SI 2	ARFCNs 137, 147, 157, 177, 197, 207, 217, 227, 237 broadcast in SI 2.
	For multiband tests, the ARFCNs 438, 447, 457, 467, 477, 487, 497, 502, 507 are broadcast in SI 2 of the GSM 700 cell and SI2ter of the PCS1900 cell. The 515, 590, 600, 655, 700, 710, 740, 780, 810 are broadcast in SI 2 of the PCS1900 cell and SI 2ter of the GSM850 cell.		
		For multiband tests, the ARFCNs 137, 147, 157, 177, 197, 207, 217, 227, 237 are broadcast in SI 2 of the GSM 850 cell and SI2ter of the PCS1900 cell. The 515, 590, 600, 655, 700, 710, 740, 780, 810 are broadcast in SI 2 of the PCS1900 cell and SI 2ter of the GSM850 cell.	

## 40.1.5 Default settings for cell E

The default settings for cell E are identical to those of cell A with the following exceptions:



	<b>GSM 900</b>	<b>DCS 1 800</b>
Downlink Input Level	53 dB $\mu$ Vemf()	53 dB $\mu$ Vemf()
Serving cell, BCCH/CCCH carrier		
Channel ARFCN	90	780
Serving cell, PDTCH (PBCCH not present), SDCCH, TCH		
Channel ARFCN	45	735
Cell identity	0005H	0005H
Neighbouring cells BCCH/CCCH carriers		
Channel ARFCN	5, 20, 80, 100, 110, 120, 122, 124	515, 590, 600, 700, 810, 870, 875, 885
Input level	53 dB $\mu$ Vemf( )	53 dB $\mu$ Vemf( )
BA ARFCN		
	Both P-GSM and E-GSM ARFCNs are broadcast:  GSM ARFCNs 5, 20, 80, 90, 100, 110, 120, 122, 124 broadcast in SI 2  E-GSM ARFCNs 985, 989, 995, 1010, 1014 broadcast in SI 2bis	ARFCNs 515, 590, 600, 700, 780, 810, 870, 875, 885 broadcast in SI 2.
	For multiband tests, the ARFCNs 5, 20, 80, 90, 100, 110, 120, 122, 124 are broadcast in SI 2 of GSM cell and in SI 2ter of DCS cell. The ARFCNs 515, 590, 600, 700, 780, 810, 870, 875, 885 are broadcast in SI 2 of DCS cell and in SI 2ter of GSM cell	

	<b>GSM 700, T-GSM 810</b>	<b>PCS 1 900</b>	<b>GSM 850</b>
Downlink Input Level	53 dB $\mu$ Vemf()	53 dB $\mu$ Vemf()	53 dB $\mu$ Vemf()
Serving cell, BCCH/CCCH carrier			
Channel ARFCN	467	780	227
Serving cell, PDTCH (PBCCH not present), SDCCH			
Channel ARFCN	487	735	232
Cell identity	0005H	0005H	0005H
Neighbouring cells BCCH/CCCH carriers			
Channel ARFCN	438, 447, 457, 477, 487, 497, 502, 507	515, 590, 600, 655, 700, 710, 740, 810	137, 147, 157, 177, 197, 207, 217, 237
Input level	53 dB $\mu$ Vemf( )	53 dB $\mu$ Vemf( )	53 dB $\mu$ Vemf( )
BA ARFCN			
	ARFCNs 438, 447, 457, 467, 477, 487, 497, 502, 507 broadcast in SI 2 For multiband tests, the ARFCNs 438, 447, 457, 467, 477, 487, 497, 502, 507 are broadcast in SI 2 of the GSM 700 cell and SI 2ter of the PCS1900 cell. The 515, 590, 600, 655, 700, 710, 740, 780, 810 are broadcast in SI 2 of the PCS1900 cell and SI 2ter of the GSM850 cell.	ARFCNs 515, 590, 600, 655, 700, 710, 740, 780, 810 broadcast in SI 2	ARFCNs 137, 147, 157, 177, 197, 207, 217, 227, 237 broadcast in SI 2.
		For multiband tests, the ARFCNs 137, 147, 157, 177, 197, 207, 217, 227, 237 are broadcast in SI 2 of the GSM 850 cell and SI 2ter of the PCS1900 cell. The 515, 590, 600, 655, 700, 710, 740, 780, 810 are broadcast in SI 2 of the PCS1900 cell and SI 2ter of the GSM850 cell.	

## 40.1.6 Default settings for cell F

The default settings for cell F are identical to those of cell A with the following exceptions:

	<b>GSM 900</b>	<b>DCS 1 800</b>
Downlink Input Level	53 dB $\mu$ Vemf()	53 dB $\mu$ Vemf()
Serving cell, BCCH/CCCH carrier		
Channel ARFCN	120	810
Serving cell, PDTCH (PBCCH not present), SDCCH, TCH		
Channel ARFCN	55	775
Cell identity	0006H	0006H
Neighbouring cells BCCH/CCCH carriers		
Channel ARFCN	5, 20, 80, 90, 100, 110, 122, 124	515, 590, 600, 700, 780, 870, 875, 885
Input level	53 dB $\mu$ Vemf( )	53 dB $\mu$ Vemf( )
BA ARFCN		
	Both P-GSM and E-GSM ARFCNs are broadcast:  GSM ARFCNs 5, 20, 80, 90, 100, 110, 120, 122, 124 broadcast in SI 2 E-GSM ARFCNs 985, 989, 995, 1010, 1014 broadcast in SI 2bis	ARFCNs 515, 590, 600, 700, 780, 810, 870, 875, 885 broadcast in SI 2.
	For multiband tests, the ARFCNs 5, 20, 80, 90, 100, 110, 120, 122, 124 are broadcast in SI 2 of GSM cell and in SI 2ter of DCS cell. The ARFCNs 515, 590, 600, 700, 780, 810, 870, 875, 885 are broadcast in SI 2 of DCS cell and in SI 2ter of GSM cell	

	<b>GSM 700, T-GSM 810</b>	<b>PCS 1 900</b>	<b>GSM 850</b>
Downlink Input Level	53 dB $\mu$ Vemf()	53 dB $\mu$ Vemf()	53 dB $\mu$ Vemf()
Serving cell, BCCH/CCCH carrier			
Channel ARFCN	487	810	237
Serving cell, PDTCH (PBCCH not present), SDCCH			
Channel ARFCN	477	775	187
Cell identity	0006H	0006H	0006H
Neighbouring cells BCCH/CCCH carriers			
Channel ARFCN	438, 447, 457, 467, 477, 497, 502, 507	515, 590, 600, 655, 700, 710, 740, 780	137, 147, 157, 177, 197, 207, 217, 227
Input level	53 dB $\mu$ Vemf()	53 dB $\mu$ Vemf()	53 dB $\mu$ Vemf()
BA ARFCN			
	ARFCNs 438, 447, 457, 467, 477, 487, 497, 502, 507 broadcast in SI 2	ARFCNs 515, 590, 600, 655, 700, 710, 740, 780, 810 broadcast in SI 2	ARFCNs 137, 147, 157, 177, 197, 207, 217, 227, 237 broadcast in SI 2.
	For multiband tests, the ARFCNs 438, 447, 457, 467, 477, 487, 497, 502, 507 are broadcast in SI 2 of the GSM 700 cell and SI2ter of the PCS1900 cell. The 515, 590, 600, 655, 700, 710, 740, 780, 810 are broadcast in SI 2 of the PCS1900 cell and SI 2ter of the GSM850 cell.		
		For multiband tests, the ARFCNs 137, 147, 157, 177, 197, 207, 217, 227, 237 are broadcast in SI 2 of the GSM 850 cell and SI2ter of the PCS1900 cell. The 515, 590, 600, 655, 700, 710, 740, 780, 810 are broadcast in SI 2 of the PCS1900 cell and SI 2ter of the GSM850 cell.	

## 40.2 Default message contents

### 40.2.1 System Information messages

#### 40.2.1.1 Cell A

With the SYSTEM INFORMATION messages, the information elements are listed in alphabetic order (this is because some information elements occur in several SYSTEM INFORMATION types).

NOTE: BCCH can send 1 instance of SYSTEM INFORMATION 13.

## 40.2.1.1.1 Contents of information elements in SYSTEM INFORMATION TYPE 1 to 13 messages.

(CBCH) Channel Description	Not present.
(CBCH) Mobile Allocation	Not present.
Cell Channel Description	
- Format identifier	For GSM 900: Bit map 0. For DCS 1 800 and PCS 1 900: Range 512. For GSM 700 and GSM 850: Range 128.
- Cell Allocation ARFCN	For GSM 900: Channel Numbers 10, 37, 40, 50, 60 and 80. For DCS1800: Channel Numbers 520, 530, 540 and 550. For PCS 1 900: Channel Numbers 520, 530, 540 and 550 For GSM 700, T-GSM 810: Channel Numbers 447, 457, 477, 487, 497 and 509. For GSM 850: Channel Numbers 159, 161, 163, 165, 187 and 207.
Cell Identity	
- Cell Identity Value	0001Hex
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	Power control level 10.
- ACS	For SI3, spare (set to '0'); for SI4, No additional cell parameters are present in SYSTEM INFORMATION messages 7 and 8.
- NECI	New establishment causes are supported.
- RXLEV_ACCESS_MIN	Minimum level.
Control Channel Description	
- MSCR bit	1 (MSC is R99 onwards)
- Attach-Detach allowed For Non Combined	MS shall apply IMSI attach and detach procedure.
- BS_AG_BLK_RES	
- CCCH_CONF	3 blocks reserved for access grant. 000 (1 basic physical channel used for CCCH, not combined with SDCCHs.)
For Combined	
- BS_AG_BLK_RES	2 blocks reserved for access grant. 001 (1 basic physical channel used for CCCH, combined with SDCCHs.)
- CCCH_CONF	6 multiframe periods for transmission of paging messages.
- BS_PA_MFRMS	0
- T3212 Time-out value	
L2 pseudo length	
- System information 1	21
- System information 2	22
- System information 3	18
- System information 4	12
- System information 7	1
- System information 8	1
- System information 13	0
- System information 14	0
- System information 15	0
Location Area Identification	
- Mobile Country Code	001 (Decimal)
- Mobile Network Code	01 (Decimal) for GSM 900 and DCS 1 800 011 (Decimal) for GSM 700, T-GSM 810, GSM 850 and PCS 1 900
- Location Area Code	0001(Hex)
Message Type	
- System information 1	00011001 (Binary)
- System information 2	00011010 (Binary)

<ul style="list-style-type: none"> <li>- System information 2bis</li> <li>- System information 2ter</li> <li>- System information 3</li> <li>- System information 4</li> <li>- System information 5</li> <li>- System information 5bis</li> <li>- System information 5ter</li> <li>- System information 7</li> <li>- System information 8</li> <li>- System information 13</li> </ul>	<ul style="list-style-type: none"> <li>00000010 (Binary)</li> <li>00000011 (Binary)</li> <li>00011011 (Binary)</li> <li>00011100 (Binary)</li> <li>00011101 (Binary)</li> <li>00000101 (Binary)</li> <li>00000110 (Binary)</li> <li>00011111 (Binary)</li> <li>00011000 (Binary)</li> <li>00000000 (Binary)</li> </ul>
<p>SI 14 and SI15 are only applicable for GSM 710 and T-GSM 810 bands (not for GSM 750 band):</p> <ul style="list-style-type: none"> <li>- System information 14</li> <li>- System information 15</li> </ul>	<ul style="list-style-type: none"> <li>00000001 (Binary)</li> <li>01000011 (Binary)</li> </ul>
<p>Neighbour Cells Description</p> <ul style="list-style-type: none"> <li>- Format identifier</li>   <li>- BCCH Allocation Sequence</li> <li>- BCCH Allocation ARFCN</li>   <li>- EXT-IND</li> </ul> <p>Neighbour Cells Description</p> <ul style="list-style-type: none"> <li>- Format identifier</li> <li>- BCCH Allocation Sequence</li> <li>- BCCH Allocation ARFCN</li>   <li>- EXT-IND</li> </ul> <p>Neighbour Cells Description 2</p> <ul style="list-style-type: none"> <li>- Multiband Reporting</li> <li>- Format identifier</li>   <li>- BCCH Allocation Sequence</li> <li>- BCCH Allocation ARFCN</li> </ul>	<p>For SI 2</p> <p>For GSM 900: Bit map 0. For DCS 1 800 and PCS 1 900: Range 512. For GSM 700 and GSM 850: Range 128.</p> <p>0</p> <p>For GSM 900: Channel numbers 5, 20, 80, 90, 100, 110, 120, 122 and 124. For DCS 1 800: Channel numbers 515, 590, 600, 700, 780, 810, 870, 875 and 885. For PCS 1 900 Channel numbers 515, 590, 600, 655, 700, 710, 740, 780 and 810. For GSM 700, T-GSM 810: Channel numbers 438, 447, 457, 467, 477, 487, 497, 502 and 507. For GSM 850: Channel numbers 137, 147, 157, 177, 197, 207, 217, 227 and 237. For GSM 900, this IE carries only part of the BA. For DCS 1 800, PCS 1 900, GSM 700 and GSM 850, this IE carries complete BA.</p> <p>SI 2bis for GSM 900 For GSM 900: Range 256</p> <p>0</p> <p>For GSM 900: Channel numbers 985, 989, 995, 1010 and 1014. This IE carries only part of the BA.</p> <p>SI2ter 00 (Binary) For GSM 900: Range 512 For DCS 1 800: Range 1024 For PCS 1 900: Range 1024 For GSM 700, T-GSM 810: Range 512 For GSM 850: Range 512</p> <p>0</p> <p>For GSM 900: Channel numbers 515, 590, 600, 700, 780, 810, 870, 875 and 885. For DCS 1800: Channel Numbers 5, 20, 80, 90, 100, 110, 120, 122 and 124. For PCS 1900: GSM 850 Channel numbers 137, 147, 157, 177, 197, 207, 217, 227 and 237 (for a GSM 850/PCS 1900 Network); or GSM 700, T-GSM 810 Channel numbers 438, 447, 457, 467, 477, 487, 497, 502 and 507 (for a GSM 700, T-GSM 810 / PCS 1900 Network). For GSM 700, T-GSM 810: Channel numbers 515, 590, 600, 655, 700, 710, 740, 780 and 810.</p> <p>For GSM 850:</p>

NCC Permitted	Channel numbers 515, 590, 600, 655, 700, 710, 740, 780 and 810.
RACH Control Parameters	0000 0010
- 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	
- {0 1<NCH Position>}	0 (NCH Position not present)
- BandIndicator	L for GSM 700 or T-GSM 810 or GSM 850 or GSM 900 or DCS 1 800 H for PCS 1 900
- spare padding	Spare Padding
SI 2bis Rest Octets	Spare Padding
SI 2ter Rest Octets	Spare Padding
SI 3 Rest Octets	
- Optional Selection Parameters	L (no optional selection parameters)
- Optional Power Offset	L (no optional power offset)
- System Information 2ter Indicator	L (for GSM 700 or T-GSM 810 or GSM 850 or GSM 900 or DCS 1 800 or PCS 1 900 single band tests, no SI2ter exists) Or H (for multiband tests, i.e GSM900/GSM1800 or GSM850/GSM1900, SI2ter does exists)
- Early Classmark Sending Control	H (perform early classmark sending)
- Scheduling if and where	L(no system information type 9)
- GPRS Indicator	H (GPRS supported)
- RA COLOUR	001(Binary)
- SI13 POSITION	On BCCH Norm
- spare padding	Spare Padding
SI 4 Rest Octets	
- Optional Selection Parameters	L (no optional selection parameters)
- Optional Power Offset	L (no optional power offset)
- GPRS Indicator	H (GPRS supported)
- RA COLOUR	001(Binary)
- SI13 POSITION	On BCCH Norm
- spare padding	Spare Padding
SI 7 Rest Octets	Same as SI 4 Rest Octets
SI 8 Rest Octets	Same as SI 4 Rest Octets
SI 13 Rest Octets	
-	H (SI 13 Rest Octets are not spare)
- BCCH_CHANGE_MARK	000
- SI_CHANGE_FIELD	0 Update of unspecified message
- {0 1	GPRS Mobile Allocation IE present
- SI13 CHANGE MARK	00
-HSN	000000 Sequence 0
-{0 1<RFL number list>}	0 Number list not present
-{0	0 using MA BITMAP
-MA_LENGTH	000101 (for GSM 700, T-GSM 810, GSM 850 and GSM900). 000011 (for DCS 1 800 and PCS 1 900).
-MA_BITMAP}	001111 4 belonging (for GSM 700, T-GSM 810, GSM 850 and GSM900). 1111 4 belonging (for DCS 1 800 and PCS 1 900).
- {0   1	0 (PBCCH not present in cell)
- RAC	00000101(Binary)
-SPGC_CCCH_SUP	1 supported
-PRIORITY_ACCESS_THR	11 PA allowed for priority level 1 to 4
-NETWORK_CONTROL_ORDER	00 NC0
-GPRS Cell Options	Present
-Network Mode of Operation	NMO I
-T3168	2 seconds
-T3192	1.5 seconds
-DRX_TIMER_MAX	000 Non-DRX not supported

