

TSG-RAN Meeting #28
Quebec, Canada, 01-03 June 2005

RP-050311
agenda item 7.7.7

Source: TSG-RAN WG2.

Title: CRs (Rel-5 & Rel-6) to WG2 specifications for the removal of DRAC

The following CRs are in RP-050311:

Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Version-New	Doc-2nd-Level	Workitem
25.302	0161	-	Rel-5	Feature Clean Up: Removal of DRAC	C	5.7.0	5.8.0	R2-051632	TEI5
25.302	0162	-	Rel-6	Feature Clean Up: Removal of DRAC	C	6.3.0	6.4.0	R2-051633	TEI5
25.306	0116	-	Rel-5	Feature Clean Up: Removal of DRAC	C	5.10.0	5.11.0	R2-051634	TEI5
25.306	0117	-	Rel-6	Feature Clean Up: Removal of DRAC	C	6.4.1	6.5.0	R2-051635	TEI5
25.331	2592	-	Rel-5	Feature Clean Up: Removal of DRAC	C	5.12.1	5.13.0	R2-051636	TEI5
25.331	2593	-	Rel-6	Feature Clean Up: Removal of DRAC	C	6.5.0	6.6.0	R2-051637	TEI5

CHANGE REQUEST

25.302 CR 0161 # rev - # Current version: 5.7.0

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Feature Clean Up: Removal of DRAC		
Source:	# RAN WG2		
Work item code:	# TEI5	Date:	# 20/04/2005
Category:	# C	Release:	# Rel-5
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: Ph2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) Rel-7 (Release 7)

Reason for change:	# At RAN#27 it was agreed to remove the DRAC feature from the specifications as part of a feature cleanup process.
Summary of change:	# The DRAC feature is removed from the specification. <i>Implementation of this CR by a Release 99/4 UE will not cause compatibility issues</i>
Consequences if not approved:	# If the CR is not approved then decision taken in RAN#23 will not be applied to the specs. The redundant DRAC feature will remain in the specifications.

Clauses affected:	# 8.2						
Other specs	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td></td> </tr> </table>	Y	N	X		Other core specifications	# 25.331, 25.306 TS 25.423, TR 25.931
Y	N						
X							
affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">X</td> <td>Test specifications</td> </tr> <tr> <td style="width: 20px; text-align: center;">X</td> <td>O&M Specifications</td> </tr> </table>	X	Test specifications	X	O&M Specifications		
X	Test specifications						
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Other comments:	#						

How to create CRs using this form:

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8.2 FDD Downlink

The table describes the possible combinations of FDD physical channels that can be supported in the downlink on the same frequency by one UE simultaneously.

Table 2: FDD Downlink

	Physical Channel Combination	Transport Channel Combination	Mandatory dependent on UE radio access capabilities	Comment
1	PCCPCH	BCH	Mandatory	
2	SCCPCH	One or more FACH Or PCH Or one or more FACH + PCH	Mandatory	The maximum channel bit rate that can be supported is dependent on the UE radio access capabilities. The PCH is included when the UE needs to receive paging on the SCCPCH. The reception of (one or more FACH + PCH) is to enable the reception of broadcast services on the CTCH, mapped to one of the FACH.
3	PCCPCH + SCCPCH	BCH + (one or more FACH or PCH or (one or more FACH + PCH))	Mandatory	Simultaneous reception of PCCPCH and SCCPCH is only needed at occurrences when the UE needs to read system information on BCH while being in CELL_FACH state, i.e. continuous reception of both PCCPCH and SCCPCH at the same time is not required. The requirement holds for PCCPCH and SCCPCH sent in different cells or in the same cell. The PCH is included when the UE needs to receive paging on the SCCPCH. The reception of (one or more FACH + PCH) is to enable the reception of broadcast services on the CTCH, mapped to one of the FACH.
4	SCCPCH + AICH	(One or more FACH or PCH or (one or more FACH + PCH))+ RACH in uplink Or (one or more FACH or PCH or (one or more FACH + PCH))+ CPCH in uplink	Mandatory	The maximum channel bit rate that can be supported is dependent on the UE radio access capabilities. The PCH is included when the UE needs to receive paging on the SCCPCH. The reception of (one or more FACH + PCH) is to enable the reception of broadcast services on the CTCH, mapped to one of the FACH. This physical channel combination facilitates the preamble portion of the CPCH in the uplink
5	SCCPCH + DPCCH	(One or more FACH or PCH or (one or more FACH + PCH))+ CPCH in uplink	Depending on UE radio access capabilities	This physical channel combination facilitates the message portion of the CPCH in the uplink The PCH is included when the UE needs to receive paging on the SCCPCH. The reception of (one or more FACH + PCH) is to enable the reception of broadcast services on the CTCH, mapped to one of the FACH.
6	More than one SCCPCH	More than one (one or more FACH or PCH or (one or more FACH + PCH))	Depending on UE radio access capabilities	The PCH is included when the UE needs to receive paging on the SCCPCH. The reception of (one or more FACH + PCH) is to enable the reception of broadcast services on the CTCH, mapped to one of the FACH.
7	PICH	N/A	Mandatory	
8	DPCCH + DPDCH	One or more DCH coded into a single CCTrCH	Mandatory	The maximum number of DCHs and the maximum channel bit rate are dependent on UE radio access capabilities.

	Physical Channel Combination	Transport Channel Combination	Mandatory dependent on UE radio access capabilities	Comment
9	DPCCH + more than one DPDCH	One or more DCH coded into a single CCTrCH	Depending on UE radio access capabilities	The maximum number of DCHs and the maximum channel bit rate are dependent on UE radio access capabilities.
10	One or more PDSCH + DPCCH + one or more DPDCH	One or more DSCH coded into a single CCTrCH + one or more DCH coded into a single CCTrCH	Depending on UE radio access capabilities	The maximum number of DCHs and the maximum channel bit rate are dependent on UE radio access capabilities.
11	SCCPCH + DPCCH + one or more DPDCH Void	One or more FACH + one or more DCH coded into a single CCTrCH	Depending on UE radio access capabilities	The maximum number of DCHs and the maximum channel bit rate are dependent on UE radio access capabilities. This combination of physical channels is used for DRAC control of an uplink DCH and for receiving services such as cell broadcast or multicast whilst in connected mode. NOTE 1
12	SCCPCH + one or more PDSCH + DPCCH + one or more DPDCH Void	One or more FACH + one or more DSCH coded into a single CCTrCH + one or more DCH coded into a single CCTrCH	Depending on UE radio access capabilities	The maximum number of DCHs and the maximum channel bit rate are dependent on UE radio access capabilities. This combination of physical channels is used for simultaneous DSCH and DRAC control of an uplink DCH. NOTE 1
13	One DPCCH + more than one DPDCH	More than one DCH coded into one or more CCTrCH	Depending on UE radio access capabilities	
14	PCCPCH (neighbour cell) + DPCCH + one or more DPDCH + zero, one, or more PDSCH	BCH (neighbour cell) + one or more DCHs + zero, one or more DSCH	Mandatory	This combination is required by a UE in CELL_DCH state to be able to read the SFN of a neighbouring cell and support "SFN-CFN observed time difference" and "SFN-SFN observed time difference" measurements.
15	DPCCH + one or more DPDCH + one or more HS-SCCH + zero, one or more HS-PDSCH	One HS-DSCH coded into a single CCTrCH + one or more DCH coded into a single CCTrCH	Depending on UE radio access capabilities	The maximum number of DCHs and the maximum channel bit rate are dependent on UE radio access capabilities. NOTE 21
16	PCCPCH (neighbour cell) + DPCCH + one or more DPDCH + one or more HS-SCCH + zero, one or more HS-PDSCH	BCH (neighbour cell) + one or more DCHs + one HS-DSCH	Depending on UE radio access capabilities	This combination is required by a UE in CELL_DCH state to be able to read the SFN of a neighbouring cell and support "SFN-CFN observed time difference" and "SFN-SFN observed time difference" measurements while HS-DSCH(s) are configured. NOTE 21

~~NOTE 1: When both DRAC and CTCH are configured in one cell, the UTRAN should transmit DRAC info and CTCH info on the same S-CCPCH in order to minimize the number of S-CCPCH to be read by the UE. A UE which supports the simultaneous reception of S-CCPCH and DPCH, shall be capable of switching between different S-CCPCH in order to listen to DRAC info and CTCH info that are not scheduled in the same time intervals. If the UE is ordered to listen to CTCH and DRAC info on different S-CCPCH in the same time interval, it shall listen to DRAC info in priority.~~

NOTE [21](#): When one or more HS-PDSCHs are received, it is sufficient for the UE to monitor only one HS-SCCH.

CHANGE REQUEST

25.302 CR 0162 # rev - # Current version: 6.3.0

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Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Feature Clean Up: Removal of DRAC		
Source:	# RAN WG2		
Work item code:	# TEI5	Date:	# 20/04/2005
Category:	# C	Release:	# Rel-6
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: Ph2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) Rel-7 (Release 7)

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Y	N										
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	X										
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3	PCCPCH + SCCPCH	BCH + (one or more FACH or PCH or (one or more FACH + PCH))	Mandatory	Simultaneous reception of PCCPCH and SCCPCH is only needed at occurrences when the UE needs to read system information on BCH while being in CELL_FACH state, i.e. continuous reception of both PCCPCH and SCCPCH at the same time is not required. The requirement holds for PCCPCH and SCCPCH sent in different cells or in the same cell. The PCH is included when the UE needs to receive paging on the SCCPCH. The reception of (one or more FACH + PCH) is to enable the reception of broadcast services on the CTCH, mapped to one of the FACH.
4	SCCPCH + AICH	(One or more FACH or PCH or (one or more FACH + PCH))+ RACH in uplink Or (one or more FACH or PCH or (one or more FACH + PCH))+ CPCH in uplink	Mandatory	The maximum channel bit rate that can be supported is dependent on the UE radio access capabilities. The PCH is included when the UE needs to receive paging on the SCCPCH. The reception of (one or more FACH + PCH) is to enable the reception of broadcast services on the CTCH, mapped to one of the FACH. This physical channel combination facilitates the preamble portion of the CPCH in the uplink
5	SCCPCH + DPCCH	(One or more FACH or PCH or (one or more FACH + PCH))+ CPCH in uplink	Depending on UE radio access capabilities	This physical channel combination facilitates the message portion of the CPCH in the uplink The PCH is included when the UE needs to receive paging on the SCCPCH. The reception of (one or more FACH + PCH) is to enable the reception of broadcast services on the CTCH, mapped to one of the FACH.

	Physical Channel Combination	Transport Channel Combination	Mandatory dependent on UE radio access capabilities	Comment
6	More than one SCCPCH	More than one (one or more FACH or PCH or (one or more FACH + PCH))	Depending on UE radio access capabilities	The PCH is included when the UE needs to receive paging on the SCCPCH. The reception of (one or more FACH + PCH) is to enable the reception of broadcast services on the CTCH, mapped to one of the FACH. One or more FACHs are used to enable the reception of MBMS (i.e., MCCH, MSCH and MTCH). The maximum number of SCCPCHs and the maximum bit rate depend on the UE implementation. The combination includes the case where one or more MBMS FACHs are transmitted on the same SCCPCH as used for non-MBMS FACH or PCH.
7	PICH	N/A	Mandatory	
8	DPCCH + DPDCH	One or more DCH coded into a single CCTrCH	Mandatory	The maximum number of DCHs and the maximum channel bit rate are dependent on UE radio access capabilities.
9	DPCCH + more than one DPDCH	One or more DCH coded into a single CCTrCH	Depending on UE radio access capabilities	The maximum number of DCHs and the maximum channel bit rate are dependent on UE radio access capabilities.
10	One or more PDSCH + DPCCH + one or more DPDCH	One or more DSCH coded into a single CCTrCH + one or more DCH coded into a single CCTrCH	Depending on UE radio access capabilities	The maximum number of DCHs and the maximum channel bit rate are dependent on UE radio access capabilities.
11	SCCPCH + DPCCH + one or more DPDCH	One or more FACH + one or more DCH coded into a single CCTrCH	Depending on UE radio access capabilities	The maximum number of DCHs and the maximum channel bit rate are dependent on UE radio access capabilities. This combination of physical channels is used for DRAC control of an uplink DCH and for receiving services such as cell broadcast or multicast whilst in connected mode. NOTE 1
12	SCCPCH + one or more PDSCH + DPCCH + one or more DPDCH	One or more FACH + one or more DSCH coded into a single CCTrCH + one or more DCH coded into a single CCTrCH	Depending on UE radio access capabilities	The maximum number of DCHs and the maximum channel bit rate are dependent on UE radio access capabilities. This combination of physical channels is used for simultaneous DSCH and DRAC control of an uplink DCH. NOTE 1
13	One DPCCH + more than one DPDCH	More than one DCH coded into one or more CCTrCH	Depending on UE radio access capabilities	
14	PCCPCH (neighbour cell) + DPCCH + one or more DPDCH + zero, one, or more PDSCH	BCH (neighbour cell) + one or more DCHs + zero, one or more DSCH	Mandatory	This combination is required by a UE in CELL_DCH state to be able to read the SFN of a neighbouring cell and support "SFN-CFN observed time difference" and "SFN-SFN observed time difference" measurements.
15	DPCCH + one or more DPDCH + one or more HS-SCCH + zero, one or more HS-PDSCH	One HS-DSCH coded into a single CCTrCH + one or more DCH coded into a single CCTrCH	Depending on UE radio access capabilities	The maximum number of DCHs and the maximum channel bit rate are dependent on UE radio access capabilities. NOTE 2

	Physical Channel Combination	Transport Channel Combination	Mandatory dependent on UE radio access capabilities	Comment
16	PCCPCH (neighbour cell) + DPCCH + one or more DPDCH + one or more HS-SCCH + zero, one or more HS-PDSCH	BCH (neighbour cell) + one or more DCHs + one HS-DSCH	Depending on UE radio access capabilities	This combination is required by a UE in CELL_DCH state to be able to read the SFN of a neighbouring cell and support "SFN-CFN observed time difference" and "SFN-SFN observed time difference" measurements while HS-DSCH(s) are configured. NOTE 2
17	DPCCH + one or more DPDCH + one or more E-HICH + one E-AGCH + one or more E-RGCH	One or more DCH coded into a single CCTrCH	Depending on UE radio access capabilities	The maximum number of DCHs and the maximum channel bit rate are dependent on UE radio access capabilities. In this combination E-DCH is configured in uplink.
18	DPCCH + one or more DPDCH + one or more HS-SCCH + zero, one or more HS-PDSCH+ one or more E-HICH + one E-AGCH + one or more E-RGCH	One HS-DSCH coded into a single CCTrCH + one or more DCH coded into a single CCTrCH	Depending on UE radio access capabilities	The maximum number of DCHs and the maximum channel bit rate are dependent on UE radio access capabilities. In this combination E-DCH is configured in uplink. NOTE 2
19	PCCPCH (neighbour cell) + DPCCH + one or more DPDCH + one or more HS-SCCH + zero, one or more HS-PDSCH + one or more E-HICH + E-AGCH + one or more E-RGCH	BCH (neighbour cell) + one or more DCHs + one HS-DSCH	Depending on UE radio access capabilities	This combination is required by a UE in CELL_DCH state to be able to read the SFN of a neighbouring cell and support "SFN-CFN observed time difference" and "SFN-SFN observed time difference" measurements while HS-DSCH(s) are configured. In this combination E-DCH is configured in uplink. NOTE 2
20	F-DPCH + one or more HS-SCCH + zero, one or more HS-PDSCH	One HS-DSCH coded into a single CCTrCH	Depending on UE radio access capabilities	The maximum channel bit rate are dependent on UE radio access capabilities. NOTE 2
21	PCCPCH (neighbour cell) + F-DPCH + one or more HS-SCCH + zero, one or more HS-PDSCH	BCH (neighbour cell) + one HS-DSCH	Depending on UE radio access capabilities	This combination is required by a UE in CELL_DCH state to be able to read the SFN of a neighbouring cell and support "SFN-CFN observed time difference" and "SFN-SFN observed time difference" measurements while HS-DSCH(s) are configured. NOTE 2
22	F-DPCH + one or more HS-SCCH + zero, one or more HS-PDSCH+ one or more E-HICH + one E-AGCH + one or more E-RGCH	One HS-DSCH coded into a single CCTrCH	Depending on UE radio access capabilities	The maximum channel bit rate are dependent on UE radio access capabilities. In this combination E-DCH is configured in uplink. NOTE 2