-ACCESS_BURST_TYPE	1	Use 11 bits access burst
-CONTROL_ACK_TYPE	1	RLC/MAC control block
-BS_CV_MAX	0111	value 7
-PAN_DEC	011	value 3
-PAN_INC	011	value 3
-PAN_MAX	010	Max value for counter N3102=12
-Optional extension information	0	Extension information not present
For R99/Rel 4/Rel 6 network simulation:		
Optional extension information	1	Extension information present
- Extension length	R99: 000011	
	Rel 4: 000101	
	Rel 6: 001001	
- {0 1 <Extension Information>}	0	EGPRS not supported by the cell.
- PFC_FEATURE_MODE	0	Packet Flow Context Procedures not supported
- DTM_SUPPORT	Default:	
	0.....	The cell does not support DTM procedures
	For DTM test cases:	
	1.....	The cell supports DTM procedures
- BSS_PAGING_COORDINATION	0	Circuit-Switched paging coordination not supported in cell
For Rel 4 network simulation		
- CCN_ACTIVE	0	CCN is disabled in the cell
- NW_EXT_UTBF	0	Ext UL TBF not supported in the cell
For Rel 6 network simulation		
- MULTIPLE_TBF_CAPABILITY	0	Cell does not support multiple TBF procedures
- EXT_UTBF_NO_DATA	0	MS shall send a PACKET UPLINK DUMMY CONTROL BLOCK message when there is no other RLC/MAC block ready to send in an uplink radio block allocated by the network
- DTM_ENHANCEMENTS_CAPABILITY	0	Cell does not support enhanced DTM CS establishment and enhanced DTM CS release procedures
- { 0   1 }	0	-- MBMS procedures not supported by the cell
End Rel 6		
End Rel 4		
End R99		
-GPRS Power Control Parameters	Present	
-ALPHA	0000	Alpha = 0.0
-T_AVG_W	01100	value 12
-T_AVG_T	01100	value 12
-PC_MEAS_CHAN	0	BCCH
-N_AVG_I	0111	value 7
For R99/Rel 4/Rel 6 network simulation:		
- Additions in R99	H	
- SGSNR bit	1	SGSN is Release '99 onwards
- Additions in Rel 4	H	
- SI_STATUS_IND bit	0	PACKET SI STATUS message not supported
- Additions in Rel 6	H	
{LB_MS_TXPWR_MAX_CCH}	1	LB_MS_TXPWR_MAX_CCH present
- LB_MS_TXPWR_MAX_CCH	01010	
- SI2n_SUPPORT	00	
End Rel 6		
End Rel 4		
End R99		
-spare padding		Spare Padding
SI 14 Rest Octets		Only applicable for GSM 710 and T-GSM 810 bands
- SI14_INDEX	0	
- SI14_COUNT	0	
- DM_CHANGE_MARK	0	
- DYNAMIC ARFCN MAPPING Description	Present	
- GSM_Band	0110	for GSM 710 band
	0111	for T-GSM 810 band
- ARFCN_FIRST	110110110	ARFCN 438
- BAND_OFFSET	000000000	
- ARFCN_RANGE	1001010	74 channels
SI 15 Rest Octets		Only applicable for GSM 710 and T-GSM 810 bands
- SI15_INDEX	0	
- SI15_COUNT	0	
- DM_CHANGE_MARK	0	

- DYNAMIC ARFCN MAPPING	Present
- GSM_Band	0110 for GSM 710 band 0111 for T-GSM 810 band
- ARFCN_FIRST	110110110 ARFCN 438
- BAND_OFFSET	000000000
- ARFCN_RANGE	1001010 74 channels

#### 40.2.1.2 Cell B

The contents of SYSTEM INFORMATION TYPE 1 to 13 messages for cell B are identical to those of cell A with the following exceptions:

Cell Channel Description	For GSM 900: Bit map 0. For DCS 1800 and PCS 1900: Range 512. For GSM 700, T-GSM 810 and GSM 850: Range 128. For GSM 900: Channel Numbers 15, 70, 97, 100, 110, 120 For DCS 1800: Channel numbers 560, 570, 580, 585. For PCS 1900: Channel numbers 560, 570, 580, 585. For GSM 700, T-GSM 810: Channel numbers 439, 441, 443, 445. For GSM 850: Channel numbers 179, 181, 183, 185
- Format Identifier	
- Cell Allocation ARFCN	
Cell Identity	0002H
- Cell Identity Value	

<p>Neighbour Cells Description</p> <ul style="list-style-type: none"> <li>- Format identifier</li>   <li>- BCCH Allocation ARFCN</li> </ul>	<p>For SI 2</p> <p>For GSM 900: Bit map 0.</p> <p>For DCS 1800 and PCS 1900: Range 512.</p> <p>For GSM 700, T-GSM 810 and GSM 850: Range 128.</p> <p>For GSM 900: Channel numbers 5, 20, 80, 90, 100, 110, 120, 122, 124.</p> <p>For DCS 1800: Channel numbers 515, 590, 600, 700, 780, 810, 870, 875, 885</p> <p>For PCS 1900 Channel numbers 515, 590, 600, 655, 700, 710, 740, 780, 810</p> <p>For GSM 700, T-GSM 810: Channel numbers 438, 447, 457, 467, 477, 487, 497, 502, 507</p> <p>For GSM 850: Channel numbers 137, 147, 157, 177, 197, 207, 217, 227, 237</p>
<p>Neighbour Cells Description 2</p> <ul style="list-style-type: none"> <li>- Multiband Reporting</li> <li>- Format identifier</li>   <li>- BCCH Allocation Sequence</li> <li>- BCCH Allocation ARFCN</li> </ul>	<p>SI2ter</p> <p>00 (Binary)</p> <p>For GSM 900: Range 512</p> <p>For DCS 1800: Range 1024</p> <p>For PCS 1900: Range 1024</p> <p>For GSM 700, T-GSM 810: Range 512</p> <p>For GSM 850: Range 512</p> <p>0</p> <p>For GSM 900: Channel numbers 515, 590, 600, 700, 780, 810, 870, 875, 885.</p> <p>For DCS 1800: Channel numbers 5, 20, 80, 90, 100, 110, 120, 122, 124.</p> <p>For PCS 1900: GSM 850 Channel numbers 137, 147, 157, 177, 197, 207, 217, 227, 237 (for a GSM 850/PCS 1900 Network); or GSM 700, T-GSM 810 Channel numbers 438, 447, 457, 467, 477, 487, 497, 502, 507 (for a GSM 700, T-GSM 810 / PCS 1900 Network).</p> <p>For GSM 700, T-GSM 810: Channel numbers 515, 590, 600, 655, 700, 710, 740, 780, 810.</p> <p>For GSM 850: Channel numbers 515, 590, 600, 655, 700, 710, 740, 780, 810.</p>
<p>SI 13 Rest Octets</p> <ul style="list-style-type: none"> <li>-MA_LENGTH</li>   <li>-MA_BITMAP}</li> </ul>	<p>present</p> <p>000101 (for GSM900).</p> <p>000011 (for GSM 700, T-GSM 810, GSM 850, DCS 1800 and PCS 1900).</p> <p>001111           4 belonging (for GSM900).</p> <p>1111               4 belonging (for GSM 700, T-GSM 810, GSM 850, DCS 1800 and PCS 1900).</p>

### 40.2.1.3 Cell C

The contents of SYSTEM INFORMATION TYPE 1 to 13 messages for cell C are identical to those of cell A with the following exceptions:



<p>Cell Channel Description</p> <ul style="list-style-type: none"> <li>- Format Identifier</li> </ul>	<p>For GSM 900: Bit map 0. For DCS 1800 and PCS 1900: Range 512. For GSM 700, T-GSM 810 and GSM 850: Range 128.</p>
<ul style="list-style-type: none"> <li>- Cell Allocation ARFCN</li> </ul>	<p>For GSM 900: Channel Numbers 65, 75, 85, 95, 105 and 115. For DCS 1800: Channel numbers 605, 610, 620 and 630 For PCS 1900: Channel numbers 605, 610, 620 and 630 For GSM 700, T-GSM 810: Channel numbers 449, 451, 453, 455 For GSM 850: Channel Numbers 169, 171, 173, 175.</p>
<p>Cell Identity</p> <ul style="list-style-type: none"> <li>- Cell Identity Value</li> </ul>	<p>0003H</p>
<p>Neighbour Cells Description</p> <ul style="list-style-type: none"> <li>- Format identifier</li> </ul>	<p>For SI 2 For GSM 900: Bit map 0. For DCS 1800 and PCS 1900: Range 512. For GSM 700, T-GSM 810 and GSM 850: Range 128.</p>
<ul style="list-style-type: none"> <li>- BCCH Allocation ARFCN</li> </ul>	<p>For GSM 900: Channel numbers 5, 20, 80, 90, 100, 110, 120, 122, 124. For DCS 1800: Channel numbers 515, 590, 600, 700, 780, 810, 870, 875, 885 For PCS 1900 Channel numbers 515, 590, 600, 655, 700, 710, 740, 780, 810 For GSM 700, T-GSM 810: Channel numbers 438, 447, 457, 467, 477, 487, 497, 502, 507 For GSM 850: Channel numbers 137, 147, 157, 177, 197, 207, 217, 227, 237</p>
<p>Neighbour Cells Description 2</p> <ul style="list-style-type: none"> <li>- Multiband Reporting</li> <li>- Format identifier</li> </ul>	<p>SI2ter 00 (Binary)</p>
<ul style="list-style-type: none"> <li>- BCCH Allocation Sequence</li> <li>- BCCH Allocation ARFCN</li> </ul>	<p>For GSM 900: Range 512 For DCS 1800: Range 1024 For PCS 1900: Range 1024 For GSM 700, T-GSM 810: Range 512 For GSM 850: Range 512</p> <p>0</p> <p>For GSM 900: Channel numbers 515, 590, 600, 700, 780, 810, 870, 875, 885. For DCS 1800: Channel numbers 5, 20, 80, 90, 100, 110, 120, 122, 124. For PCS 1900: GSM 850 Channel numbers 137, 147, 157, 177, 197, 207, 217, 227, 237 (for a GSM 850/PCS 1900 Network); or GSM 700, T-GSM 810 Channel numbers 438, 447, 457, 467, 477, 487, 497, 502, 507 (for a GSM 700, T-GSM 810 / PCS 1900 Network). For GSM 700, T-GSM 810: Channel numbers 515, 590, 600, 655, 700, 710, 740, 780, 810 For GSM 850: Channel numbers 515, 590, 600, 655, 700, 710, 740, 780, 810</p>
<p>SI 13 Rest Octets</p> <ul style="list-style-type: none"> <li>-MA_LENGTH</li> </ul>	<p>present</p>
<ul style="list-style-type: none"> <li>-MA_BITMAP}</li> </ul>	<p>000101 (for GSM900). 000011 (for GSM 700, T-GSM 810, GSM 850, DCS 1800 and PCS 1900). 001111           4 belonging (for GSM900). 1111               4 belonging (for GSM 700, T-GSM 810, GSM 850, DCS 1800 and PCS 1900).</p>

#### 40.2.1.4 Cell D

The contents of SYSTEM INFORMATION TYPE 1 to 13 messages for cell D are identical to those of cell A with the following exceptions:

<p>Cell Channel Description</p> <ul style="list-style-type: none"> <li>- Format Identifier</li> </ul> <ul style="list-style-type: none"> <li>- Cell Allocation ARFCN</li> </ul>	<p>For GSM900: Bit map 0. For DCS 1800 and PCS 1900: Range 512. For GSM700, T-GSM 810 and GSM 850: Range 128. For GSM900: Channel Numbers 22, 42, 62, 82, 102 ,122. For DCS 1800: Channel numbers 640, 655, 660, 670 For PCS 1900: Channel numbers 640, 655, 660, 670 For GSM 700, T-GSM 810: Channel numbers 459, 461, 463, 465 For GSM 850: Channel numbers 139, 141, 143, 145.</p>
<p>Cell Identity</p> <ul style="list-style-type: none"> <li>- Cell Identity Value</li> </ul> <p>Neighbour Cells Description</p> <ul style="list-style-type: none"> <li>- Format identifier</li> </ul> <ul style="list-style-type: none"> <li>- BCCH Allocation ARFCN</li> </ul>	<p>0004H For SI 2 For GSM900: Bit map 0. For DCS 1800 and PCS 1900: Range 512. For GSM 700, T-GSM 810 and GSM 850: Range 128. For GSM900: Channel numbers 5, 20, 80, 90, 100, 110, 120, 122, 124. For DCS 1800: Channel numbers 515, 590, 600, 700, 780, 810, 870, 875, 885 For PCS 1900 Channel numbers 515, 590, 600, 655, 700, 710, 740, 780, 810 For GSM 700, T-GSM 810: Channel numbers 438, 447, 457, 467, 477, 487, 497, 502, 507. For GSM 850: Channel numbers 137, 147, 157, 177, 197, 207, 217, 227, 237</p>
<p>Neighbour Cells Description 2</p> <ul style="list-style-type: none"> <li>- Multiband Reporting</li> <li>- Format identifier</li> </ul> <ul style="list-style-type: none"> <li>- BCCH Allocation Sequence</li> <li>- BCCH Allocation ARFCN</li> </ul>	<p>SI2ter 00 (Binary) For GSM900: Range 512 For DCS 1800: Range 1024 For PCS 1900: Range 1024 For GSM 700, T-GSM 810: Range 512 For GSM 850: Range 512 0 For GSM900: Channel numbers 515, 590, 600, 700, 780, 810, 870, 875, 885. For DCS 1800: Channel numbers 5, 20, 80, 90, 100, 110, 120, 122, 124. For PCS 1900: GSM 850 Channel numbers 137, 147, 157, 177, 197, 207, 217, 227, 237 (for a GSM 850/PCS 1900 Network); or GSM 700, T-GSM 810 Channel numbers 437, 447, 457, 467, 477, 487, 497, 502, 507. (for a GSM 700, T-GSM 810 / PCS 1900 Network). For GSM 700, T-GSM 810: Channel numbers 515, 590, 600, 655, 700, 710, 740, 780, 810 For GSM 850: Channel numbers 515, 590, 600, 655, 700, 710, 740, 780, 810.</p>
<p>SI 13 Rest Octets</p> <ul style="list-style-type: none"> <li>-MA_LENGTH</li> </ul> <ul style="list-style-type: none"> <li>-MA_BITMAP}</li> </ul>	<p>present 000101 (for GSM900). 000011 (for GSM 700, T-GSM 810, GSM 850, DCS 1800 and PCS 1900). 001111           4 belonging (for GSM900). 1111               4 belonging (for GSM 700, T-GSM 810, GSM</p>

	850, DCS 1800 and PCS 1900).
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#### 40.2.1.5 Cell E

The contents of SYSTEM INFORMATION TYPE 1 to 13 messages for cell E are identical to those of cell A with the following exceptions:

<p>Cell Channel Description</p> <ul style="list-style-type: none"> <li>- Format Identifier</li> </ul> <ul style="list-style-type: none"> <li>- Cell Allocation ARFCN</li> </ul>	<p>For GSM 900: Bit map 0. For DCS 1800 and PCS 1900: Range 512. For GSM 700, T-GSM 810 and GSM 850: Range 128. For GSM 900: Channel Numbers 12, 32, 52, 72, 92, 112 For DCS 1800: Channel numbers 680, 690, 705, 710 For PCS 1900: Channel numbers 680, 690, 705, 710 For GSM 700, T-GSM 810: Channel numbers 489, 491, 493, 495 For GSM 850: Channel numbers 149, 151, 153, 155</p>
<p>Cell Identity</p> <ul style="list-style-type: none"> <li>- Cell Identity Value</li> </ul> <p>Neighbour Cells Description</p> <ul style="list-style-type: none"> <li>- Format identifier</li> </ul> <ul style="list-style-type: none"> <li>- BCCH Allocation ARFCN</li> </ul>	<p>0005H For SI 2 For GSM 900: Bit map 0. For DCS 1800 and PCS 1900: Range 512. For GSM 700, T-GSM 810 and GSM 850: Range 128. For GSM 900: Channel numbers 5, 20, 80, 90, 100, 110, 120, 122, 124. For DCS 1800: Channel numbers 515, 590, 600, 700, 780, 810, 870, 875, 885 For PCS 1900 Channel numbers 515, 590, 600, 655, 700, 710, 740, 780, 810 For GSM 700, T-GSM 810: Channel numbers 438, 447, 467, 457, 477, 487, 497, 502, 507 For GSM 850: Channel numbers 137, 147, 157, 177, 197, 207, 217, 227, 237</p>
<p>Neighbour Cells Description 2</p> <ul style="list-style-type: none"> <li>- Multiband Reporting</li> <li>- Format identifier</li> </ul> <ul style="list-style-type: none"> <li>- BCCH Allocation Sequence</li> <li>- BCCH Allocation ARFCN</li> </ul>	<p>SI2ter 00 (Binary) For GSM 900: Range 512 For DCS 1800: Range 1024 For PCS 1900: Range 1024 For GSM 700, T-GSM 810: Range 512 For GSM 850: Range 512 0 For GSM 900: Channel numbers 515, 590, 600, 700, 780, 810 870, 875, 885. For DCS 1800: Channel numbers 5, 20, 80, 90, 100, 110, 120, 122, 124. For PCS 1900: GSM 850 Channel numbers 137, 147, 157, 177, 197, 207, 217, 227, 237 (for a GSM 850/PCS 1900 Network); or GSM 700, T-GSM 810 Channel numbers 438, 447, 457, 467, 477, 487, 497, 502, 507 (for a GSM 700, T-GSM 810 / PCS 1900 Network). For GSM 700, T-GSM 810: Channel numbers 515, 590, 600, 655, 700, 710, 740, 780, 810. For GSM 850: Channel numbers 515, 590, 600, 655, 700, 710, 740, 780, 810.</p>
<p>SI 13 Rest Octets</p> <ul style="list-style-type: none"> <li>-MA_LENGTH</li> </ul> <ul style="list-style-type: none"> <li>-MA_BITMAP}</li> </ul>	<p>present 000101 (for GSM900). 000011 (for GSM 700, T-GSM 810, GSM 850, DCS 1800 and PCS 1900). 001111           4 belonging (for GSM900). 1111               4 belonging (for GSM 700, T-GSM 810, GSM</p>

	850, DCS 1800 and PCS 1900).
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#### 40.2.1.6 Cell F

The contents of SYSTEM INFORMATION TYPE 1 to 13 messages for cell F are identical to those of cell A with the following exceptions:

<p>Cell Channel Description</p> <ul style="list-style-type: none"> <li>- Format Identifier</li> </ul> <ul style="list-style-type: none"> <li>- Cell Allocation ARFCN</li> </ul>	<p>For GSM 900: Bit map 0. For DCS 1800 and PCS 1900: Range 512. For GSM 700, T-GSM 810 and GSM 850: Range 128. For GSM 900: Channel Numbers 7, 27, 47, 67, 87, 107 For DCS 1800: Channel numbers 720, 730, 740, 770 For PCS 1900: Channel numbers 720, 730, 740, 750 For GSM 700, T-GSM 810: Channel numbers 479, 481, 483, 485 For GSM 850: Channel numbers 189, 191, 193, 195</p>
<p>Cell Identity</p> <ul style="list-style-type: none"> <li>- Cell Identity Value</li> </ul> <p>Neighbour Cells Description</p> <ul style="list-style-type: none"> <li>- Format identifier</li> </ul> <ul style="list-style-type: none"> <li>- BCCH Allocation ARFCN</li> </ul>	<p>0006H For SI 2 For GSM 900: Bit map 0. For DCS 1800 and PCS 1900: Range 512. For GSM 700, T-GSM 810 and GSM 850: Range 128. For GSM 900: Channel numbers 5, 20, 80, 90, 100, 110, 120, 122, 124. For DCS 1800: Channel numbers 515, 590, 600, 700, 780, 810, 870, 875, 885 For PCS 1900 Channel numbers 515, 590, 600, 655, 700, 710, 740, 780, 810 For GSM 700, T-GSM 810: Channel numbers 438, 447, 457, 467, 477, 487, 497, 502, 507 For GSM 850: Channel numbers 137, 147, 157, 177, 197, 207, 217, 227, 237</p>
<p>Neighbour Cells Description 2</p> <ul style="list-style-type: none"> <li>- Multiband Reporting</li> <li>- Format identifier</li> </ul> <ul style="list-style-type: none"> <li>- BCCH Allocation Sequence</li> <li>- BCCH Allocation ARFCN</li> </ul>	<p>SI2ter 00 (Binary) For GSM 900: Range 512 For DCS 1800: Range 1024 For PCS 1900: Range 1024 For GSM 700, T-GSM 810: Range 512 For GSM 850: Range 512 0 For GSM 900: Channel numbers 515, 590, 600, 700, 780, 810, 870, 875, 885. For DCS 1800: Channel numbers 5, 20, 80, 90, 100, 110, 120, 122, 124. For PCS 1900: GSM 850 Channel numbers 137, 147, 157, 177, 197, 207, 217, 227, 237 (for a GSM 850/PCS 1900 Network); or GSM 700, T-GSM 810 Channel numbers 438, 447, 457, 467, 477, 487, 497, 502, 507 (for a GSM 700, T-GSM 810 / PCS 1900 Network). For GSM 700, T-GSM 810: Channel numbers 515, 590, 600, 655, 700, 710, 740, 780, 810. For GSM 850: Channel numbers 515, 590, 600, 655, 700, 710, 740, 780, 810.</p>
<p>SI 13 Rest Octets</p> <ul style="list-style-type: none"> <li>-MA_LENGTH</li> </ul> <ul style="list-style-type: none"> <li>-MA_BITMAP}</li> </ul>	<p>present 000101 (for GSM900). 000011 (for GSM 700, T-GSM 810, GSM 850, DCS 1800 and PCS 1900). 001111           4 belonging (for GSM900). 1111               4 belonging (for GSM 700, T-GSM 810, GSM</p>

850, DCS 1800 and PCS 1900).
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## 40.2.2 Packet System Information messages on PACCH

### 40.2.2.1 PACKET SYSTEM INFORMATION TYPE 13 (only applicable in test cases where PBCCH is not present).

This message is transmitted PACCH in such a way that the Mobile station receives PSI13 once in 15 seconds.

MESSAGE_TYPE	110111
PAGE_MODE	00 Normal Paging
BCCH_CHANGE_MARK	000
SI_CHANGE_FIELD	0000 Unspecified
{0 1<SI13_CHANGE_MARK>}	1 Present
- SI13_CHANGE_MARK	00
{GPRS Mobile Allocation}	
-HSN	000000 Sequence 0
-(0 1<RFL number list>}	0 Number list not present
-{0	0
-MA_LENGTH	000101 (for GSM 700, T-GSM 810, GSM 850 and GSM900).
	000011 (for DCS 1 800 and PCS 1 900).
	001111 4 belonging (for GSM 700, T-GSM 810, GSM 850 and GSM900).
	1111 4 belonging (for DCS 1 800 and PCS 1 900).
	0 PBCCH not present in cell
	0000101(Binary)
	1 supported
	11 PA allowed for priority level 1 to 4
	00 NC0
GPRS Cell Options	Same as the GPRS Cell Options as stated in SI13 rest octets for test cases where PBCCH is not present.
GPRS Power Control Parameters	Same as the GPRS Power Control Parameters as stated in SI13 rest octets for test cases where PBCCH is not present.
Additions for Rel.99/Rel 4/Rel 6	1
- SGSNR bit	1 SGSN is Release '99 onwards
Additions for Rel 4	1
- SI_STATUS_IND bit	0 PACKET SI STATUS msg not supported
Additions for Rel 6	1
{LB_MS_TXPWR_MAX_CCH}	1 LB_MS_TXPWR_MAX_CCH present
- LB_MS_TXPWR_MAX_CCH	01010
- SI2n_SUPPORT	00
End Rel 6	
End Rel 4	
End R99	
Padding	Padding bits

## 40.2.3 Default contents of Layer 2 messages

### 40.2.3.1 PACKET PAGING REQUEST message:

MESSAGE_TYPE	100010
PAGE_MODE	00 Normal Paging
{0 1<PERSISTENCE_LEVEL>}	0 (no persistence level present)
{0 1<NLN>}	0 (no notification list number)
{1 <Repeated Page info>}	1 (start of Repeated Page info)
-	0 (Page request for TBF establishment)
-	0 (PTMSI)
- PTMSI	00000000000000000000000000000000
-	P-TMSI allocated during GPRS attach procedure
-	0 ( end of Repeated Page info)
spare padding	Spare Padding

### 40.2.3.2 PACKET ACCESS REJECT message:

MESSAGE_TYPE	100001
PAGE_MODE	00 Normal Paging
Reject	
-	1 (TLLI not present)
-	0(Packet Request Reference)
- Packet Request Reference	information field sent in PACKET CHANNEL REQUEST and frame number in which PACKET CHANNEL REQUEST was received
-	0 (no waiting indication)
-	0 (end of Reject IE)
spare padding	Spare Padding



40.2.3.3 Void

40.2.3.4 PACKET UPLINK ASSIGNMENT messages

MESSAGE_TYPE	001010
PAGE_MODE	00 Normal Paging
{0 1< PERSISTENCE_LEVEL >	0 (no persistence level present)
Referenced Address struct	As received from the MS
{ 0 < Global TFI >	
10 < TLLI >	
110 < TQI >	
111 <Packet Request Reference >}	
--Message escape	0
CHANNEL_CODING_COMMAND	CS1
TLLI_BLOCK_CHANNEL_CODING	1
Packet Timing Advance	
{ 0 1< TIMING_ADVANCE_VALUE >	1 (timing advance value)
- TIMING_ADVANCE_VALUE }	30 bit periods
{ 0 1< TIMING_ADVANCE_INDEX >	0 (no timing advance index)
<TIMING_ADVANCE_TIMESLOT_NUMBER > }	
{0 1<Frequency Parameters>}	Not present in case MS is in DTM mode otherwise present when required for channel assignment
For PBCCH not present case:	
< TSC >	Arbitrarily chosen (default 5)
{ 00< ARFCN >}	00 (ARFCN no hopping)
- ARFCN }	As for "Serving cell, PDTCH (PBCCH not present), SDCCH " in section 40.1.1 for the current cell
In case of Dynamic Allocation:	
{ 01 < Dynamic Allocation >	Dynamic Allocation struct :
< Extended Dynamic Allocation >	0 ( Dynamic allocation)
0 1< P0 >	0
< USF_GRANULARITY >	0 (one block)
{0 1< UPLINK_TFI_ASSIGNMENT >	1 ( uplink TFI assignment)
- UPLINK_TFI_ASSIGNMENT }	00000
{0 1< RLC_DATA_BLOCKS_GRANTED >}	0 (no RLC_DATA_BLOCKS_GRANTED, open-ended TBF)
{0 1< TBF_STARTING_TIME >}	0 (no starting time)
{0 1< Timeslot Allocation >	0 (No power control parameters)
	One slot arbitrarily chosen, the following USF_TNx shall be corresponding to the chosen value x (default timeslot 4 assigned)
{0 1< USF_TN0>}	0 (timeslot 0 not assigned)
{0 1< USF_TN1>}	0 (timeslot 1 not assigned)
{0 1< USF_TN2>	0 (timeslot 2 not assigned)
{0 1< USF_TN3>}	0 (timeslot 3 not assigned)
{0 1< USF_TN4>}	1 (timeslot 4 assigned)
- USF_TN4	arbitrarily chosen (default 000)
{0 1< USF_TN5>}	0 (timeslot 5 not assigned)
{0 1< USF_TN6>}	0 (timeslot 6 not assigned)
{0 1< USF_TN7>}	0 (timeslot 7 not assigned)
In case of Single Block Allocation:	
{ 10 <Single Block Allocation>	Single Block Allocation struct:
- TIMESLOT_NUMBER	100
{0   1	1 (ALPHA, GAMMA_TN present)
- < ALPHA >	0
- < GAMMA_TN > }	
{0   1}	0 (P0, BTS_PWR_CTRL_MODE, PR_MODE not present)
- TBF_STARTING_TIME	0 (Absolute Starting Time, indicating current frame + 104 frames)
-	
For R99 network simulation:	
Additions for Rel.99	1
- Packet Extended TA flag	0 not present
spare padding	Spare Padding

## 40.2.3.5 PACKET DOWNLINK ASSIGNMENT message:

MESSAGE_TYPE	000010
PAGE_MODE	00 Normal Paging
{0 1<PERSISTENCE_LEVEL >	0 (no persistence level present)
Referenced Address	
-	1 (address is TLLI)
- TLLI	Same as the value received from MS
MAC_MODE	00 Dynamic Allocation
RLC_MODE	0 Acknowledged mode
CONTROL_ACK	0
TIMESLOT_ALLOCATION	arbitrarily chosen (default timeslot 4)
Packet Timing Advance	
{ 0 1<TIMING_ADVANCE_VALUE >	1 (timing advance value)
- TIMING_ADVANCE_VALUE }	30 bit periods
{ 0 1<TIMING_ADVANCE_INDEX >	0 (no timing advance index)
<TIMING_ADVANCE_TIMESLOT_NUMBER > }	
{0 1<Frequency Parameters>}	Not present in case MS is in DTM mode otherwise present when required for channel assignment
For PBCCH not present case:	
< TSC >	Arbitrarily chosen (default 5)
{ 00< ARFCN >}	00 (ARFCN no hopping)
- ARFCN }	As for "Serving cell, PDTCH (PBCCH not present), SDCCCH " in section 40.1.1 for the current cell
{0 1<DOWNLINK_TFI_ASSIGNMENT>}	1 (assign downlink TFI)
- DOWNLINK_TFI_ASSIGNMENT	00001(Binary)
{0 1<Power Control Parameters>}	1 (Power Control Parameters present)
- ALPHA	0, 5
- GAMMA for allocated timeslots	For GSM 700, T-GSM 810, GSM 850 and GSM 900: +8 dBm For DCS 1800 and PCS 1900: +6 dBm (default timeslot 4)
{0 1<TBF_STARTING_TIME>}	0 (starting time not present)
{0 1<Measurement Mapping>}	0 (no measurement mapping)
For R99 network simulation:	
Additions for Rel.99	1
- EGPRS settings flag	0 not present
- Packet Extended TA flag	0 not present
- COMPACT reduced MA	0 not present
spare padding	Spare Padding

## 40.2.3.6 PACKET DOWNLINK DUMMY CONTROL BLOCK message:

MESSAGE_TYPE	100101
PAGE_MODE	00 Normal Paging
Persistence Level	1 Persistence Level Present
- PERSISTENCE_LEVEL	0000 Radio Priority 1
- PERSISTENCE_LEVEL	0000 Radio Priority 2
- PERSISTENCE_LEVEL	0000 Radio Priority 3
- PERSISTENCE_LEVEL	0000 Radio Priority 4
Spare padding	Spare Padding

## 40.2.3.7 Packet Timeslot Reconfigure

PACKET TIMESLOT RECONFIGURE message (dynamic allocation without assigning a new TBF):

MESSAGE_TYPE	000111
PAGE_MODE	Normal Paging
0<GLOBAL_TFI>	0 The TFI value of the uplink TBF or downlink TBF which this message applies to (default 00101)
CHANNEL_CODING_COMMAND	0, message escape
Global Packet Timing Advance	arbitrarily chosen from valid values (default CS-1)
- {0 1<TIMING_ADVANCE_VALUE>}	1 (timing advance value present)
- TIMING_ADVANCE_VALUE	30 bit periods
- {0 1<UPLINK_TIMING_ADVANCE_INDEX>	0 (no uplink timing advance index)
<UPLINK_TIMING_ADVANCE_TIMESLOT_NUMBER>	The MS stops the operation of the continuous timing advance procedure.
- {0 1<DOWNLINK_TIMING_ADVANCE_INDEX>	0 (no downlink timing advance index)
<DOWNLINK_TIMING_ADVANCE_TIMESLOT_NUMBER>	The MS stops the operation of the continuous timing advance procedure.
DOWNLINK_RLC_MODE	Same as in the Test PDP context used
CONTROL_ACK	0
{0 1<DOWNLINK_TFI_ASSIGNMENT>	0
{0 1<UPLINK_TFI_ASSIGNMENT>	0
DOWNLINK_TIMESLOT_ALLOCATION	arbitrarily chosen from valid values (default 00010000)
{0 1<Frequency Parameters>}	0 (use current parameters)
Dynamic allocation	0
- Extended Dynamic Allocation	0 (Dynamic allocation)
- {0 1<P0><PR_MODE>}	0
- USF_GRANULARITY	0, one block
- {0 1<RLC_DATA_BLOCKS_GRANTED>}	0 (no RLC_DATA_BLOCKS_GRANTED, open-ended TBF)
- {0 1<TBF_STARTING_TIME>}	0 (no starting time)
-	1 (Timeslot Allocation with Power Control Parameters)
- ALPHA	one slot arbitrarily chosen and different from current slot, the following USF_TNx and GAMMA_TNx shall be corresponding to the chosen value, default timeslot 3.
- {0 1<USF_TN0><GAMMA_TN0>}	0.5
- {0 1<USF_TN1><GAMMA_TN1>}	0 (timeslot 0 not assigned)
- {0 1<USF_TN2><GAMMA_TN2>}	0 (timeslot 1 not assigned)
- {0 1<USF_TN3><GAMMA_TN3>}	0 (timeslot 2 not assigned)
- USF_TN3	1 (timeslot 3 assigned)
- GAMMA_TN3	arbitrarily chosen and different from current value, default 4
- {0 1<USF_TN4><GAMMA_TN4>}	For GSM 700, T-GSM 810, GSM 850 and GSM 900, +8 dBm
- {0 1<USF_TN5><GAMMA_TN5>}	For DCS 1 800, +6 dBm
- {0 1<USF_TN6><GAMMA_TN6>}	For PCS 1 900, +6 dBm
- {0 1<USF_TN7><GAMMA_TN7>}	0 (timeslot 4 not assigned)
spare padding	0 (timeslot 5 not assigned)
	0 (timeslot 6 not assigned)
	0 (timeslot 7 not assigned)
	Spare Padding

For assignment of an uplink TBF while a downlink TBF has been established, the address information should be changed to DOWNLINK\_TFI of Global\_TFI. UPLINK\_TFI\_ASSIGNMENT is present.