	Physical Channel Combination	Transport Channel Combination	Mandatory dependent on UE radio access capabilities	Comment
23	PCCPCH (neighbour cell) + F-DPCH + one or more HS-SCCH + zero, one or more HS-PDSCH+ one or more E-HICH + one E-AGCH + one or more E-RGCH	BCH (neighbour cell) + one HS-DSCH	Depending on UE radio access capabilities	This combination is required by a UE in CELL_DCH state to be able to read the SFN of a neighbouring cell and support "SFN-CFN observed time difference" and "SFN-SFN observed time difference" measurements while HS-DSCH(s) are configured. In this combination E-DCH is configured in uplink. NOTE 2
24	MICH	N/A	Depending on UE radio access capabilities	
25	MICH + PICH	N/A	Depending on UE radio access capabilities	
26	MICH + one SCCPCH	More than one (one or more FACH or PCH or (one or more FACH + PCH))	Depending on UE radio access capabilities	Allowing MBMS notification indication during reception of non-MBMS FACH or PCH.
27	PICH + one or more SCCPCH	One or more FACH	Depending on UE radio access capabilities	The maximum number of SCCPCHs and the maximum bit rate depend on the UE implementation.
<p>NOTE 1: When both DRAC and CTCH are configured in one cell, the UTRAN should transmit DRAC info and CTCH info on the same S-CCPCH in order to minimize the number of S-CCPCH to be read by the UE. A UE, which supports the simultaneous reception of S-CCPCH and DPCH, shall be capable of switching between different S-CCPCH in order to listen to DRAC info and CTCH info that are not scheduled in the same time intervals. If the UE is ordered to listen to CTCH and DRAC info on different S-CCPCH in the same time interval, it shall listen to DRAC info in priority.</p>				
<p>NOTE 2: When one or more HS-PDSCHs are received, it is sufficient for the UE to monitor only one HS-SCCH.</p>				

CHANGE REQUEST

25.306 CR 0116 # rev - # Current version: 5.10.0

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Summary of change:	# The DRAC feature is removed from the specification. <i>Implementation of this CR by a Release 99/4 UE will not cause compatibility issues</i>
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Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"></td> </tr> </table> Other core specifications	Y	N	X		#	25.331, 25.302 TS 25.423, TR 25.931
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	X						
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4.5.3 FDD Physical channel parameters in downlink

Maximum number of DPCH/PDSCH codes to be simultaneously received

Defines the number of codes the UE is capable of receiving in parallel. For DPCH in soft/softer handover, each DPCH is only calculated once in this capability. The capability does not include codes used for S-CCPCH.

Maximum number of physical channel bits received in any 10 ms interval (DPCH, PDSCH, S-CCPCH)

Defines the number of physical channel bits the UE is capable of receiving. For DPCH in soft/softer handover, each DPCH is only calculated once in this capability.

The number of DPCH channel bits indicates the capability of the UE when operating in non-compressed mode.

The parameter also indicates the capability of the UE to support compressed mode by spreading factor reduction as follows. The UE shall:

- for parameter values up to and including 9600 bits:
 - support compressed mode by spreading factor reduction when operating at any value up to the reported capability.
- for parameter values greater than 9600 bits:
 - support compressed mode by spreading factor reduction when operating at any value up to the greater of:
 - half the reported capability; or
 - 9600bits.

NOTE: Compressed mode by spreading factor reduction is not applicable when operating at spreading factor 4.

Support for SF 512

Defines whether the UE supports spreading factor 512 in downlink or not.

Support of PDSCH

Defines whether the UE supports PDSCH or not.

Support of HS-PDSCH

Defines whether the UE supports HS-PDSCH or not.

~~Simultaneous reception of SCCPCH and DPCH~~

~~Defines whether the UE supports simultaneous reception of SCCPCH and DPCH or not.~~

~~NOTE:—Simultaneous reception of SCCPCH and DPCH, i.e. simultaneous reception of FACH and DCH is required for e.g. DRAC procedure~~

~~Simultaneous reception of SCCPCH, DPCH and PDSCH~~

~~Defines whether the UE supports simultaneous reception of SCCPCH, DPCH and PDSCH or not. The PDSCH part of this capability is only relevant if the UE supports PDSCH, as covered by the capability "Support of PDSCH".~~

~~NOTE:—Simultaneous reception of SCCPCH, DPCH and PDSCH, i.e. simultaneous reception of FACH, DCH and DSCH is required for e.g. simultaneous use of DSCH and the DRAC procedure.~~

~~Simultaneous reception of SCCPCH, DPCH and HS-PDSCH~~

~~Defines whether the UE supports simultaneous reception of SCCPCH, DPCH and HS-PDSCH or not. The HS-PDSCH part of this capability is only relevant if the UE supports HS-PDSCH, as covered by the capability "Support of HS-PDSCH".~~

~~NOTE:— Simultaneous reception of SCCPCH, DPCH and HS-PDSCH, i.e. simultaneous reception of FACH, DCH and HS-PDSCH is required for e.g. simultaneous use of HS-PDSCH and the DRAC procedure.~~

~~Maximum number of simultaneous S-CCPCH radio links~~

~~Defines the maximum number of radio links on which the UE is capable of receiving S-CCPCH simultaneously.~~

Support of dedicated pilots for channel estimation

Defines whether the UE supports dedicated pilots for channel estimation or not.

Support of dedicated pilots for channel estimation of HS-DSCH

Defines whether the UE supports dedicated pilots for channel estimation of HS-PDSCH and HS-SCCH or not.

Maximum number of HS-DSCH codes received

Defines the maximum number of HS-DSCH codes the UE is capable of receiving.

Total number of soft channel bits in HS-DSCH

Defines the maximum number of soft channel bits over all HARQ processes. When explicit signalling is used, UTRAN configures Process Memory Size for each HARQ process so that the following criterion must be fulfilled in the configuration:

Total number of soft channel bits in HS-DSCH \geq sum of Process Memory Size of all the HARQ processes.

Minimum inter-TTI interval in HS-DSCH

Defines the distance from the beginning of a TTI to the beginning of the next TTI that can be assigned to the UE.

5.1 Value ranges

Table 5.1: UE radio access capability parameter value ranges

		UE radio access capability parameter	Value range
PDCP parameters		Support for RFC 2507	Yes/No
		Support for RFC 3095	Yes/No
		Support for RFC 3095 context relocation	Yes/No
		Support for loss-less SRNS relocation	Yes/No
		Maximum header compression context space	1024, 2048, 4096, 8192, 16384, 32768, 65536, 131072 bytes
		Maximum number of ROHC context sessions	2, 4, 8, 12, 16, 24, 32, 48, 64, 128, 256, 512, 1024, 16384
		Support for Reverse Decompression	Not supported, 1..65535
RLC and MAC-hs parameters		Total RLC AM and MAC-hs buffer size	2, 10, 50, 100, 150, 200, 300, 400, 500, 750, 1000 kBytes
		Maximum number of AM entities	3, 4, 5, 6, 8, 16, 30
		Maximum RLC AM window size	2047, 4095
PHY parameters	Transport channel parameters in downlink	Maximum sum of number of bits of all transport blocks being received at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum sum of number of bits of all convolutionally coded transport blocks being received at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum sum of number of bits of all turbo coded transport blocks being received at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum number of simultaneous transport channels	4, 8, 16, 32
		Maximum number of simultaneous CCTrCH	1, 2, 3, 4, 5, 6, 7, 8
		Maximum total number of transport blocks received within TTIs that end within the same 10 ms interval	4, 8, 16, 32, 48, 64, 96, 128, 256, 512
		Maximum number of TFC	16, 32, 48, 64, 96, 128, 256, 512, 1024
		Maximum number of TF	32, 64, 128, 256, 512, 1024
		Support for turbo decoding	Yes/No
		Transport channel parameters in uplink	Maximum sum of number of bits of all transport blocks being transmitted at an arbitrary time instant
	Maximum sum of number of bits of all convolutionally coded transport blocks being transmitted at an arbitrary time instant		640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
	Maximum sum of number of bits of all turbo coded transport blocks being transmitted at an arbitrary time instant		640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
	Maximum number of simultaneous transport channels		2, 4, 8, 16, 32
	Maximum number of simultaneous CCTrCH of DCH type (TDD only)		1, 2, 3, 4, 5, 6, 7, 8
	Maximum total number of transport blocks transmitted within TTIs that start at the same time		2, 4, 8, 16, 32, 48, 64, 96, 128, 256, 512
	Maximum number of TFC		4, 8, 16, 32, 48, 64, 96, 128, 256, 512, 1024
	Maximum number of TF		32, 64, 128, 256, 512, 1024
	Support for turbo encoding		Yes/No

		UE radio access capability parameter	Value range
	FDD Physical channel parameters in downlink	Maximum number of DPCH/PDSCH codes to be simultaneously received	1, 2, 3, 4, 5, 6, 7, 8
		Maximum number of physical channel bits received in any 10 ms interval (DPCH, PDSCH, S-CCPCH)	600, 1200, 2400, 3600, 4800, 7200, 9600, 14400, 19200, 28800, 38400, 48000, 57600, 67200, 76800
		Support for SF 512	Yes/No
		Support of PDSCH	Yes/No
		Support of HS-PDSCH	Yes/No
		Simultaneous reception of SGPCH and DPCH	Yes/No
		Simultaneous reception of SGPCH, DPCH and PDSCH	Yes/No
		Simultaneous reception of SGPCH, DPCH and HS-PDSCH	Yes/No
		Maximum number of simultaneous S-CCPCH radio links	4 NOTE: Only the value 1 is part of this release of the specification
		Support of dedicated pilots for channel estimation	Yes
	Support of dedicated pilots for channel estimation of HS-DSCH	Yes/No	
	FDD Physical channel parameters in uplink	Maximum number of DPDCH bits transmitted per 10 ms	600, 1200, 2400, 4800, 9600, 19200, 28800, 38400, 48000, 57600
		Support of PCPCH	Yes/No
	TDD 3.84 Mcps physical channel parameters in downlink	Maximum number of timeslots per frame	1..14
		Maximum number of physical channels per frame	1, 2, 3..224
		Minimum SF	16, 1
		Support of PDSCH	Yes/No
		Support of HS-PDSCH	Yes/No
		Maximum number of physical channels per timeslot	1..16
TDD 3.84 Mcps physical channel parameters in uplink	Maximum Number of timeslots per frame	1..14	
	Maximum number of physical channels per timeslot	1, 2	
	Minimum SF	16, 8, 4, 2, 1	
	Support of PUSCH	Yes/No	
TDD 1.28 Mcps physical channel parameters in downlink	Maximum number of timeslots per subframe	1..6	
	Maximum number of physical channels per subframe	1, 2, 3, ..., 96	
	Minimum SF	16, 1	
	Support of PDSCH	Yes/No	
	Support of HS-PDSCH	Yes/No	
	Maximum number of physical channels per timeslot	1..16	
TDD 1.28 Mcps physical channel parameters in uplink	Support 8PSK	Yes/No	
	Maximum number of timeslots per subframe	1..6	
	Maximum number of physical channels per timeslot	1, 2	
	Minimum SF	16, 8, 4, 2, 1	
	Support of 8PSK	Yes/No	
Support of PUSCH	Yes/No		
	Yes/No		
RF parameters	FDD RF parameters	UE power class	3, 4 NOTE: Only power classes 3 and 4 are part of this release of the specification
		Tx/Rx frequency separation	190 Mhz 174.8 MHz to 205.2 MHz 134.8 MHz to 245.2 MHz

		UE radio access capability parameter	Value range
RF parameters	TDD 3.84 Mcps RF parameters	UE power class	2, 3 NOTE: Only power classes 2 and 3 are part of this release of the specification
		Radio frequency bands	a), b), c), a+b), a+c), b+c), a+b+c)
	TDD 1.28 Mcps RF parameters	UE power class	2, 3
		Radio frequency bands	a), b), c), a+b), a+c), b+c), a+b+c)
Multi-mode related parameters		Support of UTRA FDD	Yes/No
		Support of UTRA TDD 3.84 Mcps	Yes/No
		Support of UTRA TDD 1.28 Mcps	Yes/No
Multi-RAT related parameters		Support of GSM	Yes/No (per GSM frequency band)
		Support of multi-carrier	Yes/No
		Support of UTRAN to GERAN Network Assisted Cell Change	Yes/No
Security parameters		Support of ciphering algorithm UEA0	Yes
		Support of ciphering algorithm UEA1	Yes
		Support of integrity protection algorithm UIA1	Yes
UE positioning related parameters		Standalone location method(s) supported	Yes/No
		Network assisted GPS support	Network based / UE based / Both / None
		GPS reference time capable	Yes/No
		Support for IPDL	Yes/No
		Support for OTDOA UE based method	Yes/No
		Support for Rx-Tx time difference type 2 measurement	Yes/No
		Support for UE Positioning assisted GPS measurement validity in CELL_PCH and URA_PCH RRC states	Yes
Measurement related capabilities		Need for downlink compressed mode	Yes/No (per frequency band, UTRA mode and RAT)
		Need for uplink compressed mode	Yes/No (per frequency band, UTRA mode and RAT)
General capabilities		Access Stratum release indicator	R99, REL-4, REL-5
DL capabilities with simultaneous HS-DSCH		DL capability with simultaneous HS-DSCH configuration	32 kbps, 64 kbps, 128 kbps, 384 kbps

Table 5.1a: FDD HS-DSCH physical layer categories

HS-DSCH category	Maximum number of HS-DSCH codes received	Minimum inter-TTI interval	Maximum number of bits of an HS-DSCH transport block received within an HS-DSCH TTI	Total number of soft channel bits
Category 1	5	3	7298	19200
Category 2	5	3	7298	28800
Category 3	5	2	7298	28800
Category 4	5	2	7298	38400
Category 5	5	1	7298	57600
Category 6	5	1	7298	67200
Category 7	10	1	14411	115200
Category 8	10	1	14411	134400
Category 9	15	1	20251	172800
Category 10	15	1	27952	172800
Category 11	5	2	3630	14400
Category 12	5	1	3630	28800

UEs of Categories 11 and 12 support QPSK only.