## 40.2.4 Default contents of Layer 3 messages

This clause contains the default values of L3 messages, which unless indicated otherwise in clause 40, shall be transmitted by the system simulator and which are required to be received from the MS under test.

In this clause, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "Hex", or a binary value, indicated by a "Binary" is used.

## 40.2.4.1 ACTIVATE PDP CONTEXT ACCEPT message:

Protocol discriminator	1010 (SM message for GPRS service)
Activate PDP context accept message identity	01000010
Negotiated LLC SAPI	As per corresponding Activate PDP Context Request
Negotiated QoS	Minimum
Radio priority	Arbitrary chosen
Spare half octet	Spare half octet
PDP address	Returned only if PDP address from corresponding Activate PDP Context Request is not static

## 40.2.4.2 ACTIVATE PDP CONTEXT REJECT message:

Protocol discriminator	1010 (SM message for GPRS service)
Activate PDP context reject message identity	01000011
SM cause	Insufficient resources

## 40.2.4.3 ATTACH ACCEPT message:

Protocol discriminator	1000 (MM message for GPRS service)
Skip indicator	0000
Attach accept message identity	00000010
Attach result	Copy back attach type (GPRS attach (MS class C))
Force to standby	not indicated (subject to CR)
Periodic RA update timer	timer is deactivated
Radio priority for SMS	priority level 3
Spare half octet	Spare half octet
Routing area identification	
- MCC	001 (decimal)
- MNC	For GSM 900 / DCS 1800: 01 (decimal)
	For GSM 700 / T-GSM 810 / GSM 850 / PCS 1900:
	011 (decimal)
- LAC	0001H
- RAC	05H
P-TMSI signature	P-TMSI signature
Negotiated READY timer value	32 seconds
Allocated P-TMSI	P-TMSI
For R99 network simulation: T3302 value	0

## 40.2.4.4 ATTACH REJECT message:

Protocol discriminator	MM message for GPRS
Skip indicator	0000
Attach reject message identity	00000100
GMM cause	Regular deactivation
For R99 network simulation: T3302 value	0

## 40.2.4.5 AUTHENTICATION AND CIPHERING REJECT message:

Protocol discriminator	MM message for GPRS
Skip indicator	0000
Authentication and ciphering reject message identity	00010100

## 40.2.4.6 AUTHENTICATION AND CIPHERING REQUEST message:

Protocol discriminator	MM message for GPRS
Skip indicator	0000
Authentication and ciphering request message identity	00010010
Ciphering algorithm	Ciphering not used
IMEISV request	not requested
Force to standby	not indicated
A&C reference number	Arbitrary
Authentication parameter RAND	Arbitrary
GPRS ciphering key sequence number	Arbitrary

## 40.2.4.7 CHANNEL RELEASE message:

Protocol Discriminator	0110 (RR Management).
Skip Indicator	0000
Message Type	00001101
RR Cause	
- RR Cause Value	Normal event.
GPRS RESUMPTION IE	Present (see note below)
- ACK field	1

NOTE: Only in case the MS performed GPRS suspension procedure prior to the CS session, then the GPRS RESUMPTION IE shall be present in the CHANNEL RELEASE message.

## 40.2.4.8 DEACTIVATE PDP CONTEXT ACCEPT message:

Protocol discriminator	1010 (SM message for GPRS service)
Deactivate PDP context accept message identity	01010100

## 40.2.4.9 DETACH ACCEPT message (for mobile terminated detach):

Protocol discriminator	MM message for GPRS
Skip indicator	0000
Detach request message identity	00000110

## 40.2.4.10 DETACH REQUEST message (mobile terminated detach):

Protocol discriminator	MM message for GPRS
Skip indicator	0000
Detach request message identity	00000101
Detach type	re-attach not required
Force to standby	not indicated

## 40.2.4.11 GMM INFORMATION message:

Protocol discriminator	MM message for GPRS
Skip indicator	0000
GMM information message identity	00100001

## 40.2.4.12 GMM STATUS message:

Protocol discriminator	MM message for GPRS
Skip indicator	0000
GMM status message identity	00100000
GMM cause	Arbitrary

## 40.2.4.13 IDENTITY REQUEST message:

Protocol discriminator	MM message for GPRS
Skip indicator	0000
Identity request message identity	00010101
Identity type	IMSI
Force to standby	not indicated

## 40.2.4.14 IMMEDIATE ASSIGNMENT messages

## 40.2.4.14.1 IMMEDIATE ASSIGNMENT message (Packet Downlink Construction):

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	
Dedicated mode or TBF	Temporary Block Flow
- T/D	1 Resources assigned in IA Rest Octets
- Downlink	0 No meaning
- TMA	Dependant upon the test case.
Packet Channel Description	Copy of last received by the SS.
Request Reference	
Timing Advance	
- Timing advance value	30 bit periods.
Mobile Allocation	
- Length	0
Starting Time	Not present.
IA rest octets	
-	HH
-	01 (Packet Downlink Assignment)
- Packet Downlink Assignment	
- TLLI	(The value received from MS)
-	1
- TFI_ASSIGNMENT	Any value not used before
- RLC_MODE	RLC unacknowledged mode
{0   1 < ALPHA >	1 ALPHA present
- ALPHA }	0.5
- GAMMA	For GSM 700, T-GSM 810, GSM 850 and GSM 900: +8 dBm
	For DCS 1 800 and PCS 1 900: +6 dBm
- POLLING	0 No polling
- TA_VALID	1 Timing Advance value in TA IE is valid
{ 0   1 < TIMING_ADVANCE_INDEX > }	0 Timing Advance Index not present
{ 0   1 < TBF_STARTING_TIME > }	0 TBF Starting Time not present
{0   1}	0 P0, BTS_PWR_CTRL_MODE, PR_MODE not present
- spare padding	Spare Padding

## 40.2.4.14.2 IMMEDIATE ASSIGNMENT message (Packet Uplink construction):

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.
Dedicated mode or TBF	
- T/D	1 Temporary Block Flow
- Downlink	0 No meaning
- TMA	0 No meaning
Packet Channel Description	Dependant upon the test case.
Request Reference	Copy of last received by the SS.
Timing Advance	
- Timing advance value	30 bit periods.
Mobile Allocation	
- Length	0
Starting Time	Not present.
IA rest octets	
-	HH
-	00 (Packet Uplink Assignment)
- Packet Uplink Assignment	1
- TFI_ASSIGNMENT	Any value not used before
- POLLING	0
-	0 Dynamic Allocation
- USF	Any value not used before
- USF_GRANULARITY	0 (transmit one RLC block)
{ 0   1 }	0 (P0, BTS_PWR_CTRL_MODE , PR_MODE not present)
- CHANNEL_CODING_COMMAND	00 CS-1 shall be used
- TLLI_BLOCK_CHANNEL_CODING	1 MS shall used the coding scheme as specified by CHANNEL_CODING_COMMAND
{ 0   1 < ALPHA > }	1 ALPHA present
- ALPHA	0.5
- GAMMA	For GSM 700, T-GSM 810, GSM 850 and GSM 900: +8 dBm
{ 0   1 < TIMING_ADVANCE_INDEX > }	For DCS 1 800 and PCS 1 900: +6 dBm
{ 0   1 < TBF_STARTING_TIME > }	0 Timing Advance Index not present
- spare padding	0 TBF Starting Time not present
	Spare Padding

## 40.2.4.14.3 IMMEDIATE ASSIGNMENT message (Single block allocation construction):

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.
Dedicated mode or TBF	
- T/D	1 Temporary Block Flow
- Downlink	0 No meaning
- TMA	0 No meaning
Packet Channel Description	Dependant upon the test case.
Request Reference	Copy of last received by the SS.
Timing Advance	
- Timing advance value	30 bit periods.
Mobile Allocation	
- Length	0
Starting Time	Not present.
IA rest octets	
-	HH
-	00 (Packet Uplink Assignment)
- Packet Uplink Assignment	0
{0   1 < ALPHA >}	1 ALPHA present
- ALPHA	0.5
- GAMMA	For GSM 700, T-GSM 810, GSM 850 and GSM 900: +8 dBm For DCS 1 800 and PCS 1 900: +6 dBm
-	01
- TBF_STARTING_TIME	Indicating Absolute Starting Time (calculated by the SS within a range of +50 to + 250 from current frame)
{ L   H }	L (P0, BTS_PWR_CTRL_MODE , PR_MODE not present)
- spare padding	Spare Padding

## 40.2.4.15 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	
- Page Mode	Normal Paging.
Channel Description 1	Dependant upon the test case.
Request Reference 1	Pertaining to last Channel Request sent by the MS.
Timing Advance 1	
- Timing advance value	Dependant upon the test case.
Channel Description 2	Dependant upon the test case.
Request Reference 2	Not pertaining to any Channel Requests sent by the MS.
Timing Advance 2	
- Timing advance value	Dependant upon the test case.
Mobile Allocation	
- Length	0
Starting Time	Not present.
IAX rest octets	All bits set to spare.



## 40.2.4.16 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 1	Copy of last received by the SS.
Wait Indication 1	0 seconds.
Request Reference 2	Not pertaining to the MS under test.
Wait Indication 2	0 seconds.
Request Reference 3	Not pertaining to the MS under test.
Wait Indication 3	0 seconds.
Request Reference 4	Not pertaining to the MS under test.
Wait Indication 4	0 seconds.
IAR rest octets	All bits set to spare.

## 40.2.4.17 MODIFY PDP CONTEXT REQUEST message:

Protocol discriminator	1010 (SM message for GPRS service)
Modify PDP context request message identity	01001000
Radio priority	
Spare half octet	Spare half octet
Requested LLC SAPI	As per corresponding Activate PDP Context Request
New QoS	Higher than the minimum QoS

## 40.2.4.18 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	00 (indicating packet paging).
- second channel	00 (indicating packet paging).
Mobile Identity 1	
- odd/even indication	Even.
- Type of Identity	P-TMSI.
- Identity Digits	P-TMSI previously allocated to MS.
Mobile Identity 2	Not present.
P1 rest octets	
- {L H<NLN(PCH)>}	L (no Notification List Number(PCH))
- {L H<Priority1>}	L (no priority specified for mobile Id 1)
- {L H<Priority2>}	L (no priority specified for mobile Id 2)
- Packet Page Indication 1	Packet Paging
- Packet Page Indication 2	L
- {L H<Group Call Information>}	L (no Group call Information)
- {L H<NLN status>}	L (no Notification List Number status)
- spare padding	Spare Padding

## 40.2.4.19 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	00 (indicating packet paging).
- second channel	00 (indicating packet paging).
Mobile Identity 1	
- TMSI value	P-TMSI previously allocated to MS.
Mobile Identity 2	
- TMSI value	P-TMSI not allocated to MS.
Mobile Identity 3	
- TMSI value	IMSI not relevant to the MS under test
P2 rest octets	
- {L H<CN3>}	H (channel needed for mobile Id 3 present)
- CN3	Indicating packet paging
- {L H<NLN>}	L (no notification list number)
- {L H<Priority1>}	L (no priority specified for mobile Id 1)
- {L H<Priority2>}	L (no priority specified for mobile Id 2)
- {L H<Priority3>}	L (no priority specified for mobile Id 3)
- {L H<NLN status>}	L (no notification list number status)
- Packet Page Indication 3	Packet Paging
- spare padding	Spare Padding

## 40.2.4.20 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	00 (indicating packet paging).
- second channel	00 (indicating packet paging).
Mobile identity 1	
- TMSI value	P-TMSI previously allocated to MS.
Mobile identity 2	
- TMSI value	P-TMSI not allocated to MS.
Mobile identity 3	
- TMSI value	P-TMSI not allocated to MS.
Mobile identity 4	
- TMSI value	P-TMSI not allocated to MS.
P3 rest octets	
- {L H<CN3><CN4>}	H (channel needed for mobile Id 3 and 4 present)
- CN3	Indicating packet paging
- CN4	Indicating packet paging
- {L H<NLN>}	L (no notification list number)
- {L H<Priority1>}	L (no priority specified for mobile Id 1)
- {L H<Priority2>}	L (no priority specified for mobile Id 2)
- {L H<Priority3>}	L (no priority specified for mobile Id 3)
- {L H<Priority4>}	L (no priority specified for mobile Id 4)
- {L H<NLN status>}	L (no notification list number status)
- spare padding	Spare Padding

## 40.2.4.21 PDCH ASSIGNMENT COMMAND message (downlink):

Information Element	Value/Remarks
Protocol Discriminator	RR Management
Skip indicator	0000 (Binary)
Message Type	00101010 (Binary)
Description of the Channel, after time	
- Channel Description	
- Channel Type and TDMA offset	TCH/F + ACCH's
- Timeslot Number	Slot 2
- Training Sequence Code	Same as the BCC
- Hopping channel	Single RF channel
- ARFCN	Same as BCCH carrier
- RR Packet Downlink Assignment	
- LENGTH_IN_OCTETS	400
- MAC_MODE	00 (Dynamic allocation)
- RLC_MODE	1 (RLC unacknowledged mode)
- TIMESLOT_ALLOCATION	Slot 2
- Packet Timing Advance	
- { 0 1 <TIMING_ADVANCE_VALUE> }	1 (TIMING_ADVANCE_VALUE present)
- TIMING_ADVANCE_VALUE	30 bit periods
- { 0 1 <TIMING_ADVANCE_INDEX> }	0 (TIMING_ADVANCE_INDEX and TIMING_ADVANCE_TIMESLOT_NUMBER not present)
- { 0 1 <Power Control Parameters> }	1 (Power Control Parameters present)
- ALPHA	0.5
- { 0 1 <GAMMA_TN0> }	0 (GAMMA_TN0 not present)
- { 0 1 <GAMMA_TN1> }	0 (GAMMA_TN1 not present)
- { 0 1 <GAMMA_TN2> }	1 (GAMMA_TN2 present)
- GAMMA_TN2	For GSM 700, T-GSM 810, GSM 850 and GSM 900: +8 dBm For DCS 1 800 and PCS 1 900: +6 dBm
- { 0 1 <GAMMA_TN3> }	0 (GAMMA_TN3 not present)
- { 0 1 <GAMMA_TN4> }	0 (GAMMA_TN4 not present)
- { 0 1 <GAMMA_TN5> }	0 (GAMMA_TN5 not present)
- { 0 1 <GAMMA_TN6> }	0 (GAMMA_TN6 not present)
- { 0 1 <GAMMA_TN7> }	0 (GAMMA_TN7 not present)
- { 0 1 <DOWNLINK_TFI_ASSIGNMENT> }	1 (Assign downlink TFI)
- DOWNLINK_TFI_ASSIGNMENT	00011 (Binary)
- { 0 1 <MEASUREMENT_STARTING_TI> }	0 (No measurement information)
- N_SPARE_BITS	Spare padding