Table 5.1b: RLC and MAC-hs parameters for FDD HS-DSCH physical layer categories

HS-DSCH category	Maximum number of AM RLC entities	Minimum total RLC AM and MAC-hs buffer size [kBytes]
Category 1	6	50
Category 2	6	50
Category 3	6	50
Category 4	6	50
Category 5	6	50
Category 6	6	50
Category 7	8	100
Category 8	8	100
Category 9	8	150
Category 10	8	150
Category 11	6	50
Category 12	6	50

Table 5.1c: 1.28 Mcps TDD HS-DSCH physical layer categories

HS-DSCH category	Maximum number of HS-DSCH codes per timeslot	Maximum number of HS-DSCH timeslots per TTI	Maximum number of HS-DSCH transport channel bits that can be received within an HS-DSCH TTI	Total number of soft channel bits
Category 1	12	5	7016	28160
Category 2	12	5	7016	56320
Category 3	12	5	7016	84480
Category 4	16	5	7016	28160
Category 5	16	5	7016	56320
Category 6	16	5	7016	84480
Category 7	12	5	10204	40912
Category 8	12	5	10204	81824
Category 9	12	5	10204	122736
Category 10	16	5	10204	40912
Category 11	16	5	10204	81824
Category 12	16	5	10204	122736
Category 13	16	5	14056	56320
Category 14	16	5	14056	112640
Category 15	16	5	14056	168960

Table 5.1d: RLC and MAC-hs parameters for 1.28 Mcps TDD HS-DSCH physical layer categories

HS-DSCH category	Maximum number of AM RLC entities	Minimum total RLC AM and MAC-hs buffer size [kBytes]
Category 1	6	50
Category 2	6	50
Category 3	6	50
Category 4	6	50
Category 5	6	50
Category 6	6	50
Category 7	6	50
Category 8	6	50
Category 9	6	50
Category 10	6	50
Category 11	6	50

HS-DSCH category	Maximum number of AM RLC entities	Minimum total RLC AM and MAC-hs buffer size [kBytes]
Category 12	6	50
Category 13	6	100
Category 14	6	100
Category 15	6	100

Table 5.1e: 3.84 Mcps TDD HS-DSCH physical layer categories

HS-DSCH category	Maximum number of HS-DSCH codes per timeslot	Maximum number of HS-DSCH timeslots per TTI	Maximum number of HS-DSCH transport channel bits that can be received within an HS-DSCH TTI	Total number of soft channel bits
Category 1	16	2	12000	52992
Category 2	16	12	12000	52992
Category 3	16	4	24000	105984
Category 4	16	12	24000	105984
Category 5	16	6	36000	158976
Category 6	16	12	36000	158976
Category 7	16	12	53000	211968
Category 8	16	12	73000	264960
Category 9	16	12	102000	317952

Table 5.1f: RLC and MAC-hs parameters for 3.84 Mcps TDD HS-DSCH physical layer categories

HS-DSCH category	Maximum number of AM RLC entities	Minimum total RLC AM and MAC-hs buffer size [kBytes]
Category 1	6	50
Category 2	6	50
Category 3	6	50
Category 4	6	50
Category 5	6	100
Category 6	6	100
Category 7	6	150
Category 8	8	150
Category 9	8	200

5.2.2 Combinations of UE Radio Access Parameters for DL

Table 5.2.2.1: UE radio access capability parameter combinations, DL parameters

Reference combination of UE Radio Access capability parameters in DL	12 kbps class	32 kbps class	64 kbps class	128 kbps class	384 kbps class	768 kbps class	2048 kbps class
Transport channel parameters							
Maximum sum of number of bits of all transport blocks being received at an arbitrary time instant	640 (FDD) 1280(TDD)	1280	3840	3840	6400	10240	20480
Maximum sum of number of bits of all convolutionally coded transport blocks being received at an arbitrary time instant	640	640	640	640	640	640	640
Maximum sum of number of bits of all turbo coded transport blocks being received at an arbitrary time instant	NA (FDD) 1280(TDD)	1280	3840	3840	6400	10240	20480(1) 10240(2) NOTE 5
Maximum number of simultaneous transport channels	4	8 NOTE 4	8 NOTE 4	8 NOTE 4	8 NOTE 4	8 NOTE 4	16 NOTE 4
Maximum number of simultaneous CCTrCH (FDD)	1	1 NOTE 3	2/1 NOTE 2 NOTE 3	2/1 NOTE 2 NOTE 3	2 NOTE 3	2 NOTE 3	2 NOTE 3
Maximum number of simultaneous CCTrCH (TDD)	1 NOTE 3	2 NOTE 3	3 NOTE 3	3 NOTE 3	3 NOTE 3	4 NOTE 3	4 NOTE 3
Maximum total number of transport blocks received within TTIs that end at the same time	4	8	8	16	32	64	96
Maximum number of TFC	16	32	48	96	128	256	1024
Maximum number of TF	32	32	64	64	64	128	256
Support for turbo decoding	No (FDD) Yes (TDD)	Yes	Yes	Yes	Yes	Yes	Yes
Physical channel parameters (FDD)							
Maximum number of DPCH/PDSCH codes to be simultaneously received	1	1	2/1 NOTE 2	2/1 NOTE 2	3	3	3
Maximum number of physical channel bits received in any 10 ms interval (DPCH, PDSCH, S-CCPCH).	1200	1200	3600/2400 NOTE2	7200/4800 NOTE2	19200	28800	57600
Support for SF 512 for DPCH NOTE 6	No	No	No	No	No	No	No
Support of PDSCH	No	No	Yes/No NOTE 1	Yes/No NOTE 1	Yes	Yes	Yes
Support of HS-PDSCH	No	No	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1
Maximum number of simultaneous S-CCPCH radio links	4	4	4	4	4	4	4
Support of dedicated pilots for channel estimation	Yes NOTE 1 NOTE 7	Yes NOTE 1 NOTE 7	Yes NOTE 1 NOTE 7	Yes NOTE 1 NOTE 7	Yes NOTE 1 NOTE 7	Yes NOTE 1 NOTE 7	Yes NOTE 1 NOTE 7
Support of dedicated pilots for channel estimation of HS-DSCH	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1
Physical channel parameters (TDD 3.84 Mcps)							
Maximum number of timeslots per frame	1	1	2	4	5	10	12
Maximum number of physical channels per frame	5	8	9	14	28	64	136
Minimum SF	16	16	16	16	1/16 NOTE 1	1/16 NOTE 1	1/16 NOTE 1
Support of PDSCH	No	Yes/No NOTE 1	Yes	Yes	Yes	Yes	Yes

Reference combination of UE Radio Access capability parameters in DL	12 kbps class	32 kbps class	64 kbps class	128 kbps class	384 kbps class	768 kbps class	2048 kbps class
Support of HS-PDSCH	No	No	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1
Maximum number of physical channels per timeslot	5	8	9	9	9	9	13
Physical channel parameters (TDD 1.28 Mcps)							
Maximum number of timeslots per subframe	1	1	2	3	4	6	6
Maximum number of physical channels per subframe	5	8	12	18	43	77	77
Minimum SF	16	16	16	16	1/16 NOTE 1	1/16 NOTE 1	1
Support of PDSCH	No	Yes/No NOTE 1	Yes	Yes	Yes	Yes	Yes
Support of HS-PDSCH	No	No	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1
Maximum number of physical channels per timeslot	5	8	11	14	14	14	14
Support of 8PSK	No	No	No	No	No	No	Yes

NOTE 1: Options represent different combinations that should be supported with conformance tests.

NOTE 2: Options depend on the support of PDSCH. The highest value is required if PDSCH is supported.

NOTE 3: The given number does not contain the BCH CCTrCH of the current cell nor of the neighbour cells.

NOTE 4: The given number does not contain the BCH of the neighbour cell.

NOTE 5: (1) For FDD and 3.84 Mcps TDD (2) For 1.28 Mcps TDD.

NOTE 6: This UE capability does not relate to the support of CPCH in the uplink for which SF 512 is needed

NOTE 7: A UE conforming to this release of the specification shall set the support of channel estimation based on dedicated pilot bits to TRUE.

The reference combinations for HS-DSCH capabilities are shown in tables 5.2.2.2, 5.2.2.3 and 5.2.2.4. These tables are subject to further discussions in TSG-RAN WG1 and TSG-RAN WG2.

Table 5.2.2.2: FDD UE radio access capability parameter combinations, DL HS-DSCH parameters

Reference combination	1.2 Mbps class	3.6 Mbps class	7 Mbps class	10 Mbps class
FDD HS-DSCH category	Category 1	Category 5	Category 7	Category 9

Table 5.2.2.3: 1.28 Mcps TDD UE radio access capability parameter combinations, DL HS-DSCH parameters

Reference combination	1.4 Mbps class	2.0 Mbps class	2.8 Mbps class
1.28 Mcps TDD HS-DSCH Category	Category 1	Category 7	Category 13

Table 5.2.2.4: 3.84 Mcps TDD UE radio access capability parameter combinations, DL HS-DSCH parameters

Reference combination	1.2 Mbps class	2.4 Mbps class	3.6 Mbps class	7.3 Mbps class	10.2 Mbps class
3.84Mcps TDD HS-DSCH category	Category 1	Category 3	Category 5	Category 8	Category 9

5.2.3 Combinations of UE Radio Access Parameters for UL

Table 5.2.3.1: UE radio access capability parameter combinations, UL parameters

Reference combination of UE Radio Access capability parameters in UL	12 kbps class	32 kbps class	64 kbps class	128 kbps class	384 kbps class	768 kbps class
Transport channel parameters						
Maximum sum of number of bits of all transport blocks being transmitted at an arbitrary time instant	640	640(FDD) 1280 (TDD)	3840	3840	6400	10240
Maximum sum of number of bits of all convolutionally coded transport blocks being transmitted at an arbitrary time instant	640	640	640	640	640	640
Maximum sum of number of bits of all turbo coded transport blocks being transmitted at an arbitrary time instant	NA	NA(FDD) 1280 (TDD)	3840	3840	6400	10240
Maximum number of simultaneous transport channels	4	4	8	8	8	8
Maximum number of simultaneous CCTrCH(TDD only)	1 NOTE 3	1 NOTE 3	2 NOTE 3	2 NOTE 3	2 NOTE 3	2 NOTE 3
Maximum total number of transport blocks transmitted within TTIs that start at the same time	4	4	8	8	16	32
Maximum number of TFC	16	16	32	48	64	128
Maximum number of TF	32	32	32	32	32	64
Support for turbo encoding	No	No (FDD) Yes (TDD)	Yes	Yes	Yes	Yes
Physical channel parameters (FDD)						
Maximum number of DPDCH bits transmitted per 10 ms	600	1200	2400	4800	9600	19200
Simultaneous reception of SCCPCH and DPCH NOTE 2	No	No	No	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1
Simultaneous reception of SCCPCH, DPCH and PDSCH NOTE 2	No	No	No	No	No	No
Simultaneous reception of SCCPCH, DPCH and HS-PDSCH NOTE 2	No	No	No	No	No	No
Support of PCPCH NOTE 4	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1
Physical channel parameters (TDD 3.84 Mcps)						
Maximum Number of timeslots per frame	1	1	2	3	7	9
Maximum number of physical channels per timeslot	1	1	1	1	1	2
Minimum SF	8	4	2	2	2	2
Support of PUSCH	No	Yes/No NOTE 1	Yes	Yes	Yes	Yes
Physical channel parameters (TDD 1.28 Mcps)						
Maximum Number of timeslots per subframe	1	1	2	3	5	5
Maximum number of physical channels per timeslot	1	1	1	1	1	2
Minimum SF	8	4	2	2	2	2
Support of PUSCH	No	Yes/No NOTE 1	Yes	Yes	Yes	Yes
Support of 8PSK	No	No	No	No	No	No

NOTE 1: Options represent different combinations that should be supported with conformance tests.

~~NOTE 2: The downlink parameters 'Simultaneous reception of SCCPCH and DPCH' and 'Simultaneous reception of SCCPCH, DPCH and PDSCH' are included in the combinations for uplink as their requirements relate to the uplink data rate. Simultaneous reception of SCCPCH and DPCH is required for the DRAC procedure that is intended for controlling uplink transmissions. In this release of the specification, this is limited to 1 SCCPCH.~~

NOTE 3: This number does not contain the RACH CCTrCH.

NOTE 4: Support of PCPCH means that the UE supports PCPCH access for both the CA not active case and for the CA active case.

CHANGE REQUEST

25.306 CR 0117 # rev - # Current version: 6.4.1

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Feature Clean Up: Removal of DRAC		
Source:	# RAN WG2		
Work item code:	# TEI5	Date:	# 20/04/2005
Category:	# C	Release:	# Rel-6
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: Ph2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) Rel-7 (Release 7)

Reason for change:	# At RAN#27 it was agreed to remove the DRAC feature from the specifications as part of a feature cleanup process.
Summary of change:	# The DRAC feature is removed from the specification. <i>Implementation of this CR by a Release 99/4 UE will not cause compatibility issues</i>
Consequences if not approved:	# If the CR is not approved then decision taken in RAN#23 will not be applied to the specs. The redundant DRAC feature will remain in the specifications.

Clauses affected:	# 4.5.3, 5.1, 5.2.2, 5.2.3						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"></td> </tr> </table> Other core specifications	Y	N	X		#	25.331, 25.302 TS 25.423, TR 25.931
Y	N						
X							
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;"></td> <td style="width: 20px; text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> </table> Test specifications O&M Specifications		X		X		
	X						
	X						
Other comments:	#						

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4.5.3 FDD Physical channel parameters in downlink

Maximum number of DPCH/PDSCH codes to be simultaneously received

Defines the number of codes the UE is capable of receiving in parallel. For DPCH in soft/softer handover, each DPCH is only calculated once in this capability. The capability does not include codes used for S-CCPCH.

Maximum number of physical channel bits received in any 10 ms interval (DPCH, PDSCH, S-CCPCH)

Defines the number of physical channel bits the UE is capable of receiving. For DPCH in soft/softer handover, each DPCH is only calculated once in this capability.

The number of DPCH channel bits indicates the capability of the UE when operating in non-compressed mode.

The parameter also indicates the capability of the UE to support compressed mode by spreading factor reduction as follows. The UE shall:

- for parameter values up to and including 9600 bits:
 - support compressed mode by spreading factor reduction when operating at any value up to the reported capability.
- for parameter values greater than 9600 bits:
 - support compressed mode by spreading factor reduction when operating at any value up to the greater of:
 - half the reported capability; or
 - 9600bits.

NOTE: Compressed mode by spreading factor reduction is not applicable when operating at spreading factor 4.

Support for SF 512

Defines whether the UE supports spreading factor 512 in downlink or not.

Support of PDSCH

Defines whether the UE supports PDSCH or not.

Support of HS-PDSCH

Defines whether the UE supports HS-PDSCH or not.

Simultaneous reception of SCCPCH and DPCH

Defines whether the UE supports simultaneous reception of SCCPCH and DPCH or not.

NOTE: Simultaneous reception of SCCPCH and DPCH, i.e. simultaneous reception of FACH and DCH is required for e.g. DRAC procedure

~~Simultaneous reception of SCCPCH, DPCH and PDSCH~~

~~Defines whether the UE supports simultaneous reception of SCCPCH, DPCH and PDSCH or not. The PDSCH part of this capability is only relevant if the UE supports PDSCH, as covered by the capability "Support of PDSCH".~~

~~NOTE: Simultaneous reception of SCCPCH, DPCH and PDSCH, i.e. simultaneous reception of FACH, DCH and DSCH is required for e.g. simultaneous use of DSCH and the DRAC procedure.~~

~~Simultaneous reception of SCCPCH, DPCH and HS-PDSCH~~

~~Defines whether the UE supports simultaneous reception of SCCPCH, DPCH and HS-PDSCH or not. The HS-PDSCH part of this capability is only relevant if the UE supports HS-PDSCH, as covered by the capability "Support of HS-PDSCH".~~

~~NOTE:— Simultaneous reception of SCCPCH, DPCH and HS-PDSCH, i.e. simultaneous reception of FACH, DCH and HS-PDSCH is required for e.g. simultaneous use of HS-PDSCH and the DRAC procedure.~~

~~Maximum number of simultaneous S-CCPCH radio links~~

~~Defines the maximum number of radio links on which the UE is capable of receiving S-CCPCH simultaneously.~~

~~Support of dedicated pilots for channel estimation~~

~~Defines whether the UE supports dedicated pilots for channel estimation or not.~~

Support of dedicated pilots for channel estimation of HS-DSCH

Defines whether the UE supports dedicated pilots for channel estimation of HS-PDSCH and HS-SCCH or not.

Maximum number of HS-DSCH codes received

Defines the maximum number of HS-DSCH codes the UE is capable of receiving.

Total number of soft channel bits in HS-DSCH

Defines the maximum number of soft channel bits over all HARQ processes. When explicit signalling is used, UTRAN configures Process Memory Size for each HARQ process so that the following criterion must be fulfilled in the configuration:

Total number of soft channel bits in HS-DSCH \geq sum of Process Memory Size of all the HARQ processes.

Minimum inter-TTI interval in HS-DSCH

Defines the distance from the beginning of a TTI to the beginning of the next TTI that can be assigned to the UE.