## 40.2.4.22 REQUEST PDP CONTEXT ACTIVATION message (mobile originated detach):

Protocol discriminator	1010 (SM message for GPRS service)
Request PDP context activation message identity	01000100
Offered PDP address	Arbitrarily chosen

## 40.2.4.23 ROUTING AREA UPDATE ACCEPT message:

Protocol discriminator	MM message for GPRS
Skip indicator	0000
Routing area update accept message identity	00001001
Force to standby	not indicated
Update result	RA updated
Periodic RA update timer	Timer is deactivated
Routing area identification	
- MCC	001 (decimal)
- MNC	For GSM 900 / DCS 1800: 01 (decimal)
	For GSM 700 / T-GSM 810 / GSM 850 / PCS 1900: 011 (decimal)
- LAC	0001H
- RAC	05H
For R99 network simulation: T3302 value	0

## 40.2.4.24 ROUTING AREA UPDATE REJECT message:

Protocol discriminator	MM message for GPRS
Skip indicator	0000
Routing Area Update reject message identity	00001011
GMM cause	Congestion
Force to standby	Not indicated
For R99 network simulation: T3302 value	0

## 40.2.4.25 RR-CELL CHANGE ORDER message:

Information Element	Value/Remarks
Protocol Discriminator	RR Management
Skip indicator	0000 (Binary)
Message Type	00001000 (Binary)
Cell description	
- PLMN colour code, NCC	1
- BS colour code, BCC	5
- BCCH ARFCN	As for "Serving cell, PDTCH (PBCCH not present),SDCCH" in section 40.1.1 for the current cell
NC mode for target cell	
- NC mode	00 (binary, NC0 mode)
Spare half octet	Spare Padding

## 40.2.4.26 SM STATUS message:

Information Element	Value/Remarks
Protocol discriminator	1010 (SM message for GPRS service)
SM status message identity	01010101
SM cause	Arbitrary

## 40.2.4.27 DETACH ACCEPT message (for mobile originated detach):

Information Element	Value/Remarks
Protocol discriminator	MM message for GPRS
Skip indicator	0000
Detach request message identity	00000110
Force to Standby	001 (indicated)
Spare half octet	Spare Padding

## 40.2.4.28 DTM Assignment Command

Protocol discriminator	0110
Skip Indicator	0000
Message Type	01001100
Power Command	00001010 FPC not in use, Power control level 10
Description of the CS Channel	
- Channel Description	
- Channel Type and TDMA offset	TCH/F + ACCH's
- Timeslot Number	3
- Training Sequence Code	Same as the BCCH
- Hopping channel	Single RF channel
- ARFCN	default
GPRS broadcast information	
- Length in Octets	5 Octets
- GPRS Cell Options	
- NMO	00 Network Mode 1
- T3168	011 2 seconds
- T3192_VALUE	010 1.5 seconds
- DRX_TIMER_MAX	000
- ACCESS_BURST_TYPE	1 11 bit access burst
- CONTROL_ACK_TYPE	1 RLC/MAC Control block
- BS_CV_MAX	0111
-Optional extension information	0 Extension information not present
For R99/Rel 4 network simulation:	
Optional extension information	1 Extension information present
- Extension length	R99: 000011 Rel 4: 000101 Rel 6: 000111
- {0 1 <Extension Information>}	0 EGPRS not supported by the cell.
- PFC_FEATURE_MODE	0 Packet Flow Context Procedures not supported
- DTM_SUPPORT	1.....The cell supports DTM procedures
- BSS_PAGING_COORDINATION	0 Circuit-Switched paging coordination not supported in cell
end R99	
For Rel 4 network simulation	
- CCN_ACTIVE	0 CCN is disabled in the cell
- NW_EXT_UTBF	0 Ext UL TBF not supported in the cell
For Rel6 network simulation	
- MULTIPLE_TBF_CAPABILITY	0 not supported in the cell
- EXT_UTBF_NODATA	0 not supported in the cell
- GPRS Power Control Parameters	
-ALPHA	0101 Alpha = 0.5
-T_AVG_W	01100 value 12
-T_AVG_T	01100 value 12
-PC_MEAS_CHAN	0 BCCH
-N_AVG_I	0111 value 7
Channel Mode	
- Mode	00000001 (GSM Full Rate)
Description of the Uplink Packet Channel Assignment	
- LENGTH_IN_OCTETS	00000100
- CHANNEL_CODING_COMMAND	CS1
- TLLI_BLOCK_CHANNEL_CODING	1
- Packet Timing Advance	
- { 0 1 <TIMING_ADVANCE_VALUE> }	0 (no timing advance value)
{ 0 1 < Dynamic Allocation >	Dynamic Allocation struct :
< Extended Dynamic Allocation >	0 ( Dynamic allocation)
0 1< P0 >	0
< USF_GRANULARITY >	0 (one block)
{0 1< UPLINK_TFI_ASSIGNMENT >	1 ( uplink TFI assignment)
- UPLINK_TFI_ASSIGNMENT }	00000
{0 1< RLC_DATA_BLOCKS_GRANTED >}	0 (no RLC_DATA_BLOCKS_GRANTED, open-ended TBF)
{0 1< TBF_STARTING_TIME >}	0 (no starting time)
{0 1< Timeslot Allocation >	0 (Timeslot Allocation)
{0 1< USF_TN0>}	0 (timeslot 0 not assigned)
{0 1< USF_TN1>}	0 (timeslot 1 not assigned)

<pre> {0 1&lt; USF_TN2&gt;} {0 1&lt; USF_TN3&gt;} {0 1&lt; USF_TN4&gt;}   - USF_TN4 {0 1&lt; USF_TN5&gt;} {0 1&lt; USF_TN6&gt;} {0 1&lt; USF_TN7&gt;}} Description of the Downlink Packet Channel Assignment - LENGTH_IN_OCTETS - MAC_MODE - RLC_MODE - TIMESLOT_ALLOCATION   - Packet Timing Advance     { 0 1&lt; TIMING_ADVANCE_VALUE &gt;     { 0 1&lt; TIMING_ADVANCE_INDEX &gt; }   - {0 1&lt; P0 &gt;}   - { 0   1 &lt; Power Control Parameters }   - { 0   1 &lt; DOWNLINK_TFL_ASSIGNMENT &gt; }     - DOWNLINK_TFL_ASSIGNMENT   - { 0   1 &lt; MEASUREMENT_STARTING_TIME   &gt;}         </pre>	<pre> 0 (timeslot 2 not assigned) 0 (timeslot 3 not assigned) 1 (timeslot 4 assigned) arbitrarily chosen (default 000) 0 (timeslot 5 not assigned) 0 (timeslot 6 not assigned) 0 (timeslot 7 not assigned)  00000101 00 Dynamic Allocation 0 Acknowledged mode 00001000  0 (no timing advance value) 0 (no timing advance index) 0 0 1 1 00000 0         </pre>
---	---

40.2.4.29 DTM Reject

<pre> Protocol discriminator Skip Indicator Message Type Wait Indication   - T3122/T3142 timeout value         </pre>	<pre> 0110 0000 01001001 00011110 (30 Seconds)         </pre>
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40.2.4.30 Packet Notification

<pre> Protocol discriminator Skip Indicator Message Type P-TMSI   - P-TMSI Value         </pre>	<pre> 0110 0000 01001110 00000000000000000000000000000000         </pre>
---	--

## 40.2.4.31 Packet Assignment

Protocol discriminator	0110
Skip Indicator	0000
Message Type	01001011
GPRS broadcast information	
- Length in Octets	00000101
- GPRS Cell Options	
- NMO	00 Network Mode 1
- T3168	011 2 seconds
- T3192	010 1.5 seconds
- DRX_TIMER_MAX	000
- ACCESS_BURST_TYPE	1 11 bit access burst
- CONTROL_ACK_TYPE	1 RLC/MAC Control block
- BS_CV_MAX	0111
-Optional extension information	0 Extension information not present
For R99/Rel 4 network simulation:	
Optional extension information	1 Extension information present
- Extension length	R99: 000011
	Rel 4: 000101
	Rel 6: 000111
- {0 1 <Extension Information>}	0 EGPRS not supported by the cell.
- PFC_FEATURE_MODE	0 Packet Flow Context Procedures not supported
- DTM_SUPPORT	1.....The cell supports DTM procedures
- BSS_PAGING_COORDINATION	0 Circuit-Switched paging coordination not supported in cell
end R99	
For Rel 4 network simulation	
- CCN_ACTIVE	0 CCN is disabled in the cell
- NW_EXT_UTBF	0 Ext UL TBF not supported in the cell
For Rel6 network simulation	
- MULTIPLE_TBF_CAPABILITY	0 not supported in the cell
- EXT_UTBF_NODATA	0 not supported in the cell
- GPRS Power Control Parameters	
- ALPHA	0101 Alpha = 0.5
- T_AVG_W	01100 value 12
- T_AVG_T	01100 value 12
- PC_MEAS_CHAN	0 BCCH
- N_AVG_I ;	0111 value 7
Description of the Uplink Packet Channel Assignment	
- LENGTH_IN_OCTETS	00000101
- CHANNEL_CODING_COMMAND	CS1
- TLLI_BLOCK_CHANNEL_CODING	1
- Packet Timing Advance	
- { 0 1 <TIMING_ADVANCE_VALUE> }	0 (no TIMING_ADVANCE_VALUE present)
- { 0 1< TIMING_ADVANCE_INDEX > }	0 (no timing advance index)
{ 01 < Dynamic Allocation >	01 (Dynamic Allocation struct)
< Extended Dynamic Allocation >	0 ( Dynamic allocation)
0 1< P0 >	0
< USF_Granularity >	0 (one block)
{0 1< UPLINK_TFI_ASSIGNMENT >	1 ( uplink TFI assignment)
- UPLINK_TFI_ASSIGNMENT }	00000
{0 1< RLC_DATA_BLOCKS_GRANTED >}	0 (no RLC_DATA_BLOCKS_GRANTED, open-ended TBF)
{0 1< TBF_STARTING_TIME >}	0 (no starting time)
{0 1< Timeslot Allocation >	0 (Timeslot Allocation)
{0 1< USF_TN0>}	0 (timeslot 0 not assigned)
{0 1< USF_TN1>}	0 (timeslot 1 not assigned)
{0 1< USF_TN2>}	0 (timeslot 2 not assigned)
{0 1< USF_TN3>}	0 (timeslot 3 not assigned)
{0 1< USF_TN4>}	1 (timeslot 4 assigned)
- USF_TN4	arbitrarily chosen (default 000)
{0 1< USF_TN5>}	0 (timeslot 5 not assigned)
{0 1< USF_TN6>}	0 (timeslot 6 not assigned)
{0 1< USF_TN7>}}	0 (timeslot 7 not assigned)
Description of the Downlink Packet Channel Assignment	

- LENGTH_IN_OCTETS	0000101
- MAC_MODE	00 Dynamic Allocation
- RLC_MODE	0 Acknowledged mode
- TIMESLOT_ALLOCATION	00001000
- Packet Timing Advance	
{ 0 1< TIMING_ADVANCE_VALUE >	1 (timing advance value)
- TIMING_ADVANCE_VALUE }	30 bit periods
{ 0 1< TIMING_ADVANCE_INDEX >	0 (no timing advance index)
<TIMING_ADVANCE_TIMESLOT_NUMBER>	
}	
- {0 1< P0 >}	0
- { 0   1 < Power Control Parameters }	0
- { 0   1 < DOWNLINK_TFI_ASSIGNMENT > }	1
- DOWNLINK_TFI_ASSIGNMENT	00000
- { 0   1 < MEASUREMENT_STARTING_TIME > }	0

#### 40.2.4.32 Assignment Command

RR management Protocol Discriminator	0110
Skip Indicator	0000
Message Type	00101110
Description of the First Channel, after time	
- Channel Description	
- Channel Type and TDMA offset	TCH/F + ACCH's
- Timeslot Number	3
- Training Sequence Code	Same as the BCCH
- Hopping channel	Single RF channel
- ARFCN	default
Power Command	00001010 FPC not in use, Power control level 10

#### 40.2.4.33 Handover Command

RR management Protocol Discriminator	0110
Skip Indicator	0000
Message Type	00101011
Cell Description	
- Network Colour Code	1
- Base Station Colour Code	5
- BCCH Carrier Number	Dependant upon the test case
Description of the First Channel, after time	
- Channel Description	
- Channel Type and TDMA offset	TCH/F + ACCH's
- Timeslot Number	Dependant upon the test case
- Training Sequence Code	Same as the BCCH
- Hopping channel	Single RF channel
- ARFCN	Dependant upon the test case
Handover Reference	01010101
Power Command and Access Type	00001010 Handover access mandatory, FPC not in use, Power control level 10
Synchronization Indication	
- Report Observed Time Difference	Shall not be included.
- Synchronization Indication	"Non synchronized".
- Normal Cell Indication	Ignore out of range timing advance.

#### 40.2.4.34 Physical Information

Protocol Discriminator	0110
Skip Indicator	0000
Message Type	00101101
Timing advance	30 bit periods.



## 40.2.4.35 Connect Acknowledge

Protocol Discriminator	0011
Transaction Identifier	
TI value	As used in the SETUP message.
TI flag	0
Message Type	0X001111

## 40.2.4.36 Location Updating Accept

Protocol Discriminator	0101
Skip Indicator	0000
Location Updating Accept message type	00000010
Location Area Identification	
MCC	001 (decimal)
MNC	01 (decimal) for GSM 900, DCS 1800 011 (decimal) for GSM 700, T-GSM 810, GSM 850, PCS 1900
LAC	0001H

## 40.2.4.37 System Information Type 6

L2 pseudo length	This is the sum of the lengths of all the information elements present in the message except for the SI 6 rest octets and L2 pseudo length IEs. For the default message the L2 pseudo length is 11.
RR management Protocol Discriminator	0110 (radio resources management messages)
Skip Indicator	0000
System Information Type 6 Message Type	00011110
Cell Identity	Same as the BCCH
Location Area Identification	Same as the BCCH
Cell Options	Same as the BCCH
NCC Permitted	Same as the BCCH
SI 6 Rest Octets	For DTM not present case
- {L H<PCH and NCH info>}	L (no PCH and NCH info)
- {L H<VBS/VGCS options : bit(2)>}	L (no VBS/VGCS options)
- <DTM_support : bit == L >	L (DTM not supported)
<DTM_support : bit == H	
- <Band indicator >	Same as the BCCH
- <implicit spare >	1011
SI 6 Rest Octets	For DTM present case
- {L H<PCH and NCH info>}	L (no PCH and NCH info)
- {L H<VBS/VGCS options : bit(2)>}	L (no VBS/VGCS options)
- <DTM_support : bit == L >	H (DTM supported)
<DTM_support : bit == H	
- <RAC : bit (8) >	Same as the BCCH
- <MAX_LAPDm : bit (3) >	000 (Any message segmented in up to 5 LAPDm frames)
- <Band indicator >	Same as the BCCH
- L H<GPRS_MS_TXPWR_MAX_CCH : bit (5)>	H (GPRS_MS_TXPWR_MAX_CCH present)
GPRS_MS_TXPWR_MAX_CCH	01010
- <implicit spare >	1

## 40.2.4.38 DTM Information

RR management Protocol Discriminator	0110 (radio resources management messages)
Skip Indicator	0000
DTM Information Message Type	01001101
Routing Area Identification	Same as the BCCH
DTM Information Rest Octets	
- < LENGTH_IN_OCTETS : bit(8) >	00000011
- < MAX_LAPDm : bit (3) >	000 (Any message segmented in up to 5 LAPDm frames)
- < GPRS_MS_TXPWR_MAX_CCH: bit (5) >	arbitrarily chosen
- < Cell identity: bit (16) >	Cell Identity of the Serving Cell

## 40.2.4.39 PS Handover

PAGE_MODE	default
Global TFI	TFI of mobile station uplink TBF
CONTAINER_ID	00 PS Handover to A/Gb Mode Payload
PS Handover RR Info flag	00 PS Handover RR Info
PS Handover Radio Resources IE	present
Handover Reference	0
ARFCN	default ARFCN for BCCH of cell B
SI	01 Synchronized
NCI	0
BSIC	BSIC of cell B
0 <CCN_ACTIVE>	not present
0 <3G_CCN_ACTIVE>	not present
0 <CCN Support Description>	not present
Frequency Parameters	default PDTCH of cell B
NETWORK_CONTROL_ORDER	2
0 <Global Packet Timing Advance>	not present
EXTENDED_DYNAMIC_ALLOCATION	0
RLC_RESET	0
0 <PO>	not present
0 <Uplink Control Timeslot>	not present
0 GPRS mode	Uplink TBF assignment for default PDTCH of cell B
0 <NAS Container for PS Handover IE>	not present

## 40.3 Default GPRS Conditions and Message Contents for the Higher Layer Test Cases

This clause details default conditions and messages that shall be used for the higher layer test cases (GPRS Mobility Management, Session Management and SMDCP).