5.1 Value ranges

Table 5.1: UE radio access capability parameter value ranges

		UE radio access capability parameter	Value range
PDCP parameters		Support for RFC 2507	Yes/No
		Support for RFC 3095	Yes/No
		Support for RFC 3095 context relocation	Yes/No
		Support for loss-less SRNS relocation	Yes/No
		Support for loss-less DL RLC PDU size change	Yes/No
		Maximum header compression context space	1024, 2048, 4096, 8192, 16384, 32768, 65536, 131072 bytes
		Maximum number of ROHC context sessions	2, 4, 8, 12, 16, 24, 32, 48, 64, 128, 256, 512, 1024, 16384
		Support for Reverse Decompression	Not supported, 1..65535
RLC and MAC-hs parameters		Total RLC AM and MAC-hs buffer size	2, 10, 50, 100, 150, 200, 300, 400, 500, 750, 1000 kBytes
		Maximum number of AM entities	3, 4, 5, 6, 8, 16, 30
		Maximum RLC AM window size	2047, 4095
PHY parameters	Transport channel parameters in downlink	Maximum sum of number of bits of all transport blocks being received at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum sum of number of bits of all convolutionally coded transport blocks being received at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum sum of number of bits of all turbo coded transport blocks being received at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum number of simultaneous transport channels	4, 8, 16, 32
		Maximum number of simultaneous CCTrCH	1, 2, 3, 4, 5, 6, 7, 8
		Maximum total number of transport blocks received within TTIs that end within the same 10 ms interval	4, 8, 16, 32, 48, 64, 96, 128, 256, 512
		Maximum number of TFC	16, 32, 48, 64, 96, 128, 256, 512, 1024
		Maximum number of TF	32, 64, 128, 256, 512, 1024
		Support for turbo decoding	Yes/No
		Transport channel parameters in uplink	Maximum sum of number of bits of all transport blocks being transmitted at an arbitrary time instant
	Maximum sum of number of bits of all convolutionally coded transport blocks being transmitted at an arbitrary time instant		640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
	Maximum sum of number of bits of all turbo coded transport blocks being transmitted at an arbitrary time instant		640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
	Maximum number of simultaneous transport channels		2, 4, 8, 16, 32
	Maximum number of simultaneous CCTrCH of DCH type (TDD only)		1, 2, 3, 4, 5, 6, 7, 8
	Maximum total number of transport blocks transmitted within TTIs that start at the same time		2, 4, 8, 16, 32, 48, 64, 96, 128, 256, 512
	Maximum number of TFC		4, 8, 16, 32, 48, 64, 96, 128, 256, 512, 1024
	Maximum number of TF		32, 64, 128, 256, 512, 1024
	Support for turbo encoding		Yes/No

		UE radio access capability parameter	Value range
	FDD Physical channel parameters in downlink	Maximum number of DPCH/PDSCH codes to be simultaneously received	1, 2, 3, 4, 5, 6, 7, 8
		Maximum number of physical channel bits received in any 10 ms interval (DPCH, PDSCH, S-CCPCH)	600, 1200, 2400, 3600, 4800, 7200, 9600, 14400, 19200, 28800, 38400, 48000, 57600, 67200, 76800
		Support for SF 512	Yes/No
		Support of PDSCH	Yes/No
		Support of HS-PDSCH	Yes/No
		Simultaneous reception of SGPCH and DPCH	Yes/No
		Simultaneous reception of SGPCH, DPCH and PDSCH	Yes/No
		Simultaneous reception of SGPCH, DPCH and HS-PDSCH	Yes/No
		Maximum number of simultaneous S-CCPCH radio links	4 NOTE: Only the value 1 is part of this release of the specification
		Support of dedicated pilots for channel estimation	Yes
	Support of dedicated pilots for channel estimation of HS-DSCH	Yes/No	
	FDD Physical channel parameters in uplink	Maximum number of DPDCH bits transmitted per 10 ms	600, 1200, 2400, 4800, 9600, 19200, 28800, 38400, 48000, 57600
		Support of PCPCH	Yes/No
		Support of E-DPDCH	Yes/No
	TDD 3.84 Mcps physical channel parameters in downlink	Maximum number of timeslots per frame	1..14
		Maximum number of physical channels per frame	1, 2, 3..224
		Minimum SF	16, 1
		Support of PDSCH	Yes/No
		Support of HS-PDSCH	Yes/No
Maximum number of physical channels per timeslot		1..16	
TDD 3.84 Mcps physical channel parameters in uplink	Maximum Number of timeslots per frame	1..14	
	Maximum number of physical channels per timeslot	1, 2	
	Minimum SF	16, 8, 4, 2, 1	
	Support of PUSCH	Yes/No	
TDD 1.28 Mcps physical channel parameters in downlink	Maximum number of timeslots per subframe	1..6	
	Maximum number of physical channels per subframe	1, 2, 3, ..., 96	
	Minimum SF	16, 1	
	Support of PDSCH	Yes/No	
	Support of HS-PDSCH	Yes/No	
	Maximum number of physical channels per timeslot	1..16	
TDD 1.28 Mcps physical channel parameters in uplink	Support 8PSK	Yes/No	
	Maximum number of timeslots per subframe	1..6	
	Maximum number of physical channels per timeslot	1, 2	
	Minimum SF	16, 8, 4, 2, 1	
	Support of 8PSK	Yes/No	
RF parameters	FDD RF parameters	UE power class	3, 4 NOTE: Only power classes 3 and 4 are part of this release of the specification
		Tx/Rx frequency separation	190 Mhz 174.8 MHz to 205.2 MHz 134.8 MHz to 245.2 MHz

		UE radio access capability parameter	Value range
RF parameters	TDD 3.84 Mcps RF parameters	UE power class	2, 3 NOTE: Only power classes 2 and 3 are part of this release of the specification
		Radio frequency bands	a), b), c), a+b), a+c), b+c), a+b+c)
	TDD 1.28 Mcps RF parameters	UE power class	2, 3
		Radio frequency bands	a), b), c), a+b), a+c), b+c), a+b+c)
Multi-mode related parameters		Support of UTRA FDD	Yes/No
		Support of UTRA TDD 3.84 Mcps	Yes/No
		Support of UTRA TDD 1.28 Mcps	Yes/No
Multi-RAT related parameters		Support of GSM	Yes/No (per GSM frequency band)
		Support of multi-carrier	Yes/No
		Support of UTRAN to GERAN Network Assisted Cell Change	Yes/No
Security parameters		Support of ciphering algorithm UEA0	Yes
		Support of ciphering algorithm UEA1	Yes
		Support of integrity protection algorithm UIA1	Yes
UE positioning related parameters		Standalone location method(s) supported	Yes/No
		Network assisted GPS support	Network based / UE based / Both/ None
		GPS reference time capable	Yes/No
		Support for IPDL	Yes/No
		Support for OTDOA UE based method	Yes/No
		Support for Rx-Tx time difference type 2 measurement	Yes/No
		Support for UE Positioning assisted GPS measurement validity in CELL_PCH and URA_PCH RRC states	Yes
Measurement related capabilities		Need for downlink compressed mode	Yes/No (per frequency band, UTRA mode and RAT)
		Need for uplink compressed mode	Yes/No (per frequency band, UTRA mode and RAT)
General capabilities		Access Stratum release indicator	R99, REL-4, REL-5
DL capabilities with simultaneous HS-DSCH		DL capability with simultaneous HS-DSCH configuration	32 kbps, 64 kbps, 128 kbps, 384 kbps
UL capabilities with simultaneous E-DCH		UL capabilities with simultaneous E-DCH	64 kbps

Table 5.1a: FDD HS-DSCH physical layer categories

HS-DSCH category	Maximum number of HS-DSCH codes received	Minimum inter-TTI interval	Maximum number of bits of an HS-DSCH transport block received within an HS-DSCH TTI	Total number of soft channel bits
Category 1	5	3	7298	19200
Category 2	5	3	7298	28800
Category 3	5	2	7298	28800
Category 4	5	2	7298	38400
Category 5	5	1	7298	57600
Category 6	5	1	7298	67200
Category 7	10	1	14411	115200
Category 8	10	1	14411	134400
Category 9	15	1	20251	172800
Category 10	15	1	27952	172800
Category 11	5	2	3630	14400

HS-DSCH category	Maximum number of HS-DSCH codes received	Minimum inter-TTI interval	Maximum number of bits of an HS-DSCH transport block received within an HS-DSCH TTI	Total number of soft channel bits
Category 12	5	1	3630	28800

UEs of Categories 11 and 12 support QPSK only.

Table 5.1b: RLC and MAC-hs parameters for FDD HS-DSCH physical layer categories

HS-DSCH category	Maximum number of AM RLC entities	Minimum total RLC AM and MAC-hs buffer size [kBytes]
Category 1	6	50
Category 2	6	50
Category 3	6	50
Category 4	6	50
Category 5	6	50
Category 6	6	50
Category 7	8	100
Category 8	8	100
Category 9	8	150
Category 10	8	150
Category 11	6	50
Category 12	6	50

Table 5.1c: 1.28 Mcps TDD HS-DSCH physical layer categories

HS-DSCH category	Maximum number of HS-DSCH codes per timeslot	Maximum number of HS-DSCH timeslots per TTI	Maximum number of HS-DSCH transport channel bits that can be received within an HS-DSCH TTI	Total number of soft channel bits
Category 1	12	5	7016	28160
Category 2	12	5	7016	56320
Category 3	12	5	7016	84480
Category 4	16	5	7016	28160
Category 5	16	5	7016	56320
Category 6	16	5	7016	84480
Category 7	12	5	10204	40912
Category 8	12	5	10204	81824
Category 9	12	5	10204	122736
Category 10	16	5	10204	40912
Category 11	16	5	10204	81824
Category 12	16	5	10204	122736
Category 13	16	5	14056	56320
Category 14	16	5	14056	112640
Category 15	16	5	14056	168960

Table 5.1d: RLC and MAC-hs parameters for 1.28 Mcps TDD HS-DSCH physical layer categories

HS-DSCH category	Maximum number of AM RLC entities	Minimum total RLC AM and MAC-hs buffer size [kBytes]
Category 1	6	50
Category 2	6	50
Category 3	6	50
Category 4	6	50
Category 5	6	50

HS-DSCH category	Maximum number of AM RLC entities	Minimum total RLC AM and MAC-hs buffer size [kBytes]
Category 6	6	50
Category 7	6	50
Category 8	6	50
Category 9	6	50
Category 10	6	50
Category 11	6	50
Category 12	6	50
Category 13	6	100
Category 14	6	100
Category 15	6	100

Table 5.1e: 3.84 Mcps TDD HS-DSCH physical layer categories

HS-DSCH category	Maximum number of HS-DSCH codes per timeslot	Maximum number of HS-DSCH timeslots per TTI	Maximum number of HS-DSCH transport channel bits that can be received within an HS-DSCH TTI	Total number of soft channel bits
Category 1	16	2	12000	52992
Category 2	16	12	12000	52992
Category 3	16	4	24000	105984
Category 4	16	12	24000	105984
Category 5	16	6	36000	158976
Category 6	16	12	36000	158976
Category 7	16	12	53000	211968
Category 8	16	12	73000	264960
Category 9	16	12	102000	317952

Table 5.1f: RLC and MAC-hs parameters for 3.84 Mcps TDD HS-DSCH physical layer categories

HS-DSCH category	Maximum number of AM RLC entities	Minimum total RLC AM and MAC-hs buffer size [kBytes]
Category 1	6	50
Category 2	6	50
Category 3	6	50
Category 4	6	50
Category 5	6	100
Category 6	6	100
Category 7	6	150
Category 8	8	150
Category 9	8	200

Table 5.1g: FDD E-DCH physical layer categories

E-DCH category	Maximum number of E-DCH codes transmitted	Minimum spreading factor	Support for 10 and 2 ms TTI EDCH	Maximum number of bits of an E-DCH transport block transmitted within a 10 ms E-DCH TTI	Maximum number of bits of an E-DCH transport block transmitted within a 2 ms E-DCH TTI
Category 1	1	SF4	10 ms TTI only	7296	-
Category 2	2	SF4	10 ms and 2 ms TTI	14592	2919
Category 3	2	SF4	10 ms TTI only	14592	-

E-DCH category	Maximum number of E-DCH codes transmitted	Minimum spreading factor	Support for 10 and 2 ms TTI EDCH	Maximum number of bits of an E-DCH transport block transmitted within a 10 ms E-DCH TTI	Maximum number of bits of an E-DCH transport block transmitted within a 2 ms E-DCH TTI
Category 4	2	SF2	10 ms and 2 ms TTI	20000	5837
Category 5	2	SF2	10 ms TTI only	20000	-
Category 6	4	SF2	10 ms and 2 ms TTI	20000	11520

NOTE: When 4 codes are transmitted in parallel, two codes shall be transmitted with SF2 and two with SF4

5.2.2 Combinations of UE Radio Access Parameters for DL

Table 5.2.2.1: UE radio access capability parameter combinations, DL parameters

Reference combination of UE Radio Access capability parameters in DL	12 kbps class	32 kbps class	64 kbps class	128 kbps class	384 kbps class	768 kbps class	2048 kbps class
Transport channel parameters							
Maximum sum of number of bits of all transport blocks being received at an arbitrary time instant	640 (FDD) 1280(TDD)	1280	3840	3840	6400	10240	20480
Maximum sum of number of bits of all convolutionally coded transport blocks being received at an arbitrary time instant	640	640	640	640	640	640	640
Maximum sum of number of bits of all turbo coded transport blocks being received at an arbitrary time instant	NA (FDD) 1280(TDD)	1280	3840	3840	6400	10240	20480(1) 10240(2) NOTE 5
Maximum number of simultaneous transport channels	4	8 NOTE 4	8 NOTE 4	8 NOTE 4	8 NOTE 4	8 NOTE 4	16 NOTE 4
Maximum number of simultaneous CCTrCH (FDD)	1	1 NOTE 3	2/1 NOTE 2 NOTE 3	2/1 NOTE 2 NOTE 3	2/1 NOTE 2 NOTE 3	2/1 NOTE 2 NOTE 3	2/1 NOTE 2 NOTE 3
Maximum number of simultaneous CCTrCH (TDD)	1 NOTE 3	2 NOTE 3	3 NOTE 3	3 NOTE 3	3 NOTE 3	4 NOTE 3	4 NOTE 3
Maximum total number of transport blocks received within TTIs that end at the same time	4	8	8	16	32	64	96
Maximum number of TFC	16	32	48	96	128	256	1024
Maximum number of TF	32	32	64	64	64	128	256
Support for turbo decoding	No (FDD) Yes (TDD)	Yes	Yes	Yes	Yes	Yes	Yes
Support for loss-less DL RLC PDU size change	No	No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Physical channel parameters (FDD)							
Maximum number of DPCH/PDSCH codes to be simultaneously received	1	1	2/1 NOTE 2	2/1 NOTE 2	3	3	3
Maximum number of physical channel bits received in any 10 ms interval (DPCH, PDSCH, S-CCPCH).	1200	1200	3600/2400 NOTE2	7200/4800 NOTE2	19200	28800	57600
Support for SF 512 for DPCH NOTE 6	No	No	No	No	No	No	No
Support of PDSCH	No	No	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1
Support of HS-PDSCH	No	No	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1
Maximum number of simultaneous S-CCPCH radio links	4	4	4	4	4	4	4
Support of dedicated pilots for channel estimation	Yes NOTE 1 NOTE 7	Yes NOTE 1 NOTE 7	Yes NOTE 1 NOTE 7	Yes NOTE 1 NOTE 7	Yes NOTE 1 NOTE 7	Yes NOTE 1 NOTE 7	Yes NOTE 1 NOTE 7
Support of dedicated pilots for channel estimation of HS-DSCH	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1
Physical channel parameters (TDD 3.84 Mcps)							
Maximum number of timeslots per frame	1	1	2	4	5	10	12
Maximum number of physical channels per frame	5	8	9	14	28	64	136
Minimum SF	16	16	16	16	1/16 NOTE 1	1/16 NOTE 1	1/16 NOTE 1
Support of PDSCH	No	Yes/No	Yes	Yes	Yes	Yes	Yes

Reference combination of UE Radio Access capability parameters in DL	12 kbps class	32 kbps class	64 kbps class	128 kbps class	384 kbps class	768 kbps class	2048 kbps class
		NOTE 1					
Support of HS-PDSCH	No	No	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1
Maximum number of physical channels per timeslot	5	8	9	9	9	9	13
Physical channel parameters (TDD 1.28 Mcps)							
Maximum number of timeslots per subframe	1	1	2	3	4	6	6
Maximum number of physical channels per subframe	5	8	12	18	43	77	77
Minimum SF	16	16	16	16	1/16 NOTE 1	1/16 NOTE 1	1
Support of PDSCH	No	Yes/No NOTE 1	Yes	Yes	Yes	Yes	Yes
Support of HS-PDSCH	No	No	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1
Maximum number of physical channels per timeslot	5	8	11	14	14	14	14
Support of 8PSK	No	No	No	No	No	No	Yes

NOTE 1: Options represent different combinations that should be supported with conformance tests.