These alternate conditions and messages are derived from the standard defaults via the changes listed in the following sub-clause. They aim to produce default conditions with permitted channel combinations of:

- FCCH+SCH+BCCH+CCCH+SDCCH/4+SACCH/4 (v. from 3GPP TS 05.02 'Permitted Channel Combinations onto a Basic Physical Channel').
- PDTCH+PACCH+PTCCH (xiii. From 3GPP TS 05.02 'Permitted Channel Combinations onto a Basic Physical Channel').

Where values have not been specified the equivalent overall default values should be used. If values need to be removed from the overall defaults then these should be specified as 'OMITTED'.

### 40.3.1 Default Test Conditions for the Higher Layer Test Cases

Network dependant parameters	
CCCH_CONF	1 basic physical channel for CCCH combined with SDCCH
BS_AG_BLKRES	0 blocks reserved
BS_PA_MFRMS	5 multiframes
IMSI Attach-detach	IMSI attach / detach not allowed

### 40.3.2 Default Message for the Higher Layer Test Cases

#### 40.3.2.1 Default Contents of System Information Messages for the Higher Layer Test Cases

Default Contents of Information Elements in SYSTEM INFORMATION TYPE 1 to 13 Messages Used for the Higher Layer Test Cases.

Control Channel Description	
- BS_AG_BLKRES	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.
- Attach-Detach allowed	IMSI attach / detach not allowed

## Normal Case

SI 13 Rest Octets	For PBCCH not present case
Routing Area Code(RAC)	00000101(Binary)
SPLIT_PG_CYCLE(SPGC_CCCH_SUP)	Supported
PRIORITY_ACCESS_THR	Packet access allowed for priority level 1 to 4
NETWORK_CONTROL_ORDER	Normal MS control, no measurement reporting
GPRS Cell Options	
Network Mode of Operation	NMO 1
T3168	2 seconds
T3192	1.5 seconds
DRX_TIMER_MAX	Non-DRX not supported
ACCESS_BURST_TYPE	11 bits access burst
CONTROL_ACK_TYPE	RLC/MAC control block
BS_CV_MAX	7
PAN_DEC	3
PAN_INC	3
PAN_MAX	010(Binary)
GPRS Power Control Parameters	
ALPHA	
T_AVG_W	12
T_AVG_T	12
PC_MEAS_CHAN	BCCH
N_AVG_I	7
INT_MEAS_CHANNEL_LIST_AVAIL	Not Available

### 40.3.3 Contents Of Packet System Information Messages for the Higher Layer Test Cases

### 40.3.4 Contents of Layer 2 Messages for the Higher Layer Test Cases

PACKET UPLINK ASSIGNMENT message:

{0 1<Frequency Parameters> - Frequency Parameters - ARFCN	1 (Frequency Parameters present)  ARFCN of the CCCH
Single Block Allocation - TIMESLOT_NUMBER	01 (Single Block Allocation) 010 1 (ALPHA, GAMMA_TN present)

PACKET DOWNLINK ASSIGNMENT message:

{0 1<Frequency Parameters> - Frequency Parameters - ARFCN	1 (Frequency Parameters present)  ARFCN of the CCCH
---	---

### 40.3.5 Contents of Layer 3 Messages for the Higher Layer Test Cases

IMMEDIATE ASSIGNMENT message:

Packet Channel Description - TN - ARFCN	2 (Chosen arbitrarily) ARFCN of the CCCH
---	---

IMMEDIATE ASSIGNMENT EXTENDED message:

Channel Description 1 - Channel Type and TDMA offset	SDCCH/4, with subchannel chosen arbitrarily by the test house.
- Timeslot Number	0
- ARFCN	ARFCN of the CCCCH

## 40.3.6 Timer tolerance for higher layer test cases

The timers specified in the test cases in section 44, 45 and 46 shall take into account the delay in the establishment of uplink and/or downlink TBF required as per the test sequence. Timer tolerance = Timer Value +/- 10% +/- Delay to establish TBF.

## 40.4 Macros

### 40.4.1 Overview

The present document presents macros for GPRS test cases. It is intended to be a working document forming part of the GPRS Test Specifications.

#### 40.4.1.1 Definition

A macro is a name or sentence, possibly followed by an argument list, that is equated to a text to which it is to be expanded, possibly with the substitution of actual arguments.

Macros may be used to simplify the writing and reading of the test cases or to avoid the repetition of common sentences, message contents or message sequences. The macros defined in this subclause can be used throughout the test cases.

The definition of the macros is done in alphabetical order.

#### 40.4.1.2 Syntax

##### 40.4.1.2.1 Message contents

Any macro referencing message contents shall use the following table:

Macro reference (arguments)		
SI	Information Element	Value/Remarks

The table must contain:

**Macro reference:** word or sentence that gives the name to the macro. It may include a list of arguments with actual values for some IE's.

**SI:** the System Information messages whose content is referenced. Several SIs can be referenced in this column. The defined IE value(s) refers to the SI(s) in the same row.

**Information Element:** IE which value is specified.

**Value/Remarks:** value and any other comment specific to the IE's. In particular, the mapping between an argument value and its coding shall be specified in this column (see note).

NOTE: If possible, only the meaning of the value will be shown and not the value itself; this avoids updating when the core specifications are modified.

##### 40.4.1.2.2 Message sequence

Any macro referencing message contents shall use the following table:

Step	Direction	Message	Comments
		{ Macro reference }	Macro (arguments)

The table must contain:

**Macro reference:** word or sentence that gives the name to the macro. It may include a list of arguments with actual values for some parameters used within the macro.

**Step:** Number of the message. Letters may be used for general values: the same rules as in 3GPP TS 11.10 apply.

**Direction:** it must be either:

- "MS → SS": for an uplink message or a macro containing only uplink message(s);
- "SS → MS": for a downlink message or a macro containing only downlink message(s);
- "SS ↔ MS": for a macro containing both uplink and downlink message(s);
- "MS": for an action performed on the mobile side; or
- "SS": for an action performed on the system simulator side.

**Message:** Message name or macro reference.

**Comments:** any other comment specific to the message. In particular, value of certain bits/fields of the correspondent message.

The symbol ':' can be used to indicate that the previous and following message or sequence of messages (both previous and following must appear) is sent an unknown number of times, probably referenced with a letter on the 'step' column.

## 40.4.2 Default message contents

### 40.4.2.1 GPRS not supported

SI	Information Element	Value/Remarks
SI 3 SI 4 SI 7 SI 8	GPRS Indicator	GPRS not supported

### 40.4.2.2 GPRS supported

SI	Information Element	Value/Remarks
SI 3 SI 4 SI 7 SI 8	GPRS Indicator	GPRS supported

### 40.4.2.3 GPRS supported using BCCH

(P)SI	Information Element	Value/Remarks
SI 13	[Bit after RA_CODE]	PCCCH not present

## 40.4.2.4 Max retrans set to {1, 2, 4, 7}

(P)SI	Information Element	Value/Remarks
SI 1 SI 2 SI 2bis SI 3 SI 9	RACH Control Parameters - Max retrans	Maximum 1 retransmission, maximum 2 retransmissions, maximum 4 retransmissions or maximum 7 retransmissions

## 40.4.3 Macro message sequences

## 40.4.3.1 Acknowledged downlink data

Step	Direction	Message	Comments
	SS ↔ MS	{ Acknowledged downlink data }	Macro
1	SS → MS	{ Downlink data }	Macro
2	MS → SS	PACKET DOWNLINK ACK/NACK	

## 40.4.3.2 Classmark and measurement

Step	Direction	Message	Comments
	MS → SS	{ Classmark and measurement }	Macro
1a	MS → SS	MEASUREMENT REPORT	
2a	MS → SS	CLASSMARK CHANGE	Mobile Station Classmark 2 and 3
1b	MS → SS	CLASSMARK CHANGE	Mobile Station Classmark 2 and 3
2b	MS → SS	MEASUREMENT REPORT	
3	MS → SS	{ Measurement reporting }	Macro

## 40.4.3.3 Downlink data

Step	Direction	Message	Comments
	SS → MS	{ Downlink data }	Macro
1	SS → MS	RLC DOWNLINK DATA	FBI bit set to '0'
2	SS → MS	RLC DOWNLINK DATA	
⋮	⋮	⋮	
N	SS → MS	RLC DOWNLINK DATA	$n \geq 1$

## 40.4.3.4 Downlink data transfer

Step	Direction	Message	Comments
	SS ↔ MS	{ Downlink data transfer }	Macro
<b>a. RLC unacknowledged mode</b>			
1	SS → MS	{ Downlink data }	Macro
2	SS → MS	RLC DOWNLINK DATA	FBI bit set to '1' and valid RRBP field
3	MS → SS	PACKET CONTROL ACKNOWLEDGMENT	In the uplink block specified by the RRBP field
<b>b. RLC acknowledged mode</b>			
1	SS ↔ MS	{ Acknowledged downlink data }	Macro
2	SS ↔ MS	{ Acknowledged downlink data }	Macro
⋮	⋮	⋮	
N	SS ↔ MS	{ Acknowledged downlink data }	Macro. $n \geq 1$
n+1	SS → MS	RLC DOWNLINK DATA	
n+2	SS → MS	RLC DOWNLINK DATA	
⋮	⋮	⋮	
M	SS → MS	RLC DOWNLINK DATA	$m \geq n+1$ . FBI bit set to '1' and valid RRBP field
m+1	MS → SS	PACKET DOWNLINK ACK/NACK	In the uplink block specified by the RRBP field. Final Ack Indicator bit set to '1'

## 40.4.3.5 Measurement reporting

Step	Direction	Message	Comments
	MS → SS	{ Measurement reporting }	Macro
1	MS → SS	MEASUREMENT REPORT	See note
2	MS → SS	MEASUREMENT REPORT	
⋮	⋮	⋮	
N	MS → SS	MEASUREMENT REPORT	
NOTE: These messages are sent continuously on the ACCH. As no short messages are sent, this sequence should not be temporarily interrupted by other messages also sent on the same channel. However, other messages may be sent on the main DCCH.			

## 40.4.3.6 Uplink data transfer

Step	Direction	Message	Comments
	MS ↔ SS	{ Uplink data transfer }	Macro (arguments: see note 4)
1	MS → SS	RLC UPLINK DATA	See notes 1 and 2
2a	MS → SS	RLC UPLINK DATA	See note 3
2b	SS → MS	PACKET UPLINK ACK/NACK	
3a	MS → SS	RLC UPLINK DATA	
3b	SS → MS	PACKET UPLINK ACK/NACK	
⋮	⋮	⋮	n ≥ 1. CV set to '0' Final Ack Indicator bit = '1' and valid RRBP field In the uplink block specified by the RRBP field
N	MS → SS	RLC UPLINK DATA	
N+1	SS → MS	PACKET UPLINK ACK/NACK	
N+2	MS → SS	PACKET CONTROL ACKNOWLEDGEMENT	

NOTE 1: SI bit set to '0' in all data blocks.

NOTE 2: The SS sends a PACKET UPLINK ACK/NACK message at least every k-1 RLC UPLINK DATA messages, being k the window size with a value of 64 blocks.

NOTE 3: The field CV in the RLC UPLINK DATA messages verifies:

$$CV' = \text{round}\left(\frac{TBC - BSN' - 1}{NTS}\right)$$

$$CV = \begin{cases} CV' & x \leq BS\_CV\_MAX \\ 15 & \text{otherwise} \end{cases}$$

where:

- TBC: total number of RLC data blocks that will be transmitted in the TBF;
- BSN': absolute block sequence number of the RLC data block, from 0 to (TBC - 1);
- NTS: number of timeslots assigned to the uplink TBF, with range 1 to 8;
- the function round() rounds upwards to the nearest integer;
- BS\_CV\_MAX is a parameter broadcast in the system information;
- the division operation is non-integer and results in zero only for (TBC - BSN' - 1) = 0.

NOTE 4: In the case of Dynamic MAC mode, the macro reference in the corresponding test case may contain a certain frequency (in seconds<sup>-1</sup> or frames<sup>-1</sup>) for the SS to indicate the USF allocated to the mobile so that the MS is allowed to transmit. Otherwise, mobile's USF is indicated in every available block.



## 40.4.3.7 Uplink dynamic allocation one phase access

Step	Direction	Message	Comments
		{Uplink dynamic allocation one phase access}	Macro parameters: <b>n</b> : the number of RLC data block to be transferred, <b>USF_GRANULARITY</b> : 1 or 4 blocks, <b>RLC_DATA_BLOCKS_GRANTED</b> : 9-261 (close-end), or absent (open-end) <b>CHANNEL_CODING_COMMAND</b> : CS-1, -2, -3, -4 <b>TLLI_BLOCK_CHANNEL_CODING</b> : CS-1 or as data block <b>REL_OR_ABS_FN</b> : absolute or relative frame number encoding for starting time <b>TBF_STARTING_TIME</b>
0	MS		Trigger the MS initiating uplink transfer <b>n</b> octets data according to the test PDP context activated
1	MS -> SS	CHANNEL REQUEST	Received on RACH.
2	SS -> MS	IMMEDIATE ASSIGNMENT	uplink dynamic allocation, Sent on AGCH.
NOTE: After step 2, the MS is not yet in the packet transfer mode. The contention resolution must be completed.			

## 40.4.3.8 Uplink dynamic allocation one phase access with contention resolution

Step	Direction	Message	Comments
		{Uplink dynamic allocation one phase access with contention resolution}	Macro parameters: <b>n</b> : the number of RLC data block to be transferred, <b>USF_GRANULARITY</b> : 1 or 4 blocks, <b>RLC_DATA_BLOCKS_GRANTED</b> : 9-261 (close-end), or absent (open-end) <b>CHANNEL_CODING_COMMAND</b> : CS-1, -2, -3, -4 <b>TLLI_BLOCK_CHANNEL_CODING</b> : CS-1 or as data block <b>REL_OR_ABS_FN</b> : absolute or relative frame number encoding for starting time <b>TBF_STARTING_TIME</b>
0	MS		Trigger the MS initiating uplink transfer <b>n</b> octets data according to the test PDP context activated
1	MS -> SS	CHANNEL REQUEST	Received on RACH.
2	SS -> MS	IMMEDIATE ASSIGNMENT	uplink dynamic allocation, Sent on AGCH.
3	SS -> MS	PACKET DOWNLINK DUMMY CONTROL BLOCK	Sent on the PACCH of the PDCH, the USF assigned to the MS, on 3 blocks from the last radio block containing the uplink assignment.
4A	MS -> SS	UPLINK RLC DATA BLOCK	For <b>USF_GRANULARITY</b> = 1, containing TLLI in the RLC/MAC header.
4B1	MS -> SS	UPLINK RLC DATA BLOCK	For <b>USF_GRANULARITY</b> = 4, containing TLLI in the RLC/MAC header.
4B2	MS -> SS	UPLINK RLC DATA BLOCK	For <b>USF_GRANULARITY</b> = 4, containing TLLI in the RLC/MAC header.
4B3	MS -> SS	UPLINK RLC DATA BLOCK	For <b>USF_GRANULARITY</b> = 4, containing TLLI in the RLC/MAC header.
4B4	MS -> SS	UPLINK RLC DATA BLOCK	For <b>USF_GRANULARITY</b> = 4, containing TLLI in the RLC/MAC header.
5	SS -> MS	PACKET UPLINK ACK/NACK	Sent on the PACCH, containing TLLI received at step 4.
6			Wait for 3 block periods.