NOTE 2: Options depend on the support of PDSCH. The highest value is required if PDSCH is supported.

NOTE 3: The given number does not contain the BCH CCTrCH of the current cell nor of the neighbour cells.

NOTE 4: The given number does not contain the BCH of the neighbour cell.

NOTE 5: (1) For FDD and 3.84 Mcps TDD (2) For 1.28 Mcps TDD.

NOTE 6: This UE capability does not relate to the support of CPCH in the uplink for which SF 512 is needed

NOTE 7: A UE conforming to this release of the specification shall set the support of channel estimation based on dedicated pilot bits to TRUE.

The reference combinations for HS-DSCH capabilities are shown in tables 5.2.2.2, 5.2.2.3 and 5.2.2.4. These tables are subject to further discussions in TSG-RAN WG1 and TSG-RAN WG2.

Table 5.2.2.2: FDD UE radio access capability parameter combinations, DL HS-DSCH parameters

Reference combination	1.2 Mbps class	3.6 Mbps class	7 Mbps class	10 Mbps class
FDD HS-DSCH category	Category 1	Category 5	Category 7	Category 9

Table 5.2.2.3: 1.28 Mcps TDD UE radio access capability parameter combinations, DL HS-DSCH parameters

Reference combination	1.4 Mbps class	2.0 Mbps class	2.8 Mbps class
1.28 Mcps TDD HS-DSCH Category	Category 1	Category 7	Category 13

Table 5.2.2.4: 3.84 Mcps TDD UE radio access capability parameter combinations, DL HS-DSCH parameters

Reference combination	1.2 Mbps class	2.4 Mbps class	3.6 Mbps class	7.3 Mbps class	10.2 Mbps class
3.84Mcps TDD HS-DSCH category	Category 1	Category 3	Category 5	Category 8	Category 9

5.2.3 Combinations of UE Radio Access Parameters for UL

Table 5.2.3.1: UE radio access capability parameter combinations, UL parameters

Reference combination of UE Radio Access capability parameters in UL	12 kbps class	32 kbps class	64 kbps class	128 kbps class	384 kbps class	768 kbps class
Transport channel parameters						
Maximum sum of number of bits of all transport blocks being transmitted at an arbitrary time instant	640	640(FDD) 1280 (TDD)	3840	3840	6400	10240
Maximum sum of number of bits of all convolutionally coded transport blocks being transmitted at an arbitrary time instant	640	640	640	640	640	640
Maximum sum of number of bits of all turbo coded transport blocks being transmitted at an arbitrary time instant	NA	NA(FDD) 1280 (TDD)	3840	3840	6400	10240
Maximum number of simultaneous transport channels	4	4	8	8	8	8
Maximum number of simultaneous CCTrCH(TDD only)	1 NOTE 3	1 NOTE 3	2 NOTE 3	2 NOTE 3	2 NOTE 3	2 NOTE 3
Maximum total number of transport blocks transmitted within TTIs that start at the same time	4	4	8	8	16	32
Maximum number of TFC	16	16	32	48	64	128
Maximum number of TF	32	32	32	32	32	64
Support for turbo encoding	No	No (FDD) Yes (TDD)	Yes	Yes	Yes	Yes
Physical channel parameters (FDD)						
Maximum number of DPDCH bits transmitted per 10 ms	600	1200	2400	4800	9600	19200
Simultaneous reception of SCCPCH and DPCH NOTE 2	No	No	No	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1
Simultaneous reception of SCCPCH, DPCH and PDSCH NOTE 2	No	No	No	No	No	No
Simultaneous reception of SCCPCH, DPCH and HS-PDSCH NOTE 2	No	No	No	No	No	No
Support of PCPCH NOTE 4	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1	Yes/No NOTE 1
Support of E-DPDCH	No	No	Yes/No	Yes/No	Yes/No	Yes/No
Physical channel parameters (TDD 3.84 Mcps)						
Maximum Number of timeslots per frame	1	1	2	3	7	9
Maximum number of physical channels per timeslot	1	1	1	1	1	2
Minimum SF	8	4	2	2	2	2
Support of PUSCH	No	Yes/No NOTE 1	Yes	Yes	Yes	Yes
Physical channel parameters (TDD 1.28 Mcps)						
Maximum Number of timeslots per subframe	1	1	2	3	5	5
Maximum number of physical channels per timeslot	1	1	1	1	1	2
Minimum SF	8	4	2	2	2	2
Support of PUSCH	No	Yes/No NOTE 1	Yes	Yes	Yes	Yes
Support of 8PSK	No	No	No	No	No	No

NOTE 1: Options represent different combinations that should be supported with conformance tests.

~~NOTE 2: The downlink parameters 'Simultaneous reception of SCCPCH and DPCH' and 'Simultaneous reception of SCCPCH, DPCH and PDSCH' are included in the combinations for uplink as their requirements relate to the uplink data rate. Simultaneous reception of SCCPCH and DPCH is required for the DRAC procedure that is intended for controlling uplink transmissions. In this release of the specification, this is limited to 1 SCCPCH.~~

NOTE 3: This number does not contain the RACH CCTrCH.

NOTE 4: Support of PCPCH means that the UE supports PCPCH access for both the CA not active case and for the CA active case.

CHANGE REQUEST

25.331 CR 2592 # rev - # Current version: 5.12.1

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Feature Clean Up: Removal of DRAC		
Source:	# RAN WG2		
Work item code:	# TEI5	Date:	# 20/04/2005
Category:	# C	Release:	# Rel-5
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> Ph2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) Rel-7 (Release 7)

Reason for change:	# At RAN#27 it was agreed to remove the DRAC feature from the specifications as part of a feature cleanup process.
Summary of change:	# The DRAC feature is removed from the specification. <i>Implementation of this CR by a Release 99/4 UE will not cause compatibility issues</i>
Consequences if not approved:	# If the CR is not approved then decision taken in RAN#23 will not be applied to the specs. The redundant DRAC feature will remain in the specifications.

Clauses affected:	# 3.2, 7.2.2.3, 8.1.1.1.2, 8.1.1.6.10, 8.6.5.11, 8.6.6.4, 10.2.8, 10.2.27, 10.2.30, 10.2.33, 10.2.48.8.13, 10.2.50, 10.3.3.9, 10.3.3.20, 10.3.3.25, 10.3.3.39, 10.3.5.7, 10.3.6.27, 10.3.6.68, 10.3.6.70, 10.3.10, 11.2, 11.3, 14.8, 14.12.4.2										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;">X</td> <td style="width: 20px;"></td> </tr> <tr> <td style="width: 20px;"></td> <td style="width: 20px;"></td> </tr> <tr> <td style="width: 20px;"></td> <td style="width: 20px;"></td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	X						# 25.306, 25.302 TS 25.423, TR 25.931	
Y	N										
X											
Other comments:	#										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ACK	Acknowledgement
AICH	Acquisition Indicator CHannel
AM	Acknowledged Mode
AS	Access Stratum
ASC	Access Service Class
ASN.1	Abstract Syntax Notation.1
BCCH	Broadcast Control Channel
BCFE	Broadcast Control Functional Entity
BER	Bit Error Rate
BLER	Block Error Rate
BSS	Base Station Sub-system
CCCH	Common Control Channel
CCPCH	Common Control Physical CHannel
CH	Conditional on history
CM	Connection Management
CN	Core Network
CPCH	Common Packet CHannel
C-RNTI	Cell RNTI
CTCH	Common Traffic CHannel
CTFC	Calculated Transport Format Combination
CV	Conditional on value
DCA	Dynamic Channel Allocation
DCCH	Dedicated Control Channel
DCFE	Dedicated Control Functional Entity
DCH	Dedicated Channel
DC-SAP	Dedicated Control SAP
DGPS	Differential Global Positioning System
DL	Downlink
DRAC	Dynamic Resource Allocation Control
DSCH	Downlink Shared Channel
DTCH	Dedicated Traffic Channel
FACH	Forward Access Channel
FDD	Frequency Division Duplex
GC-SAP	General Control SAP
GERAN	GSM/EDGE Radio Access Network
GRA	GERAN Registration Area
G-RNTI	GERAN Radio Network Temporary Identity
HCS	Hierarchical Cell Structure
HFN	Hyper Frame Number
H-RNTI	HS-DSCH RNTI
HS-DSCH	High Speed Downlink Shared Channel
ID	Identifier
IDNNS	Intra Domain NAS Node Selector
IE	Information element
IETF	Internet Engineering Task Force
IMEI	International Mobile Equipment Identity
IMSI	International Mobile Subscriber Identity
IP	Internet Protocol
ISCP	Interference on Signal Code Power
L1	Layer 1
L2	Layer 2
L3	Layer 3
LAI	Location Area Identity
MAC	Media Access Control
MCC	Mobile Country Code
MD	Mandatory default
MM	Mobility Management

MNC	Mobile Network Code
MP	Mandatory present
NACC	Network Assisted Cell Change
NAS	Non Access Stratum
Nt-SAP	Notification SAP
NW	Network
OP	Optional
PCCH	Paging Control Channel
PCH	Paging Channel
PDCP	Packet Data Convergence Protocol
PDSCH	Physical Downlink Shared Channel
PDU	Protocol Data Unit
PLMN	Public Land Mobile Network
PNFE	Paging and Notification Control Functional Entity
PRACH	Physical Random Access CHannel
PSI	Packet System Information
P-TMSI	Packet Temporary Mobile Subscriber Identity
PUSCH	Physical Uplink Shared Channel
QoS	Quality of Service
RAB	Radio access bearer
RACH	Random Access CHannel
RAI	Routing Area Identity
RAT	Radio Access Technology
RB	Radio Bearer
RFE	Routing Functional Entity
RL	Radio Link
RLC	Radio Link Control
RNC	Radio Network Controller
RNTI	Radio Network Temporary Identifier
RRC	Radio Resource Control
RSCP	Received Signal Code Power
RSSI	Received Signal Strength Indicator
SAP	Service Access Point
SCFE	Shared Control Function Entity
SCTD	Space Code Transmit Diversity
SF	Spreading Factor
SHCCH	Shared Control Channel
SI	System Information
SIR	Signal to Interference Ratio
S-RNTI	SRNC - RNTI
SSDT	Site Selection Diversity Transmission
TDD	Time Division Duplex
TF	Transport Format
TFCS	Transport Format Combination Set
TFS	Transport Format Set
TM	Transparent Mode
TME	Transfer Mode Entity
TMSI	Temporary Mobile Subscriber Identity
Tr	Transparent
Tx	Transmission
UE	User Equipment
UL	Uplink
UM	Unacknowledged Mode
URA	UTRAN Registration Area
U-RNTI	UTRAN-RNTI
USCH	Uplink Shared Channel
UTRAN	Universal Terrestrial Radio Access Network

7.2.2.3 CELL_DCH state

In the CELL_DCH state the UE shall perform the following actions:

NOTE: DCCH and, if configured, DTCH are available in this state.

~~1> read system information broadcast on FACH as specified in subclause 8.1.1.3 (applicable only to UEs with certain capabilities and in FDD mode);~~

1> read the system information as specified in subclause 8.1.1 (for UEs in TDD mode);

1> perform measurements process according to measurement control information as specified in subclause 8.4 and in clause 14;

1> select and configure the RB multiplexing options applicable for the transport channels to be used in this RRC state;

1> act on RRC messages received on DCCH;

1> act on RRC messages received on BCCH (applicable only to UEs with certain capabilities and in FDD mode);

1> act on RRC messages received on BCCH (TDD only) and, if available, SHCCH (TDD only).

8.1.1.1.2 System information blocks

Table 8.1.1 specifies all system information blocks and their characteristics.

The *area scope column* in table 8.1.1 specifies the area where a system information block's value tag is valid. If the area scope is *cell*, the UE shall consider the system information block to be valid only in the cell in which it was read. If system information blocks have been previously stored for this cell, the UE shall check whether the value tag for the system information block in the entered cell is different compared to the stored value tag. If the area scope is *PLMN* or *Equivalent PLMN*, the UE shall check the value tag for the system information block when a new cell is selected. If the value tag for the system information block in the new cell is different compared to the value tag for the system information block stored in the UE, the UE shall re-read the system information block. If the area scope is *PLMN*, the UE shall consider the system information block to be valid only within the PLMN in which it was read. If the area scope is *Equivalent PLMN*, the UE shall consider the system information block to be valid within the PLMN in which it was received and all PLMNs which are indicated by higher layers to be equivalent.

For System information block types 15.2, 15.3 and 16, which may have multiple occurrences, each occurrence has its own independent value tag. The UE shall re-read a particular occurrence if the value tag of this occurrence has changed compared to that stored in the UE.

The *UE mode/state column when block is valid* in Table 8.1.1 specifies in which UE mode or UE state the IEs in a system information block shall be regarded as valid by the UE. In other words, the indicated system information block becomes invalid upon change to a mode/state that is not included in this column. System Information Block Type 16 remains also valid upon transition to or from GSM/GPRS. In some cases, the states are inserted in brackets to indicate that the validity is dependent on the broadcast of the associated System Information Blocks by the network as explained in the relevant procedure subclause.

The *UE mode/state column when block is read* in Table 8.1.1 specifies in which UE mode or UE state the IEs in a system information block may be read by the UE. The UE shall have the necessary information prior to execution of any procedure requiring information to be obtained from the appropriate system information block. The requirements on the UE in terms of when to read the system information may therefore be derived from the procedure specifications that specify which IEs are required in the different UE modes/states in conjunction with the different performance requirements that are specified.

~~System Information Block type 10 shall only be read by the UE while in CELL_DCH.~~

The UE shall:

- 1> if System Information Block type 11 is referenced in the master information block or in the scheduling blocks:
- 2> if System Information Block type 12 is not referenced in the master information block or in the scheduling blocks, or broadcast of System Information Block type 12 is not indicated in System Information Block type 11:
 - 3> have read and acted upon System Information Block type 11 in a cell when the UE transmits an RRC message on RACH.
- 2> else:
 - 3> have read and acted upon System Information Block type 11 in a cell before the UE transmits the RRC CONNECTION REQUEST message.
 - 3> have read and acted upon both System Information Block type 11 and System Information Block type 12 in a cell when:
 - 4> the UE transmits an RRC message on RACH in RRC connected mode; or
 - 4> the UE receives a message commanding to enter Cell_DCH state.

NOTE 1: There are a number of system information blocks that include the same IEs while the UE mode/state in which the information is valid differs. This approach is intended to allow the use of different IE values in different UE mode/states.

NOTE 2: System Information Block Type 16 is also obtained by a UE while in GSM/GPRS. The details of this are not within the scope of this specification.

The *Scheduling information* column in table 8.1.1 specifies the position and repetition period for the System Information Block.

The *modification of system information* column in table 8.1.1 specifies the update mechanisms applicable for a certain system information block. For system information blocks with a value tag, the UE shall update the information according to subclause 8.1.1.7.1 or 8.1.1.7.2. For system information blocks with an expiration timer, the UE shall, when the timer expires, perform an update of the information according to subclause 8.1.1.7.4.

Table 8.1.1: Specification of system information block characteristics

System information block	Area scope	UE mode/state when block is valid	UE mode/state when block is read	Scheduling information	Modification of system information	Additional comment
Master information block	Cell	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	SIB_POS = 0 SIB_REP = 8 (FDD) SIB_REP = 8, 16, 32 (TDD) SIB_OFF=2	Value tag	
Scheduling block 1	Cell	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	Specified by the IE "Scheduling information" in MIB	Value tag	
Scheduling block 2	Cell	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	Specified by the IE "Scheduling information" in MIB	Value tag	
System information block type 1	PLMN	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH	Idle, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 2	Cell	URA_PCH	URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 3	Cell	Idle mode, (CELL_FACH, CELL_PCH, URA_PCH)	Idle mode, (CELL_FACH, CELL_PCH, URA_PCH)	Specified by the IE "Scheduling information"	Value tag	
System information block type 4	Cell	CELL_FACH, CELL_PCH, URA_PCH	CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	If System information block type 4 is not broadcast in a cell, the connected mode UE shall apply information in System information block type 3 in connected mode.
System information block type 5	Cell	Idle mode, (CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only))	Idle mode, (CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only))	Specified by the IE "Scheduling information"	Value tag	

System information block	Area scope	UE mode/state when block is valid	UE mode/state when block is read	Scheduling information	Modification of system information	Additional comment
System information block type 6	Cell	CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	Specified by the IE "Scheduling information"	Value tag	<p>If system information block type 6 is not broadcast in a cell, the connected mode UE shall read System information block type 5.</p> <p>If some of the optional IEs are not included in System information block type 6, the UE shall read the corresponding IEs in System information block type 5</p> <p>In TDD mode system information block 6 shall only be read in CELL_DCH if required for open loop power control as specified in subclause 8.5.7 and/or if shared transport channels are assigned to the UE. If in these cases system information block type 6 is not broadcast the UE shall read system information block type 5.</p>
System information block type 7	Cell	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	Specified by the IE "Scheduling information"	Expiration timer = MAX(32 , SIB_REP * ExpirationTimeFactor)	In TDD mode system information block type 7 shall only be read in CELL_DCH if shared transport channels are assigned to the UE.
System information block type 8	Cell	CELL_FACH, CELL_PCH, URA_PCH	CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 9	Cell	CELL_FACH, CELL_PCH, URA_PCH	CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Expiration timer = SIB_REP	
System information block type 10	Cell	CELL_DCH	CELL_DCH	Specified by the IE "Scheduling information"	Expiration timer = SIB_REP	
System information block type 11	Cell	Idle mode (CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH)	Idle mode (CELL_FACH, CELL_PCH, URA_PCH)	Specified by the IE "Scheduling information"	Value tag	

System information block	Area scope	UE mode/state when block is valid	UE mode/state when block is read	Scheduling information	Modification of system information	Additional comment
System information block type 12	Cell	CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH	Idle mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	If system information block type 12 is not broadcast in a cell, the connected mode UE shall read System information block type 11. If some of the optional IEs are not included in System information block type 12, the UE shall read the corresponding IEs in System information block type 11.
System information block type 13	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 13.1	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 13.2	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 13.3	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 13.4	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 14	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH	Specified by the IE "Scheduling information"	Expiration timer = MAX(32 , SIB_REP * ExpirationTimeFactor)	This system information block is used in 3.84 Mcps TDD mode only. System information block type 14 shall only be read in CELL_DCH if required for open loop power control as specified in subclause 8.5.7.
System information block type 15	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 15.1	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 15.2	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	For this system information block there may be multiple occurrences
System information block type 15.3	PLMN	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	For this system information block there may be multiple occurrences

System information block	Area scope	UE mode/state when block is valid	UE mode/state when block is read	Scheduling information	Modification of system information	Additional comment
System information block type 15.4	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 15.5	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 16	Equivalent PLMN	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	For this system information block there may be multiple occurrences. This system information block is also valid while in GSM/GPRS.
System information block type 17	Cell	CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH	CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH	Specified by the IE "Scheduling information"	Expiration timer = SIB_REP	This system information block is used in TDD mode only. System information block type 17 shall only be read if shared transport channels are assigned to the UE.
System Information Block type 18	Cell	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH	Idle mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	

~~The UE shall acquire all system information blocks except system information block type 10 on BCH. System Information Block type 10 shall be acquired on the FACH and only by UEs with support for simultaneous reception of one SCCPCH and one DPCH. If System Information Block type 10 is not broadcast in a cell, the DRAC procedures do not apply in this cell. System Information Block type 10 is used in FDD mode only.~~

8.1.1.6.10 ~~System Information Block type 10~~[Void](#)

~~This system information block type is used only in FDD.~~

~~If in state CELL_DCH, the UE should store all relevant IEs included in this system information block. The UE shall:~~

- ~~1> start a timer set to the value given by the repetition period (SIB_REP) for that system information block;~~
- ~~1> perform actions defined in subclause 14.8.~~

~~If in idle mode, state CELL_FACH, state CELL_PCH or state URA_PCH, the UE shall not use the values of the IEs in this system information block.~~

8.6.5.11 ~~DRAC static information~~ Void

If the IE "DRAC static information" is included the UE shall:

- 1> ~~store the content of the IE "Transmission Time Validity";~~
- 1> ~~store the content of the IE "Time duration before retry";~~
- 1> ~~store the content of the IE "DRAC Class identity".~~

8.6.6.4 Downlink information for each radio link

If the IE "Downlink information for each radio link" is included in a received message, the UE shall:

1> if the UE would enter CELL_DCH state according to subclause 8.6.3.3 applied on the received message:

~~2> if the IE "SCCPCH Information for FACH" is included; and~~

~~2> if the UE is in FDD mode and is not capable of simultaneous reception of DPCH and Secondary CCPCH:~~

~~3> set the variable UNSUPPORTED_CONFIGURATION to TRUE;~~

~~2> if the UE is in FDD mode and is capable of simultaneous reception of DPCH and SCCPCH:~~

~~3> start to receive the indicated Secondary CCPCH.~~

2> if the UE is in TDD mode and shared transport channels are assigned to the UE:

3> start to receive the indicated Secondary CCPCH.

2> if the UE is in TDD mode and no shared transport channels are assigned to the UE:

3> set the variable UNSUPPORTED_CONFIGURATION to TRUE.

2> if the IE "Serving HS-DSCH radio link indicator" is set to "TRUE":

3> consider this radio link as the serving HS-DSCH radio link;

2> act on the other IEs contained in the IE "Downlink information for each radio link" as specified in subclause 8.6 applied on this radio link.

1> in addition, if the message was received in CELL_DCH state and the UE remains in CELL_DCH state according to subclause 8.6.3.3 applied on the received message:

2> if the IE "Serving HS-DSCH radio link indicator" is set to "TRUE":

3> consider this radio link as the serving HS-DSCH radio link;

3> if the serving HS-DSCH radio link was another radio link than this radio link prior to reception of the message and the IE "H-RNTI" is not included:

4> clear the variable H_RNTI.

2> if the IE "Serving HS-DSCH radio link indicator" is set to 'FALSE' and this radio link was considered the serving HS-DSCH radio link prior to reception of this message:

3> no longer consider this radio link as the serving HS-DSCH radio link.

2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25.

2> for each optional IE part of the IE "Downlink information for each radio link" that is not present:

3> do not change its current downlink physical channel configuration corresponding to the IE, which is absent, if not stated otherwise elsewhere.

NOTE: The Release '99 RADIO BEARER RECONFIGURATION message always includes at least one IE "Downlink information for each radio link" containing the mandatory IEs, even if UTRAN does not require the reconfiguration of any radio link.

1> if the UE would enter either the CELL_FACH, CELL_PCH or URA_PCH state according to subclause 8.6.3.3 applied on the received message:

2> if the received message is CELL UPDATE CONFIRM:

3> ignore the IE "Downlink information for each radio link".

- 2> if the received message is any other message than CELL UPDATE CONFIRM; and
- 2> if IEs other than the IE "Primary CPICH info" (for FDD) or the IE "Primary CCPCH info" (for TDD) are included in the IE "Downlink information for each radio link":
 - 3> ignore these IEs.
- 2> act on the other IEs contained in the IE "Downlink information for each radio link" as specified in subclause 8.6 applied on this radio link.

10.2.8 CELL UPDATE CONFIRM

This message confirms the cell update procedure and can be used to reallocate new RNTI information for the UE valid in the new cell.

RLC-SAP: UM

Logical channel: CCCH or DCCH

Direction: UTRAN→UE

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Message Type	MP		Message Type		
UE Information Elements					
U-RNTI	CV- <i>CCCH</i>		U-RNTI 10.3.3.47		
RRC transaction identifier	MP		RRC transaction identifier 10.3.3.36		
Integrity check info	CH		Integrity check info 10.3.3.16		
Integrity protection mode info	OP		Integrity protection mode info 10.3.3.19	The UTRAN should not include this IE unless it is performing an SRNS relocation or a cell reselection from GERAN <i>lu mode</i>	
Ciphering mode info	OP		Ciphering mode info 10.3.3.5	The UTRAN should not include this IE unless it is performing either an SRNS relocation or a cell reselection from GERAN <i>lu mode</i> , and a change in ciphering algorithm.	
Activation time	MD		Activation time 10.3.3.1	Default value is "now"	
New U-RNTI	OP		U-RNTI 10.3.3.47		
New C-RNTI	OP		C-RNTI 10.3.3.8		
New DSCH-RNTI	OP		DSCH-RNTI 10.3.3.9a		
New H-RNTI	OP		H-RNTI 10.3.3.14a		REL-5
RRC State Indicator	MP		RRC State Indicator 10.3.3.35a		
UTRAN DRX cycle length coefficient	OP		UTRAN DRX cycle length coefficient 10.3.3.49		
RLC re-establish indicator (RB2, RB3 and RB4)	MP		RLC re-establish indicator 10.3.3.35	Should not be set to TRUE if IE "Downlink counter synchronisation info" is included in message.	

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
RLC re-establish indicator (RB5 and upwards)	MP		RLC re-establish indicator 10.3.3.35	Should not be set to TRUE if IE "Downlink counter synchronisation info" is included in message.	
CN Information Elements					
CN Information info	OP		CN Information info 10.3.1.3		
UTRAN Information Elements					
URA identity	OP		URA identity 10.3.2.6		
RB information elements					
RB information to release list	OP	1 to <maxRB>			
>RB information to release	MP		RB information to release 10.3.4.19		
RB information to reconfigure list	OP	1 to <maxRB>			
>RB information to reconfigure	MP		RB information to reconfigure 10.3.4.18		
RB information to be affected list	OP	1 to <maxRB>			
>RB information to be affected	MP		RB information to be affected 10.3.4.17		
Downlink counter synchronisation info	OP				
>RB with PDCP information list	OP	1 to <maxRBall RABs>			
>>RB with PDCP information	MP		RB with PDCP information 10.3.4.22	This IE is needed for each RB having PDCP in the case of lossless SRNS relocation	
	OP				REL-5
>>PDCP context relocation info	OP		PDCP context relocation info 10.3.4.1a	This IE is needed for each RB having PDCP and performing PDCP context relocation	REL-5
TrCH Information Elements					
Uplink transport channels					
UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24		

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Deleted TrCH information list	OP	1 to <maxTrCH >			
>Deleted UL TrCH information	MP		Deleted UL TrCH information 10.3.5.5		
Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>Added or Reconfigured UL TrCH information	MP		Added or Reconfigured UL TrCH information 10.3.5.2		
CHOICE <i>mode</i>	MP				
>FDD					
>>CPCH set ID	OP		CPCH set ID 10.3.5.3		
>>>Added or Reconfigured TrCH information for DRAC list	OP	1 to <maxTrCH >			
>>>>DRAC static information	MP		DRAC static information 10.3.5.7		
>TDD				(no data)	
Downlink transport channels					
DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6		
Deleted TrCH information list	OP	1 to <maxTrCH >			
>Deleted DL TrCH information	MP		Deleted DL TrCH information 10.3.5.4		
Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>Added or Reconfigured DL TrCH information	MP		Added or Reconfigured DL TrCH information 10.3.5.1		
PhyCH information elements					
Frequency info	OP		Frequency info 10.3.6.36		
Uplink radio resources					
Maximum allowed UL TX power	MD		Maximum allowed UL TX power 10.3.6.39	Default value is the existing maximum UL TX power	
CHOICE <i>channel requirement</i>	OP				
>Uplink DPCH info			Uplink DPCH info 10.3.6.88.		
>CPCH SET Info			CPCH SET Info 10.3.6.13		

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Downlink radio resources					
CHOICE <i>mode</i>	MP				
>FDD					
>>Downlink PDSCH information	OP		Downlink PDSCH information 10.3.6.30		
>TDD				(no data)	
Downlink HS-PDSCH Information	OP		Downlink HS_PDSCH Information 10.3.6.23a		REL-5
Downlink information common for all radio links	OP		Downlink information common for all radio links 10.3.6.24		
Downlink information per radio link list	OP	1 to <maxRL>		Send downlink information for each radio link to be set-up	
>Downlink information for each radio link	MP		Downlink information for each radio link 10.3.6.27		

Condition	Explanation
CCCH	This IE is mandatory present when CCCH is used and ciphering is not required and not needed otherwise.

10.2.27 RADIO BEARER RECONFIGURATION

This message is sent from UTRAN to reconfigure parameters related to a change of QoS. This procedure can also change the multiplexing of MAC, reconfigure transport channels and physical channels. This message is also used to perform a handover from GERAN *Iu mode* to UTRAN.

RLC-SAP: AM or UM or sent through GERAN *Iu mode*

Logical channel: DCCH or sent through GERAN *Iu mode*

Direction: UTRAN → UE

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Message Type	MP		Message Type		
UE Information elements					
RRC transaction identifier	MP		RRC transaction identifier 10.3.3.36		
Integrity check info	CH		Integrity check info 10.3.3.16		
Integrity protection mode info	OP		Integrity protection mode info 10.3.3.19	The UTRAN should not include this IE unless it is performing an SRNS relocation or a handover from GERAN <i>Iu mode</i>	
Ciphering mode info	OP		Ciphering mode info 10.3.3.5	The UTRAN should not include this IE unless it is performing either an SRNS relocation or a handover from GERAN <i>Iu mode</i> and a change in ciphering algorithm	
Activation time	MD		Activation time 10.3.3.1	Default value is "now"	
New U-RNTI	OP		U-RNTI 10.3.3.47		
New C-RNTI	OP		C-RNTI 10.3.3.8		
New DSCH-RNTI	OP		DSCH-RNTI 10.3.3.9a		
New H-RNTI	OP		H-RNTI 10.3.3.14a		REL-5
RRC State Indicator	MP		RRC State Indicator 10.3.3.35a		
UTRAN DRX cycle length coefficient	OP		UTRAN DRX cycle length coefficient 10.3.3.49		
CN information elements					
CN Information info	OP		CN Information info 10.3.1.3		
UTRAN mobility information elements					

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
URA identity	OP		URA identity 10.3.2.6		
CHOICE specification mode	MP				REL-5
>Complete specification					
RB information elements					
>>RAB information to reconfigure list	OP	1 to <maxRABse tup >			
>>>RAB information to reconfigure	MP		RAB information to reconfigure 10.3.4.11		
>>RB information to reconfigure list	MP	1 to <maxRB>		Although this IE is not always required, need is MP to align with ASN.1	
	OP				REL-4
>>>RB information to reconfigure	MP		RB information to reconfigure 10.3.4.18		
>>RB information to be affected list	OP	1 to <maxRB>			
>>>RB information to be affected	MP		RB information to be affected 10.3.4.17		
>>RB with PDCP context relocation info list	OP	1 to <maxRBall RABs>		This IE is needed for each RB having PDCP and performing PDCP context relocation	REL-5
>>>PDCP context relocation info	MP		PDCP context relocation info 10.3.4.1a		REL-5
TrCH Information Elements					
Uplink transport channels					
>>UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24		
>>Deleted TrCH information list	OP	1 to <maxTrCH >			
>>>Deleted UL TrCH information	MP		Deleted UL TrCH information 10.3.5.5		
>>Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>>>Added or Reconfigured UL TrCH information	MP		Added or Reconfigured UL TrCH information 10.3.5.2		

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
>>CHOICE <i>mode</i>	OP				
>>>FDD					
>>>>CPCH set ID	OP		CPCH set ID 10.3.5.3		
>>>>Added or Reconfigured-TrCH information for DRAC list	OP	1 to <maxTrCH >			
>>>>DRAC static information	MP		DRAC static information 10.3.5.7		
>>>TDD				(no data)	
Downlink transport channels					
>>DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6		
>>Deleted TrCH information list	OP	1 to <maxTrCH >			
>>>Deleted DL TrCH information	MP		Deleted DL TrCH information 10.3.5.4		
>>Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>>>Added or Reconfigured DL TrCH information	MP		Added or Reconfigured DL TrCH information 10.3.5.1		
>Preconfiguration					REL-5
>>CHOICE <i>Preconfiguration mode</i>	MP			This value only applies in case the message is sent through GERAN <i>lu mode</i>	
>>>Predefined configuration identity	MP		Predefined configuration identity 10.3.4.5		
>>>Default configuration					
>>>>Default configuration mode	MP		Enumerated (FDD, TDD)	Indicates whether the FDD or TDD version of the default configuration shall be used	
>>>>Default configuration identity	MP		Default configuration identity 10.3.4.0		
PhyCH information elements					
Frequency info	OP		Frequency info 10.3.6.36		
Uplink radio resources					
Maximum allowed UL TX power	MD		Maximum allowed UL TX power 10.3.6.39	Default value is the existing maximum UL TX power	
CHOICE <i>channel requirement</i>	OP				

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
>Uplink DPCH info			Uplink DPCH info 10.3.6.88		
>CPCH SET Info			CPCH SET Info 10.3.6.13		
Downlink radio resources					
CHOICE <i>mode</i>	MP				
>FDD					
>>Downlink PDSCH information	OP		Downlink PDSCH information 10.3.6.30		
>TDD				(no data)	
Downlink HS-PDSCH Information	OP		Downlink HS-PDSCH Information 10.3.6.23a		REL-5
Downlink information common for all radio links	OP		Downlink information common for all radio links 10.3.6.24		
Downlink information per radio link list	MP	1 to <maxRL>		Although this IE is not always required, need is MP to align with ASN.1	
	OP				REL-4
>Downlink information for each radio link	MP		Downlink information for each radio link 10.3.6.27		

10.2.30 RADIO BEARER RELEASE

This message is used by UTRAN to release a radio bearer. It can also include modifications to the configurations of transport channels and/or physical channels. It can simultaneously indicate release of a signalling connection when UE is connected to more than one CN domain.