## 40.4.3.9 Uplink dynamic allocation two phase access

Step	Direction	Message	Comments
		{Uplink dynamic allocation two phase access}	Macro parameters: <b>n</b> : the number of RLC data block to be transferred, <b>USF_GRANULARITY</b> : 1 or 4 blocks, <b>RLC_DATA_BLOCKS_GRANTED</b> : 9-261 (close-end), or absent (open-end) <b>CHANNEL_CODING_COMMAND</b> : CS-1, -2, -3, -4 <b>TLLI_BLOCK_CHANNEL_CODING</b> : CS-1 or as data block, <b>TBF_STARTING_TIME</b>
0	MS		Trigger the MS initiating uplink transfer <b>n</b> octets data according to the test PDP context activated
1	MS -> SS	CHANNEL REQUEST	Received on RACH. (PBCCH not preset case)
2	SS -> MS		Single block assignment, to order the MS to follow the two phase access procedure.
		IMMEDIATE ASSIGNMENT	Sent on AGCH (PBCCH not present case)
3	MS -> SS	PACKET RESOURCE REQUEST	Two phase access procedure. Received on the single block assigned in step 2. If the access type of the PACKET RESOURCE REQUEST specifies "Two Phase Access Req" check that the PEAK_THROUGHPUT, RADIO_PRIORITY and RLC_MODE are compliant with the PDP context used. In case of SMS over GPRS PEAK THROUGHPUT is not checked.
4	SS -> MS	PACKET UPLINK ASSIGNMENT	uplink dynamic allocation, no starting time (as default, otherwise use <b>TBF_STARTING_TIME</b> ), Sent on PACCH of the same PDCH assigned in step 2.

## 40.4.3.10 Completion of uplink RLC data block transfer

Steps 1A - 3A are applied for 1 uplink slot with USF granularity 1 block.

Steps 1B, 2B1-2B4 and 3B are applied for 1 uplink slot with USF granularity 4 blocks.

Steps 1C - 5C are applied for 2 uplink slots with USF granularity 1 block.

Steps 6 - 7 are common to the cases A, B and C.

Step	Direction	Message	Comments
		{Completion of uplink RLC data block transfer}	Macro parameters: <b>USF_GRANULARITY</b> : 1 or 4 blocks, the <b>number of slots</b> assigned in the uplink.
1A,1B	SS -> MS	PACKET UPLINK ACK/NACK	The assigned USF assigned to the MS to the MS.
2A	MS -> SS	UPLINK RLC DATA BLOCK	For USF_GRANULARITY = 1 Received on the assigned PDTCH.
2B1 2B2	MS -> SS MS -> SS	UPLINK RLC DATA BLOCK UPLINK RLC DATA BLOCK or PACKET UPLINK DUMMY CONTROL BLOCK	For USF_GRANULARITY = 4 Received on the assigned PDTCH. Received on the assigned PDTCH
2B3	MS -> SS	UPLINK RLC DATA BLOCK or PACKET UPLINK DUMMY CONTROL BLOCK	Received on the assigned PDTCH
2B4	MS -> SS	UPLINK RLC DATA BLOCK or PACKET UPLINK DUMMY CONTROL BLOCK	Received on the assigned PDTCH
3A,3B			Repeat the steps 1A and 2A or 1B and 2B1-2B4 until the countdown value CV=0 in step 2A or in one of the steps 2B1 - 2B4.
1C	SS -> MS	PACKET UPLINK ACK/NACK	Sent on the PACCH of the PDCH 1, the assigned USF1 addressing the MS.
2C	SS -> MS	PACKET UPLINK ACK/NACK	Sent on the PACCH of the PDCH 2 on the same radio block as step 1C, the assigned USF2 addressing the MS.
3C	MS -> SS	UPLINK RLC DATA BLOCK	Received on the assigned PDTCH 1.
4C	MS -> SS	UPLINK RLC DATA BLOCK	Received on the assigned PDTCH 2.
5C			Repeat steps 1C – 4C until the countdown value CV=0 in step 3C or step 4C.
6	SS -> MS	PACKET UPLINK ACK/NACK	Final Ack Indicator = '1' containing valid RRBP. Sent on the PACCH of the assigned PDCH.
7	MS -> SS	PACKET CONTROL ACKNOWLEDGEMENT	Received on the block specified by RRBP on PACCH of the assigned PDCH.

## 40.4.3.10.1

## PACKET UPLINK ACK/NACK message in step 6:

Ack/Nack Description	
- FINAL_ACK_INDICATION	1 (final ACK)
- STARTING_SEQUENCE_NUMBER	No information, ignored
- RECEIVED_BLOCK_BITMAP	No information, ignored

40.4.3.11 Void

40.4.3.12 Void

40.4.3.13 Void

40.4.3.14 Downlink TBF establishment

Step	Direction	Message	Comments
		{Downlink TBF establishment}	Macro parameters: <b>RLC mode</b> <b>TBF_STARTING_TIME</b>
1	SS -> MS	PAGING REQUEST	1 <sup>st</sup> Repeated Page info contains P-TMSI of the MS. Sent on PCH. ACCESS TYPE = " Page Response ". Received on RACH.
2	MS -> SS	CHANNEL REQUEST	
3	SS -> MS	IMMEDIATE ASSIGNMENT	Random Reference = pertaining to the message received in step 2. Dynamic allocation, Sent on AGCH.
4	SS -> MS	PACKET DOWNLINK DUMMY CONTROL BLOCK	Sent on PACCH containing USF assigned to the MS.
5	MS -> SS	UPLINK RLC DATA BLOCK	LLC PDU implicitly indicating paging response, containing TLLI in the RLC/MAC header. Received on uplink PDTCH assigned in step 3.
6	SS -> MS	PACKET UPLINK ACK/NACK	Acknowledge the received RLC data block. Sent on uplink PACCH.
7	MS -> SS	PACKET CONTROL ACKNOWLEDGEMENT	Acknowledge the RLC control message. Received on uplink PACCH.
8	SS -> MS	IMMEDIATE ASSIGNMENT	Downlink Assignment, TLLI value as received. Sent on PCH. Three macro parameters as assigned in the test cases.

40.4.3.15 PDP Context Activation

Mobile initiated, for LLC mode unacknowledged:

Step	Direction	Message	Comments
		{PDP Context Activation}	
1	MS -> SS	Activate PDP Context Request	
2	SS -> MS	Activate PDP Context Accept	

Mobile initiated, for LLC mode acknowledged:

Step	Direction	Message	Comments
		{PDP Context Activation}	
1	MS -> SS	Activate PDP Context Request	
2	SS -> MS	Activate PDP Context Accept	
3	MS -> SS	SABM	Link establishment (When relevant to the test case, steps 3 and 4 are shown as a part of the test case)
4	SS -> MS	UA	

40.4.3.16 PDP Context Deactivation

Mobile initiated:

Step	Direction	Message	Comments
		{PDP Context Deactivation}	
1	MS -> SS	Deactivate PDP Context Request	
2	SS -> MS	Deactivate PDP Context Accept	

Network initiated:

Step	Direction	Message	Comments
		{PDP Context Deactivation}	
1	SS -> MS	Deactivate PDP Context Request	
2	MS -> SS	Deactivate PDP Context Accept	

#### 40.4.3.17 Inter-SGSN Routing Area Update

Step	Direction	Message	Comments
		{Inter-SGSN Routing Area Update}	
1			Cell B is already activated with a lower signal strength than cell A. The RF level of cell A is lowered until cell B is preferred by the MS.
2	MS -> SS	Routing Area Update Request	The updating type shall be "Combined RA/LA Updating" for Class B mobiles in Network Mode I and "RA Updating" for Class C mobiles supporting GPRS.
3	SS->MS	XID	XID with RESET
4	MS->SS	XID	XID response
5	SS -> MS	Routing Area Update Accept	
6	MS->SS	Routing Area Update Complete	If the Routing Area Update Accept sent in step 5 contains P-TMSI and/or receive N-PDU or new ready timer value, the MS sends Routing Area Update Complete message.

NOTE: The MS may send an XID command any time. The SS shall send an XID response accepting the values proposed by the MS.

#### 40.4.3.17a Inter-SGSN Routing Area Update – with PSHO

Step	Direction	Message	Comments
		{Inter-SGSN Routing Area Update – with PSHO}	Macro parameters: <b>Old XID</b> : to reset with/without the old XID parameters
1			Cell B is already activated with a lower signal strength than cell A. All necessary information on target cell were sent to the MS - Relevant SI (SI1, SI3, SI13)
2	SS -> MS	PS HANDOVER COMMAND	Sent on the PACCH of the assigned PDCH. See specific message content (NAS Container IE present)
			The following messages are received on cell B.

3	MS->SS	XID	XID response
4	MS->SS	ROUTING AREA UPDATE REQUEST	
5 Optional Step	SS -> MS	XID	Performed if Old XID set to '0': XID Command – Empty to use default parameter
6 Conditional Step	MS->SS	XID	If step 5 was performed: XID response
7			Cell B power is increased and Cell A power decreased (Cell B power > Cell A power) so the MS will remain on Cell B for the rest of the test.
8	SS -> MS	ROUTING AREA UPDATE ACCEPT	
9	MS->SS	ROUTING AREA UPDATE COMPLETE	

NOTE 1: The MS may send an XID command any time. The SS shall send an XID response accepting the values proposed by the MS.

NOTE 2: The optional Steps 5 and 6 apply if the NAS container IE includes a “Reset without old XID parameters”,

Specific Message Contents

PS HANDOVER COMMAND message in step 2:

As default message contents except  <NAS Container for PS Handover IE> NAS_CONTAINER_LENGTH NAS_CONTAINER_Data:	Present Set accordingly Type of ciphering algorithm : same as before <b>old XID</b> : Reset with or without the old XID parameters
---	---

40.4.3.18 PDP Context Modification

This procedure is always initiated by the network.

Step	Direction	Message	Comments
		{PDP Context Modification}	
1	SS -> MS	Modify PDP Context	
2	MS -> SS	Modify PDP Context Accept	

40.4.3.19 Location Update Procedure

This procedure is only initiated by mobile stations that are not operating in class mode C "GPRS".

Step	Direction	Message	Comments
		<b>{Location Update Procedure}</b>	Macro parameters: <b>MOBILE_IDENTITY</b>
1	MS -> SS	LOCATION UPDATE REQUEST	
2	SS -> MS	AUTHENTICATION REQUEST	
3	MS -> SS	AUTHENTICATION RESPONSE	
4	SS -> MS	LOCATION UPDATE ACCEPT	
A5 (optional step)	MS -> SS	TMSI REALLOCATION COMPLETE	Step executed only when assigned mobile identity is of the type TMSI.
5	SS -> MS	CHANNEL RELEASE	GPRS RESUMPTION IE is present and the ACK field is set to 1 (see note below).

NOTE: Only in case the MS performed GPRS suspension procedure prior to the CS session, then the GPRS RESUMPTION IE shall be present in the CHANNEL RELEASE message.

#### 40.4.3.20 MT Call in GPRS cell

This procedure is initiated by the network while the MS is GPRS attached, one cell is active:

Step	Direction	Message	Comments
		<b>{MT Call while GPRS Attached}</b>	Macro parameters: <b>T</b> : Duration of the call (in seconds) <b>R</b> : Binary acknowledge of a successful resumption of GPRS services
1	SS -> MS	PAGING REQUEST Type 1	Page info contains TMSI of the MS, PAGE_MODE = "same as before", sent on downlink PCH
2	MS -> SS	CHANNEL REQUEST	
3	SS -> MS	IMMEDIATE ASSIGNMENT	
4	MS -> SS	PAGING RESPONSE	
5	MS -> SS	CLASSMARK CHANGE	This step may be optionally performed by a R97 or R98 MS; this step shall be mandatorily performed by R99 and later MS.
6	MS -> SS	GPRS SUSPENSION REQUEST	
7	SS -> MS	AUTHENTICATION REQUEST	
8	MS -> SS	AUTHENTICATION RESPONSE	
9	SS -> MS	CIPHERING MODE COMMAND	
10	MS -> SS	CIPHERING MODE COMPLETE	
11	SS -> MS	SETUP	
12	MS -> SS	CALL CONFIRMED	
13			If the MS supports immediate connect then branch A applies. If not then branch B applies

14A	MS -> SS	CONNECT	Sent on the old channel
15A	SS -> MS	ASSIGNMENT COMMAND	Timeslot and channel type arbitrarily chosen or PICS dependant
16A	MS -> SS	ASSIGNMENT COMPLETE	Continues at step 20
14B	SS -> MS	ASSIGNMENT COMMAND	Timeslot and channel type arbitrarily chosen or PICS dependant
15B	MS -> SS	ASSIGNMENT COMPLETE	Sent on the new channel.
16B	MS -> SS	ALERTING	
17B	MS		An alerting indication as defined in a PICS/PIXIT statement is given by the MS
18B	MS		The MS is made to accept the call in the way described in a PICS/PIXIT statement
19B	MS -> SS	CONNECT	
20	SS -> MS	CONNECT ACKNOWLEDGE	
21	MS		The appropriate bearer channel is through connected in both directions. The channel is kept open for T seconds
22	SS -> MS	DISCONNECT	
23	MS -> SS	RELEASE	
24	SS -> MS	RELEASE COMPLETE	
25	SS -> MS	CHANNEL RELEASE	The main signalling link is released. Resumption Field is set to R

NOTE: In step1x and 10x, the test procedure follows **either** the 'a' branch **or** the 'b' branch.

This procedure is initiated by the network while the MS is GPRS attached, two GPRS cells are active:

Step	Direction	Message	Comments
		<b>{MT Call while GPRS Attached with Handover}</b>	Macro parameters: <b>T</b> : Duration of the call (in seconds) <b>Target Cell</b> : Second cell for handover <b>R</b> : Binary acknowledge of a successful resumption of GPRS services:
1	SS -> MS	PAGING REQUEST Type 1	Page info contains TMSI of the MS, PAGE_MODE = " same as before ", sent on downlink PCH
2	MS -> SS	CHANNEL REQUEST	
3	SS -> MS	IMMEDIATE ASSIGNMENT	
4	MS -> SS	PAGING RESPONSE	
5	MS -> SS	CLASSMARK CHANGE	This step may be optionally performed by a R97 or R98 MS; this step shall be mandatorily performed by R99 and later MS.
6	MS -> SS	GPRS SUSPENSION REQUEST	
7	SS -> MS	AUTHENTICATION REQUEST	
8	MS -> SS	AUTHENTICATION RESPONSE	
9	SS -> MS	CIPHERING MODE COMMAND	
10	MS -> SS	CIPHERING MODE COMPLETE	
11	SS -> MS	SETUP	
12	MS -> SS	CALL CONFIRMED	
13			If the MS supports immediate connect then branch A applies. If the MS does not support immediate connect then branch B applies



14A	MS -> SS	CONNECT	Sent on the old channel
14A	SS -> MS	ASSIGNMENT COMMAND	Timeslot and channel type arbitrarily chosen or PICS dependant
16A	MS -> SS	ASSIGNMENT COMPLETE	Continues at step 20
14B	SS -> MS	ASSIGNMENT COMMAND	Timeslot and channel type arbitrarily chosen or PICS dependant
15B	MS -> SS	ASSIGNMENT COMPLETE	Sent on the new channel.
16B	MS -> SS	ALERTING	
17B	MS		An alerting indication as defined in a PICS/PIXIT statement is given by the MS
18B	MS		The MS is made to accept the call in the way described in a PICS/PIXIT statement
19B	MS -> SS	CONNECT	
20	SS -> MS	CONNECT ACKNOWLEDGE	
21	MS		The appropriate bearer channel is through connected in both directions. Wait for <b>T/2</b> seconds
22	SS -> MS	HANDOVER COMMAND	Instructs the MS to move to an arbitrarily chosen timeslot on <b>Target Cell</b>
23	MS -> SS	HANDOVER ACCESS	Repeated on every burst of the uplink main DCCH until reception of the PHYSICAL INFORMATION message. Handover reference as included in the HANDOVER COMMAND.
24	SS -> MS	PHYSICAL INFORMATION	
25	MS -> SS	HANDOVER COMPLETE	Sent on the new channel after the establishment of the main signalling link on <b>Target Cell</b>
26	SS		Wait for <b>T/2</b> seconds
27	SS -> MS	DISCONNECT	
28	MS -> SS	RELEASE	
29	SS -> MS	RELEASE COMPLETE	
30	SS -> MS	CHANNEL RELEASE	The main signalling link is released. Resumption Field is set to <b>R</b>

NOTE: In step1x and 10x, the test procedure follows **either** the 'a' branch **or** the 'b' branch.