RLC-SAP: AM or UM

Logical channel: DCCH

Direction: UTRAN → UE

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Message Type	MP		Message Type		
UE Information Elements					
RRC transaction identifier	MP		RRC transaction identifier 10.3.3.36		
Integrity check info	CH		Integrity check info 10.3.3.16		
Integrity protection mode info	OP		Integrity protection mode info 10.3.3.19	The UTRAN should not include this IE unless it is performing an SRNS relocation.	
Ciphering mode info	OP		Ciphering mode info 10.3.3.5	The UTRAN should not include this IE unless it is performing an SRNS relocation and a change in ciphering algorithm.	
Activation time	MD		Activation time 10.3.3.1	Default value is "now"	
New U-RNTI	OP		U-RNTI 10.3.3.47		
New C-RNTI	OP		C-RNTI 10.3.3.8		
New DSCH-RNTI	OP		DSCH-RNTI 10.3.3.9a		
New H-RNTI	OP		H-RNTI 10.3.3.14a		REL-5
RRC State Indicator	MP		RRC State Indicator 10.3.3.35a		
UTRAN DRX cycle length coefficient	OP		UTRAN DRX cycle length coefficient 10.3.3.49		
CN Information Elements					
CN Information info	OP		CN Information info 10.3.1.3		
Signalling Connection release indication	OP		CN domain identity 10.3.1.1		
UTRAN mobility information elements					
URA identity	OP		URA identity 10.3.2.6		
RB Information Elements					
RAB information to reconfigure list	OP	1 to <maxRABsetup >			
>RAB information to reconfigure	MP		RAB		

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
			information to reconfigure 10.3.4.11		
RB information to release list	MP	1 to <maxRB>			
>RB information to release	MP		RB information to release 10.3.4.19		
RB information to be affected list	OP	1 to <maxRB>			
>RB information to be affected	MP		RB information to be affected 10.3.4.17		
Downlink counter synchronisation info	OP				
>RB with PDCP information list	OP	1 to <maxRBall RABs>			
>>RB with PDCP information	MP		RB with PDCP information 10.3.4.22	This IE is needed for each RB having PDCP in the case of lossless SRNS relocation	
	OP				REL-5
>RB with PDCP context relocation info list	OP	1 to <maxRBall RABs>			REL-5
>>PDCP context relocation info	MP		PDCP context relocation info 10.3.4.1a	This IE is needed for each RB having PDCP and performing PDCP context relocation	REL-5
TrCH Information Elements					
Uplink transport channels					
UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24		
Deleted TrCH information list	OP	1 to <maxTrCH >			
>Deleted UL TrCH information	MP		Deleted UL TrCH information 10.3.5.5		
Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>Added or Reconfigured UL TrCH information	MP		Added or Reconfigured UL TrCH information 10.3.5.2		
CHOICE <i>mode</i>	OP				
>FDD					
>>CPCH set ID	OP		CPCH set ID 10.3.5.3		
>>Added or Reconfigured TrCH information for DRAC list	OP	1 to <maxTrCH			

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
>>>DRAC static information	MP	>	DRAC static information-10.3.5.7		
>TDD				(no data)	
Downlink transport channels					
DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6		
Deleted TrCH information list	OP	1 to <maxTrCH >			
>Deleted DL TrCH information	MP		Deleted DL TrCH information 10.3.5.4		
Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>Added or Reconfigured DL TrCH information	MP		Added or Reconfigured DL TrCH information 10.3.5.1		
PhyCH information elements					
Frequency info	OP		Frequency info 10.3.6.36		
Uplink radio resources					
Maximum allowed UL TX power	MD		Maximum allowed UL TX power 10.3.6.39	Default value is the existing maximum UL TX power	
<i>CHOICE channel requirement</i>					
>Uplink DPCH info			Uplink DPCH info 10.3.6.88		
>CPCH SET Info			CPCH SET Info 10.3.6.13		
Downlink radio resources					
<i>CHOICE mode</i>					
>FDD					
>>Downlink PDSCH information	OP		Downlink PDSCH information 10.3.6.30		
>TDD				(no data)	
Downlink HS-PDSCH Information	OP		Downlink HS-PDSCH Information 10.3.6.23a		REL-5
Downlink information common for all radio links	OP		Downlink information common for all radio links 10.3.6.24		
Downlink information per radio link list	OP	1 to <maxRL>		Send downlink information for each radio link to be set-up	
>Downlink information for each radio link	MP		Downlink information		

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
			for each radio link 10.3.6.27		

10.2.33 RADIO BEARER SETUP

This message is sent by UTRAN to the UE to establish new radio bearer(s). It can also include modifications to the configurations of transport channels and/or physical channels.

RLC-SAP: AM or UM

Logical channel: DCCH

Direction: UTRAN → UE

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Message Type	MP		Message Type		
UE Information Elements					
RRC transaction identifier	MP		RRC transaction identifier 10.3.3.36		
Integrity check info	CH		Integrity check info 10.3.3.16		
Integrity protection mode info	OP		Integrity protection mode info 10.3.3.19	The UTRAN should not include this IE unless it is performing an SRNS relocation	
Ciphering mode info	OP		Ciphering mode info 10.3.3.5	The UTRAN should not include this IE unless it is performing an SRNS relocation and a change in ciphering algorithm	
Activation time	MD		Activation time 10.3.3.1	Default value is "now"	
New U-RNTI	OP		U-RNTI 10.3.3.47		
New C-RNTI	OP		C-RNTI 10.3.3.8		
New DSCH-RNTI	OP		DSCH-RNTI 10.3.3.9a		
New H-RNTI	OP		H-RNTI 10.3.3.14a		REL-5
RRC State Indicator	MP		RRC State Indicator 10.3.3.35a		
UTRAN DRX cycle length coefficient	OP		UTRAN DRX cycle length coefficient 10.3.3.49		
CN Information Elements					
CN Information info	OP		CN Information info 10.3.1.3		
UTRAN mobility information elements					
URA identity	OP		URA identity 10.3.2.6		
RB Information Elements					
Signalling RB information to setup list	OP	1 to <maxSRBs etup>		For each signalling radio bearer established	
>Signalling RB information to	MP		Signalling		

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
setup			RB information to setup 10.3.4.24		
RAB information to setup list	OP	1 to <maxRABs etup>		For each RAB established	
>RAB information for setup	MP		RAB information for setup 10.3.4.10		
RB information to be affected list	OP	1 to <maxRB>			
>RB information to be affected	MP		RB information to be affected 10.3.4.17		
Downlink counter synchronisation info	OP				
>RB with PDCP information list	OP	1 to <maxRBall RABs>			
>>RB with PDCP information	MP		RB with PDCP information 10.3.4.22	This IE is needed for each RB having PDCP in the case of lossless SRNS relocation	
>>PDCP context relocation info	OP		PDCP context relocation info 10.3.4.1a	This IE is needed for each RB having PDCP and performing PDCP context relocation	REL-5
TrCH Information Elements					
Uplink transport channels					
UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24		
Deleted TrCH information list	OP	1 to <maxTrCH >			
>Deleted UL TrCH information	MP		Deleted UL TrCH information 10.3.5.5		
Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>Added or Reconfigured UL TrCH information	MP		Added or Reconfigured UL TrCH information 10.3.5.2		
CHOICE mode	OP				
>FDD					
>>CPCH set ID	OP		CPCH set ID 10.3.5.3		
>>Added or Reconfigured TrCH information for DRAC list	OP	1 to <maxTrCH			

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
>>>DRAC static information	MP	>	DRAC static information-10.3.5.7		
>TDD				(no data)	
Downlink transport channels					
DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels10.3.5.6		
Deleted TrCH information list	OP	1 to <maxTrCH >			
>Deleted DL TrCH information	MP		Deleted DL TrCH information 10.3.5.4		
Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>Added or Reconfigured DL TrCH information	MP		Added or Reconfigured DL TrCH information 10.3.5.1		
PhyCH information elements					
Frequency info	OP		Frequency info 10.3.6.36		
Uplink radio resources					
Maximum allowed UL TX power	MD		Maximum allowed UL TX power 10.3.6.39	Default value is the existing maximum UL TX power	
<i>CHOICE channel requirement</i>	OP				
>Uplink DPCH info			Uplink DPCH info 10.3.6.88		
>CPCH SET Info			CPCH SET Info 10.3.6.13		
Downlink radio resources					
<i>CHOICE mode</i>	MP				
>FDD					
>>Downlink PDSCH information	OP		Downlink PDSCH information 10.3.6.30		
>TDD				(no data)	
Downlink HS-PDSCH Information	OP		Downlink HS-PDSCH Information 10.3.6.23a		REL-5
Downlink information common for all radio links	OP		Downlink information common for all radio links 10.3.6.24		
Downlink information per radio link list	OP	1 to <maxRL>		Send downlink information for each radio link	
>Downlink information for each	MP		Downlink		

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
radio link			information for each radio link 10.3.6.27		

10.2.48.8.13 ~~System Information Block type 10~~[Void](#)

~~NOTE: Only for FDD.~~

~~The system information block type 10 contains information to be used by UEs having their DCH controlled by a DRAC procedure.~~

Information Element/Group name	Need	Multi	Type and reference	Semantics description
UE information				
DRAC-system information	MP		DRAC-system-information-10.3.3.9	DRAC information is sent for each class of terminal

10.2.50 TRANSPORT CHANNEL RECONFIGURATION

This message is used by UTRAN to configure the transport channel of a UE. This also includes a possible reconfiguration of physical channels. The message can also be used to assign a TFC subset and reconfigure physical channel.

RLC-SAP: AM or UM

Logical channel: DCCH

Direction: UTRAN → UE

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Message Type	MP		Message Type		
UE Information Elements					
RRC transaction identifier	MP		RRC transaction identifier 10.3.3.36		
Integrity check info	CH		Integrity check info 10.3.3.16		
Integrity protection mode info	OP		Integrity protection mode info 10.3.3.19	The UTRAN should not include this IE unless it is performing an SRNS relocation	
Ciphering mode info	OP		Ciphering mode info 10.3.3.5	The UTRAN should not include this IE unless it is performing an SRNS relocation and a change in ciphering algorithm	
Activation time	MD		Activation time 10.3.3.1	Default value is "now"	
New U-RNTI	OP		U-RNTI 10.3.3.47		
New C-RNTI	OP		C-RNTI 10.3.3.8		
New DSCH-RNTI	OP		DSCH-RNTI 10.3.3.9a		
New H-RNTI	OP		H-RNTI 10.3.3.14a		REL-5
RRC State Indicator	MP		RRC State Indicator 10.3.3.35a		
UTRAN DRX cycle length coefficient	OP		UTRAN DRX cycle length coefficient 10.3.3.49		
CN Information Elements					
CN Information info	OP		CN Information info 10.3.1.3		
UTRAN mobility information elements					
URA identity	OP		URA identity 10.3.2.6		
RB information elements					
Downlink counter synchronisation info	OP				
>RB with PDCP information list	OP	1 to			

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
		<maxRBall RABs>			
>>RB with PDCP information	MP		RB with PDCP information 10.3.4.22	This IE is needed for each RB having PDCP in the case of lossless SRNS relocation	
	OP				REL-5
>>PDCP context relocation info	OP		PDCP context relocation info 10.3.4.1a	This IE is needed for each RB having PDCP and performing PDCP context relocation	REL-5
TrCH Information Elements					
Uplink transport channels					
UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24		
Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>Added or Reconfigured UL TrCH information	MP		Added or Reconfigured UL TrCH information 10.3.5.2		
CHOICE <i>mode</i>	OP				
>FDD					
>>CPCH set ID	OP		CPCH set ID 10.3.5.3		
>>Added or Reconfigured TrCH information for DRAC list	OP	1 to <maxTrCH >			
>>>DRAC static information	MP		DRAC static information 10.3.5.7		
>TDD				(no data)	
Downlink transport channels					
DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6		
Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>Added or Reconfigured DL TrCH information	MP		Added or Reconfigured DL TrCH information 10.3.5.1		
PhyCH information elements					
Frequency info	OP		Frequency info 10.3.6.36		
Uplink radio resources					
Maximum allowed UL TX power	MD		Maximum allowed UL	Default value is the existing	

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
			TX power 10.3.6.39	maximum UL TX power	
<i>CHOICE channel requirement</i>	OP				
>Uplink DPCH info			Uplink DPCH info 10.3.6.88		
>CPCH SET Info			CPCH SET Info 10.3.6.13		
Downlink radio resources					
<i>CHOICE mode</i>	MP				
>FDD					
>>Downlink PDSCH information	OP		Downlink PDSCH information 10.3.6.30		
>TDD				(no data)	
Downlink HS-PDSCH Information	OP		Downlink HS-PDSCH Information 10.3.6.23a		REL-5
Downlink information common for all radio links	OP		Downlink information common for all radio links 10.3.6.24		
Downlink information per radio link list	OP	1 to <maxRL>		Send downlink information for each radio link	
>Downlink information for each radio link	MP		Downlink information for each radio link 10.3.6.27		

10.3.3.9 ~~DRAC system information~~ Void

Information element	Need	Multi	Type and reference	Semantics description
DRAC system information	MP	1 to <maxDRA Classes>		DRAC information is sent for each class of terminal
>Transmission probability	MP		Transmission probability- 10.3.3.39	
>Maximum bit rate	MP		Maximum bit rate- 10.3.3.20	

10.3.3.20 ~~Maximum bit rate~~Void

~~NOTE:—Only for FDD.~~

~~Indicates the maximum user bit rate allowed on a DCH controlled by DRAC procedure for the transmission period (Transmission time validity).~~

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Maximum bit rate	MP		integer(0..512 by step of 16)	=kbit/s

10.3.3.25 Physical channel capability

Information Element/Group name	Need	Multi	Type and Reference	Semantics description	Version
Downlink physical channel capability information elements					
FDD downlink physical channel capability	CH- fdd_req_su p				
>Max no DPCH/PDSCH codes	MP		Integer (1..8)	Maximum number of DPCH/PDSCH codes to be simultaneously received	
>Max no physical channel bits received	MP		Integer (1200, 2400, 3600, 4800, 7200, 9600, 14400, 19200, 28800, 38400, 48000, 57600, 67200, 76800)	Maximum number of physical channel bits received in any 10 ms interval (DPCH, PDSCH, S-CCPCH)	
>Support for SF 512	MP		Boolean	TRUE means supported	
>Support of PDSCH	MP		Boolean	TRUE means supported	
>CHOICE Support of HS-PDSCH	CV- not_iRAT_ HoInfo				REL-5
>>Supported					REL-5
>>>HS-DSCH physical layer category	MP		Integer (1..64)		REL-5
>>>Support of dedicated pilots for channel estimation of HS-DSCH	MP		Boolean	TRUE means supported	REL-5
>>>Simultaneous reception of SCCPCH, DPCH and HS-PDSCH	MP		Boolean	TRUE means supported. This IE shall only be set to TRUE in the case the IE "Simultaneous reception of SCCPCH and DPCH" is set to TRUE	REL-5
>>Unsupported				(no data)	REL-5
>Simultaneous reception of SCCPCH and DPCH	MP		Boolean	TRUE means supported	
>Simultaneous reception of SCCPCH, DPCH and PDSCH	CV- if_sim_rec _pdsch- _sup		Boolean	TRUE means supported	
>Max no of S-CCPCH RL	CV- if_sim_rec		Integer(1)	Maximum number of simultaneous S-CCPCH radio links	
>Support of dedicated pilots for channel estimation	MD		Enumerated (true)	Presence of this element means supported and absence not supported. This IE shall be set to TRUE in this	