#### 40.4.3.21 Uplink data

Step	Direction	Message	Comments
	MS ↔ SS	{ Uplink data }	Macro (arguments: see note 2)
1	MS → SS	RLC UPLINK DATA	SI bit set to '0'
2a	MS → SS	RLC UPLINK DATA	See notes 1
⋮	⋮	⋮	
2b	SS → MS	PACKET UPLINK ACK/NACK	
⋮	⋮	⋮	
N	MS → SS	RLC UPLINK DATA	till the required amount of blocks are received
N+1	SS → MS	PACKET UPLINK ACK/NACK	

NOTE 1: The SS sends a PACKET UPLINK ACK/NACK message at least every k-1 RLC UPLINK DATA messages, being k the window size with a value of 64 blocks.

NOTE 2: In the case of Dynamic MAC mode, the macro reference in the corresponding test case may contain a certain frequency (in seconds<sup>-1</sup> or frames<sup>-1</sup>) for the SS to indicate the USF allocated to the mobile so that the MS is allowed to transmit. Otherwise, mobile's USF is indicated in every available block.

## 40.4.3.22 Bring MS in the active state (U10)

Step	Direction	Message	Comments
		<b>{Bring MS in active state (U10)}</b>	Macro parameters: <b>N</b> : Timeslot used for traffic channel
1	SS -> MS	PAGING REQUEST Type 1	Page info contains IMSI of the MS, sent on downlink PCH
2	MS -> SS	CHANNEL REQUEST	Establishment cause : ANSWER TO PAGING
3	SS -> MS	IMMEDIATE ASSIGNMENT	
4	MS -> SS	PAGING RESPONSE	
5 (Optional)	MS -> SS	CLASSMARK CHANGE	This step may be optionally performed by a R97 or R98 MS; this step shall be mandatorily performed by R99 and later MS.
			If DTM is not supported from the MS or the cell then step 6-1 is performed otherwise step 6-2
6-1	MS -> SS	GRPS SUSPENSION REQUEST	
6-2 (Optional)	MS -> SS	GRPS INFORMATION	The MS send this message to indicate Cell Update. This step is optional for MS with release up to Rel5 and it is mandatory for MS with release from Rel6 onwards.
7	SS -> MS	AUTHENTICATION REQUEST	
8	MS -> SS	AUTHENTICATION RESPONSE	
9	SS -> MS	CIPHERING MODE COMMAND	
10	MS -> SS	CIPHERING MODE COMPLETE	
11	SS -> MS	SETUP	
12	MS -> SS	CALL CONFIRMED	
13			If the MS supports immediate connect then branch A applies. If not then branch B applies
14A	MS -> SS	CONNECT	Sent on the old channel
15A	SS -> MS	ASSIGNMENT COMMAND	Timeslot <b>N</b> used, channel type arbitrarily chosen or PICS dependant
16A	MS -> SS	ASSIGNMENT COMPLETE	Continues at step 20
14B	SS -> MS	ASSIGNMENT COMMAND	Timeslot <b>N</b> used, channel type arbitrarily chosen or PICS dependant
15B	MS -> SS	ASSIGNMENT COMPLETE	Sent on the new channel.
16B	MS -> SS	ALERTING	
17B	MS		An alerting indication as defined in a PICS/PIXIT statement is given by the MS
18B	MS		The MS is made to accept the call in the way described in a PICS/PIXIT statement
19B	MS -> SS	CONNECT	
20	SS -> MS	CONNECT ACKNOWLEDGE	

## 40.4.3.23 Completion of uplink RLC data block transfer in extended dynamic mode

Step	Direction	Message	Comments
		{Completion of uplink RLC data block transfer in extended dynamic mode}	Macro parameters: <b>USF_GRANULARITY</b> : 1 or 4 blocks, the <b>number of timeslots</b> assigned in the uplink, the <b>lowest numbered timeslot</b> in the PDCH allocation. USF1 is assigned on TN1 (the lowest numbered timeslot), USF2 is assigned on TN2 etc.
1	SS -> MS	PACKET UPLINK ACK/NACK	Assigned USF1 addressing the MS. Sent on the lowest numbered timeslot in the PDCH allocation.
2	MS -> SS	UPLINK RLC DATA BLOCK	The MS shall send one UPLINK RLC DATA BLOCK on each assigned uplink timeslot within the same TDMA frame. For USF_GRANULARITY=4 this is repeated on four consecutive Radio blocks.
3			Repeat steps 1 and 2 until the countdown value CV=0 is received in step 2.
4	SS -> MS	PACKET UPLINK ACK/NACK	Final Ack Indicator = '1' containing valid RRBP. Sent on the lowest numbered timeslot in the PDCH allocation.
5	MS -> SS	PACKET CONTROL ACKNOWLEDGEMENT	Received on the block specified by RRBP on PACCH of the lowest numbered timeslot in the PDCH allocation.

## 40.4.3.23.1 PACKET UPLINK ACK/NACK message in step 4:

Ack/Nack Description - FINAL_ACK_INDICATION - STARTING_SEQUENCE_NUMBER - RECEIVED_BLOCK_BITMAP	1 (final ACK) No information, ignored No information, ignored
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## 40.5 Test PDP contexts

The following table defines Test PDP contexts required for test cases using packet services (e.g. GPRS, EGPRS, DTM). Test PDP context3 is the default Test PDP context which is used in the test cases where no particular Test PDP contexts are specified. Compression is always turned off if nothing else is stated explicitly in the test case.

If the MS does not include any PDP address, dynamic PDP address shall be assigned by the SS. The MS with Rel-8 behaviour shall not include the PDP address and the PDP address allocation is dynamic always.

Table 40.5 Test PDP contexts

	PDP Context1	PDP Context2	PDP context3	PDP context4
LLC SAPI	SAPI = 3	SAPI = 11	SAPI = 11	SAPI = 9
PDP Type	IP type	IP type	IP type	IP type
PDP Address	static/Dynamic	static/Dynamic	static/Dynamic	static/Dynamic
APN	arbitrarily chosen	arbitrarily chosen	arbitrarily chosen	arbitrarily chosen
Protocol Configuration Options	PPP options	PPP options	PPP options	PPP options
Radio Priority	1	4	4	4
Quality of service settings to be used when testing R98 or earlier MS:				
Reliability Class	5 (RLC unacknowledged) (LLC unacknowledged)	3 (RLC acknowledged) (LLC unacknowledged)	5	3
Delay Class	4 (best effort)	4	4	4
Precedence Class (SS)	2 (normal)	2	2	2
Precedence Class (MS)	Subscribed	Subscribed	Subscribed	Subscribed
Peak Throughput Class	5 (Up to 16 000 octet/s)	5	5	6 (Up to 32 000 octet/s)
Mean Throughput Class (SS)	16 (10 000 000 octet/h)	16	16	16
Mean Throughput Class (MS)	31 (best effort)	31	31	31
Quality of service settings to be used when testing R99 or later MS:				
Traffic Class	Background	Background	Background	Background
Delivery Order	'yes'	'yes'	'yes'	'yes'
Delivery of erroneous SDU	'yes'	'no'	'yes'	'no'
Maximum SDU size	150 (1500 octets)	150	150	150
Maximum bit rate for uplink	128 kbps	128 kbps	128 kbps	256 kbps
Maximum bit rate for downlink	128 kbps	128 kbps	128 kbps	256 kbps
Residual BER	$4 \cdot 10^{-3}$	$10^{-5}$	$4 \cdot 10^{-3}$	$10^{-5}$
SDU error ratio	$10^{-3}$	$10^{-4}$	$10^{-3}$	$10^{-4}$
Transfer delay	0 (not relevant for background class)	0	0	0
Traffic Handling priority	0 (not relevant for background class)	0	0	0
Guaranteed bit rate for uplink	0 (not relevant for background class)	0	0	0
Guaranteed bit rate for downlink	0 (not relevant for background class)	0	0	0
Quality of service settings to be used when testing R5 or later MS:				
Signalling Indication	0	0	0	0

Source Statistics Descriptor	0	0	0	0
Maximum bit rate for downlink (extended)	0	0	0	0
Guaranteed bit rate for downlink (extended)	0	0	0	0
Quality of service settings to be used when testing R7 behaviour				
Maximum bit rate for uplink (extended)	0	0	0	0
Guaranteed bit rate for uplink (extended)	0	0	0	0

The table continues on the next page.

	<b>PDP context5</b>	<b>PDP context6</b>	<b>PDP Context7</b>	<b>PDP Context 8</b>
LLC SAPI	SAPI = 3	SAPI = 9	SAPI = 9	SAPI = 5
PDP Type	IP type	IP type	IP type	IP type
PDP Address	static/Dynamic	static/Dynamic	static/Dynamic	static/Dynamic
APN	arbitrarily chosen	arbitrarily chosen	arbitrarily chosen	arbitrarily chosen
Protocol Configuration Options	PPP options	PPP options	PPP options	PPP options
Radio Priority	1	4	4	1
<b>Quality of service settings to be used when testing R98 or earlier MS:</b>				
Reliability Class	3	5	5	3 (RLC acknowledged) (LLC unacknowledged) (data protected)
Delay Class	4	4	4	4 (best effort)
Precedence Class (SS)	2	2	2	2 (normal)
Precedence Class (MS)	subscribed	Subscribed	subscribed	Subscribed
Peak Throughput Class	5	6	6	5 (Up to 16 000 octet/s)
Mean Throughput Class (SS)	16	16	16	16 (10 000 000 octet/h)
Mean Throughput Class (MS)	31 (best effort)	31	31	31
<b>Quality of service settings to be used when testing R99 or later MS:</b>				
Traffic Class	Background	Background	Background	Background
Delivery Order	'yes'	'yes'	'yes'	'yes'
Delivery of erroneous SDU	'no'	'yes'	'yes'	'no'
Maximum SDU size	150	150	150	150
Maximum bit rate for uplink	128 kbps	256 kbps	256 kbps	128 kbps
Maximum bit rate for downlink	128 kbps	256 kbps	256 kbps	128 kbps
Residual BER	$10^{-5}$	$4 \cdot 10^{-3}$	$4 \cdot 10^{-3}$	$10^{-5}$
SDU error ratio	$10^{-4}$	$10^{-3}$	$10^{-3}$	$10^{-4}$
Transfer delay	0	0	0	0
Traffic Handling priority	0	0	0	0
Guaranteed bit rate for uplink	0	0	0	0
Guaranteed bit rate for downlink	0	0	0	0
<b>Quality of service settings to be used when testing R5 or later MS:</b>				
<u>Signalling Indication</u>	0	0	0	0
Source Statistics Descriptor	0	0	0	0
Maximum bit rate for downlink (extended)	0	0	0	0
Guaranteed bit rate for downlink (extended)	0	0	0	0
<b>Quality of service settings to be used when testing R7 behaviour</b>				
Maximum bit rate for uplink (extended)	0	0	0	0

Guaranteed bit rate for uplink (extended)	0	0	0	0
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	<b>PDP Context 9</b>	<b>PDP Context 10</b>	<b>PDP Context 11 (Note 2)</b>
LLC SAPI	SAPI = 11	SAPI = 5	SAPI = 3
PDP Type	IP type	IP type	IP type
PDP Address	static/Dynamic	static/Dynamic	static/Dynamic
APN	arbitrarily chosen	arbitrarily chosen	arbitrarily chosen
Protocol Configuration Options	PPP options	PPP options	PPP options
Radio Priority	1	1	1

## Quality of service settings to be used when testing R98 or earlier MS:

Reliability Class	3 (RLC acknowledged) (LLC unacknowledged) (data protected)	5 (RLC unacknowledged) (LLC unacknowledged) (data unprotected)	2 (RLC acknowledged) (LLC acknowledged) (data protected)
Delay Class	4 (best effort)	4 (best effort)	4 (best effort)
Precedence Class (SS)	2 (normal)	2	2
Precedence Class (MS)	subscribed	subscribed	subscribed
Peak Throughput Class	5 (Up to 16 000 octet/s)	5 (Up to 16 000 octet/s)	5 (Up to 16 000 octet/s)
Mean Throughput Class (SS)	16 (10 000 000 octet/h)	16 (10 000 000 octet/h)	16 (10 000 000 octet/h)
Mean Throughput Class (MS)	31 (best effort)	31	31

## Quality of service settings to be used when testing R99 or later MS:

Traffic Class	Background	Background	Background
Delivery Order	'yes'	'yes'	'yes'
Delivery of erroneous SDU	'no'	'yes'	'no'
Maximum SDU size	150	150	150
Maximum bit rate for uplink	128 kbps	128 kbps	128 kbps
Maximum bit rate for downlink	128 kbps	128 kbps	128 kbps
Residual BER	$10^{-5}$	$4 \cdot 10^{-3}$	$10^{-5}$
SDU error ratio	$10^{-4}$	$10^{-3}$	$10^{-6}$
Transfer delay	0	0	0
Traffic Handling priority	0	0	0
Guaranteed bit rate for uplink	0	0	0
Guaranteed bit rate for downlink	0	0	0

## Quality of service settings to be used when testing R5 or later MS:

<u>Signalling Indication</u>	0	0	0
Source Statistics Descriptor	0	0	0
Maximum bit rate for downlink (extended)	0	0	0
Guaranteed bit rate for downlink (extended)	0	0	0

## Quality of service settings to be used when testing R7 behaviour

Maximum bit rate for uplink (extended)	0	0	0
Guaranteed bit rate for uplink (extended)	0	0	0

The table continues on the next page.

	<b>PDP Context 12 (Note 2)</b>	<b>PDP Context 13 (Note 2)</b>	<b>PDP Context 14</b>
LLC SAPI	SAPI = 9	SAPI = 11	SAPI = 9
PDP Type	IP type	IP type	IP type
PDP Address	static/Dynamic	static/Dynamic	static/Dynamic
APN	arbitrarily chosen	arbitrarily chosen	arbitrarily chosen
Protocol Configuration Options	PPP options	PPP options	PPP options
Radio Priority	1	1	1
Quality of service settings to be used when testing R98 or earlier MS:			
Reliability Class	2 (RLC acknowledged) (LLC acknowledged) (data protected)	2 (RLC acknowledged) (LLC acknowledged) (data protected)	3 (RLC acknowledged) (LLC unacknowledged) (data protected)
Delay Class	4 (best effort)	4 (best effort)	4 (best effort)
Precedence Class (SS)	2 (normal)	2 (normal)	2 (normal)
Precedence Class (MS)	Subscribed	Subscribed	Subscribed
Peak Throughput Class	5 (Up to 16 000 octet/s)	5 (Up to 16 000 octet/s)	5 (Up to 16 000 octet/s)
Mean Throughput Class (SS)	16 (10 000 000 octet/h)	16 (10 000 000 octet/h)	16 (10 000 000 octet/h)
Mean Throughput Class (MS)	31 (best effort)	31	31
Quality of service settings to be used when testing R99 or later MS:			
Traffic Class	Background	Background	Background
Delivery Order	'yes'	'yes'	'yes'
Delivery of erroneous SDU	'no'	'no'	'no'
Maximum SDU size	150	150	150
Maximum bit rate for uplink	128 kbps	128 kbps	128 kbps
Maximum bit rate for downlink	128 kbps	128 kbps	128 kbps
Residual BER	10 <sup>-5</sup>	10 <sup>-5</sup>	10 <sup>-5</sup>
SDU error ratio	10 <sup>-6</sup>	10 <sup>-6</sup>	10 <sup>-4</sup>
Transfer delay	0	0	0
Traffic Handling priority	0	0	0
Guaranteed bit rate for uplink	0	0	0
Guaranteed bit rate for downlink	0	0	0
Quality of service settings to be used when testing R5 or later MS:			
<u>Signalling Indication</u>	0	0	0
Source Statistics Descriptor	0	0	0
Maximum bit rate for downlink (extended)	0	0	0
Guaranteed bit rate for downlink (extended)	0	0	0
Quality of service settings to be used when testing R7 behaviour			
Maximum bit rate for uplink (extended)	0	0	0
Guaranteed bit rate for uplink (extended)	0	0	0

NOTE 1: For compatibility purposes when performing R98 tests or earlier it is still allowed for the MS to request Precedence Class 2 (normal) and Mean Throughput Class 16 (10 000 000 octets/h).



NOTE 2: From Rel-8 onwards MS is not expected to support QoS parameter Reliability Class=2. therefore Test PDP contexts 11, 12 and 13 are not required for test cases using packet services.