Information Element/Group name	Need	Multi	Type and Reference	Semantics description	Version
				version of the protocol.	
3.84 Mcps TDD downlink physical channel capability	CH-3.84_Mcps_tdd_req_s up				Name changed in REL-4
>Maximum number of timeslots per frame	MP		Integer (1..14)		
>Maximum number of physical channels per frame	MP		Integer (5..224)		
>Minimum SF	MP		Integer (1, 16)		
>Support of PDSCH	MP		Boolean	TRUE means supported	
>CHOICE <i>Support of HS-PDSCH</i>	CV-not_iRAT_HoInfo				REL-5
>>Supported					REL-5
>>>HS-DSCH physical layer category	MP		Integer (1..64)		REL-5
>>Unsupported				(no data)	REL-5
>Maximum number of physical channels per timeslot	MP		Integer (5..16)		
1.28 Mcps TDD downlink physical channel capability	CH-1.28_Mcps_tdd_req_s up				REL-4
>Maximum number of timeslots per subframe	MP		Integer (1..6)		REL-4
>Maximum number of physical channels per subframe	MP		Integer (1..96)		REL-4
>Minimum SF	MP		Integer (1, 16)		REL-4
>Support of PDSCH	MP		Boolean	TRUE means supported	REL-4
>CHOICE <i>Support of HS-PDSCH</i>	CV-not_iRAT_HoInfo				REL-5
>>Supported					REL-5
>>>HS-DSCH physical layer category	MP		Integer (1..64)		REL-5
>>Unsupported				(no data)	REL-5
>Maximum number of physical channels per timeslot	MP		Integer (1..16)		REL-4
>Support of 8PSK	MP		Boolean	TRUE means supported	REL-4
Uplink physical channel capability information elements					
FDD uplink physical channel capability	CH-fdd_req_s up				
>Maximum number of DPDCH bits transmitted per 10 ms	MP		Integer (600, 1200, 2400, 4800. 9600, 19200. 28800, 38400, 48000, 57600)		
>Support of PCPCH	MP		Boolean	TRUE means supported	
3.84 Mcps TDD uplink physical channel capability	CH-3.84_Mcps				Name changed

Information Element/Group name	Need	Multi	Type and Reference	Semantics description	Version
	<i>_tdd_req_sup</i>				in REL-4
>Maximum Number of timeslots per frame	MP		Integer (1..14)		
>Maximum number of physical channels per timeslot	MP		Integer (1, 2)		
>Minimum SF	MP		Integer (1, 2, 4, 8)		
>Support of PUSCH	MP		Boolean	TRUE means supported	
1.28 Mcps TDD uplink physical channel capability	CH- <i>1.28_Mcps_tdd_req_sup</i>				REL-4
>Maximum Number of timeslots per subframe	MP		Integer (1..6)		REL-4
>Maximum number of physical channels per timeslot	MP		Integer (1, 2)		REL-4
>Minimum SF	MP		Integer (1, 2, 4, 8, 16)		REL-4
>Support of PUSCH	MP		Boolean	TRUE means supported	REL-4
>Support of 8PSK	MP		Boolean	TRUE means supported	REL-4

Condition	Explanation
<i>if_sim_rec_pdsch_sup</i>	The IE is mandatory present if the IE "Simultaneous reception of SCCPCH and DPCH" = True and IE "Support of PDSCH" = True. Otherwise this field is not needed in the message.
<i>if_sim_rec</i>	The IE is mandatory present if the IE "capability-Simultaneous reception of SCCPCH and DPCH" = True. Otherwise this field is not needed in the message.
<i>3.84_Mcps_tdd_req_sup</i>	The IE is mandatory present if the IE "TDD RF capability" is present with the IE "Chip rate capability" set to "3.84 Mcps" and a 3.84 Mcps TDD capability update has been requested in a previous message. Otherwise this field is not needed in the message.
<i>1.28_Mcps_tdd_req_sup</i>	The IE is mandatory present if the IE "TDD RF capability" is present with the IE "Chip rate capability" set to "1.28 Mcps" and a 1.28 Mcps TDD capability update has been requested in a previous message. Otherwise this field is not needed in the message.
<i>fdd_req_sup</i>	The IE is mandatory present if the IE "Multi-mode capability" has the value "FDD" or "FDD/TDD" and a FDD capability update has been requested in a previous message. Otherwise this field is not needed in the message.
<i>not_iRAT_HoInfo</i>	The CHOICE <i>Support of HS-PDSCH</i> is not needed in the INTER RAT HANDOVER INFO message. Otherwise, it is mandatory present.

10.3.3.39 ~~Transmission probability~~Void

~~NOTE:—Only for FDD.~~

~~Indicates the probability for a mobile to be allowed to transmit on a DCH controlled by DRAC procedure.~~

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Transmission probability	MP		Real(0.125--1.0 by step of 0.125)	probability

10.3.5.7 ~~DRAC-Static-Information~~Void

~~NOTE:—Only for FDD.~~

~~Contains static parameters used by the DRAC procedure. Meaning and use is described in subclause 14.8.~~

Information Element/Group-name	Need	Multi	Type and reference	Semantics description
Transmission Time Validity	MP		Integer(1..256)	number of frames
Time duration before retry	MP		Integer(1..256)	number of frames
DRAC-Class-Identity	MP		Integer(1..maxDRACclasses)	Indicates the class of DRAC-parameters to use in SIB10-message

10.3.6.27 Downlink information for each radio link

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Choice mode	MP				
>FDD					
>>Primary CPICH info	MP		Primary CPICH info 10.3.6.60		
>>>Cell ID	OP		Cell ID 10.3.2.2		REL-4
>>>PDSCH with SHO DCH Info	OP		PDSCH with SHO DCH Info 10.3.6.47		
>>>PDSCH code mapping	OP		PDSCH code mapping 10.3.6.43		
>>>Serving HS-DSCH radio link indicator	CV- <i>not_rrcConnectionSetup</i>		Boolean	The value "TRUE" indicates that this radio link is the serving HS-DSCH radio link	REL-5
>TDD					
>>Primary CCPCH info	MP		Primary CCPCH info 10.3.6.57		
Downlink DPCH info for each RL	OP		Downlink DPCH info for each RL 10.3.6.21		
SCCPCH Information for FACH	OP		SCCPCH Information for FACH 10.3.6.70		

Condition	Explanation
<i>not_rrcConnectionSetup</i>	This IE is not needed in the RRC CONNECTION SETUP message. Otherwise it is mandatory present.

10.3.6.68 Radio link addition information

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Primary CPICH info	MP		Primary CPICH info 10.3.6.60		
Cell ID	OP		Cell ID 10.3.2.2		REL-4
Downlink DPCH info for each RL	MP		Downlink DPCH info for each RL 10.3.6.21		
TFCI combining indicator	MP		TFCI combining indicator 10.3.6.81		
SCCPCH Information for FACH	OP		SCCPCH Information for FACH 10.3.6.70	Note 1	

~~NOTE 1: These IEs are present when the UE needs to listen to system information on FACH in CELL_DCH state.~~

10.3.6.70 **SCCPCH Information for FACH**Void

Information Element/Group-name	Need	Multi	Type and reference	Semantics description
Secondary CCPCH info	MP		Secondary-CCPCH info-10.3.6.71	
TFCs	MP		Transport-format-combination-set 10.3.5.20	For FACHs and PCH
FACH/PCH information	MP	1 to <maxFAG HPCH>		
>TFS	MP		Transport-format-set 10.3.5.23	For each FACHs and PCH
>Transport channel identity	MP		Transport-channel-identity-10.3.5.18	
>CTCH indicator	MP		Boolean	The value "TRUE" indicates that a CTCH is mapped on the FACH, and "FALSE" that no CTCH is mapped.
CHOICE mode				
>FDD				
>>References to system-information blocks	MP	1 to <maxSIB-FACH>		
>>>Scheduling information	MP		Scheduling-information-10.3.8.16	
>>>SIB type-SIBs only	MP		SIB Type-SIBs only, 10.3.8.22	
>TDD				(No data)

NOTE:—TFS for PCH shall be the first "FACH/PCH information" in the list if a PCH exists for the respective secondary CCPCH.

10.3.10 Multiplicity values and type constraint values

The following table includes constants that are either used as multi bounds (name starting with "max") or as high or low value in a type specification (name starting with "lo" or "hi"). Constants are specified only for values appearing more than once in the RRC specification. In case a constant is related to one or more other constants, an expression is included in the "value" column instead of the actual value.

Constant	Explanation	Value	Version
CN information			
maxCNdomains	Maximum number of CN domains	4	
UTRAN mobility information			
maxRAT	Maximum number of Radio Access Technologies	maxOtherRAT + 1	
maxOtherRAT	Maximum number of other Radio Access Technologies	15	
maxURA	Maximum number of URAs in a cell	8	
maxInterSysMessages	Maximum number of Inter System Messages	4	
maxRABsetup	Maximum number of RABs to be established	16	
UE information			
maxtransactions	Maximum number of parallel RRC transactions in downlink	25	
maxPDCPalgoType	Maximum number of PDCP algorithm types	8	
maxDRACclasses	Maximum number of UE classes which would require different DRAC parameters	8	
maxFreqBandsFDD	Maximum number of frequency bands supported by the UE as defined in [21]	8	
maxFreqBandsTDD	Maximum number of frequency bands supported by the UE as defined in [22]	4	
maxFreqBandsGSM	Maximum number of frequency bands supported by the UE as defined in [45]	16	
maxPage1	Number of UEs paged in the Paging Type 1 message	8	
maxSystemCapability	Maximum number of system specific capabilities that can be requested in one message.	16	
MaxURNTIgroup	Maximum number of U-RNTI groups in one message	8	REL-5
RB information			
maxPredefConfig	Maximum number of predefined configurations	16	
maxRB	Maximum number of RBs	32	
maxSRBsetup	Maximum number of signalling RBs to be established	8	
maxRBperRAB	Maximum number of RBs per RAB	8	
maxRBallRABs	Maximum number of non signalling RBs	27	
maxRBMuxOptions	Maximum number of RB multiplexing options	8	
maxLoCHperRLC	Maximum number of logical channels per RLC entity	2	
MaxROHC-PacketSizes	Maximum number of packet sizes that are allowed to be produced by ROHC.	16	
MaxROHC-Profiles	Maximum number of profiles supported by ROHC on a given RB.	8	
maxRFC 3095-CID	Maximum number of available CID values per radio bearer	16384	REL-5
TrCH information			
MaxHProcesses	Maximum number of H-ARQ processes	8	REL-5
MaxHSDSCH_TB_index	Maximum number of TB set size configurations for the HS-DSCH.	64 (FDD and 1.28 Mcps TDD); 512 (3.84 Mcps TDD)	REL-5
maxMACdPDUSizes	Maximum number of MAC-d PDU sizes per queue permitted for MAC-hs	8	REL-5
maxTrCH	Maximum number of transport channels used in one direction (UL or DL)	32	
maxTrCHpreconf	Maximum number of preconfigured Transport channels, per direction	16	
maxCCTrCH	Maximum number of CCTrCHs	8	

Constant	Explanation	Value	Version
maxQueueID	Maximum number of Mac-hs queues	8	REL-5
MaxTF	Maximum number of different transport formats that can be included in the Transport format set for one transport channel	32	
maxTF-CPCH	Maximum number of TFs in a CPCH set	16	
maxTFC	Maximum number of Transport Format Combinations	1024	
maxTFCsub	Maximum number of Transport Format Combinations Subset	1024	
maxTFCl-1-Combs	Maximum number of TFCl (field 1) combinations	512	
maxTFCl-2-Combs	Maximum number of TFCl (field 2) combinations	512	
maxCPCHsets	Maximum number of CPCH sets per cell	16	
maxSIBperMsg	Maximum number of complete system information blocks per SYSTEM INFORMATION message	16	
maxSIB	Maximum number of references to other system information blocks.	32	
maxSIB-FACH	Maximum number of references to system information blocks on the FACH	8	
PhyCH information			
maxHS-SCCHs	Maximum number of HSSCCH codes that can be assigned to a UE	4	REL-5
maxPCPCH-APsubCH	Maximum number of available sub-channels for AP signature on PCPCH	12	
maxPCPCH-CDsubCH	Maximum number of available sub-channels for CD signature on PCPCH	12	
maxPCPCH-APsig	Maximum number of available signatures for AP on PCPCH	16	
maxPCPCH-CDsig	Maximum number of available signatures for CD on PCPCH	16	
maxAC	Maximum number of access classes	16	
maxASC	Maximum number of access service classes	8	
maxASCmap	Maximum number of access class to access service classes mappings	7	
maxASCpersist	Maximum number of access service classes for which persistence scaling factors are specified	6	
maxPRACH	Maximum number of PRACHs in a cell	16	
MaxPRACH_FPACH	Maximum number of PRACH / FPACH pairs in a cell (1.28 Mcps TDD)	8	REL-4
maxFACHPCH	Maximum number of FACHs and PCHs mapped onto one secondary CCPCHs	8	
maxRL	Maximum number of radio links	8	
maxSCCPCH	Maximum number of secondary CCPCHs per cell	16	
maxDPDCH-UL	Maximum number of DPDCHs per cell	6	
maxDPCH-DLchan	Maximum number of channelisation codes used for DL DPCH	8	
maxPUSCH	Maximum number of PUSCHs	(8)	
maxPDSCH	Maximum number of PDSCHs	8	
maxPDSCHcodes	Maximum number of codes for PDSCH	16	
maxPDSCH-TFClgroups	Maximum number of TFCl groups for PDSCH	256	
maxPDSCHcodeGroups	Maximum number of code groups for PDSCH	256	
maxPCPCHs	Maximum number of PCPCH channels in a CPCH Set	64	
maxPCPCH-SF	Maximum number of available SFs on PCPCH	7	
maxTS	Maximum number of timeslots used in one direction (UL or DL)	14 (3.84 Mcps TDD) 6 (1.28 Mcps TDD)	REL-4
hiPUSCHidentities	Maximum number of PUSCH Identities	64	
hiPDSCHidentities	Maximum number of PDSCH Identities	64	
Measurement information			
maxTGPS	Maximum number of transmission gap pattern sequences	6	
maxAdditionalMeas	Maximum number of additional measurements for	4	

Constant	Explanation	Value	Version
	a given measurement identity		
maxMeasEvent	Maximum number of events that can be listed in measurement reporting criteria	8	
maxMeasParEvent	Maximum number of measurement parameters (e.g. thresholds) per event	2	
maxMeasIntervals	Maximum number of intervals that define the mapping function between the measurements for the cell quality Q of a cell and the representing quality value	1	
maxCellMeas	Maximum number of cells to measure	32	
maxReportedGSMCells	Maximum number of GSM cells to be reported	8	
maxFreq	Maximum number of frequencies to measure	8	
maxSat	Maximum number of satellites to measure	16	
maxSatAlmanacStorage	Maximum number of satellites for which to store GPS Almanac information	32	
HiRM	Maximum number that could be set as rate matching attribute for a transport channel	256	
Frequency information			
MaxFDDFreqList	Maximum number of FDD carrier frequencies to be stored in USIM	4	
MaxTDDFreqList	Maximum number of TDD carrier frequencies to be stored in USIM	4	
MaxFDDFreqCellList	Maximum number of neighbouring FDD cells to be stored in USIM	32	
MaxTDDFreqCellList	Maximum number of neighbouring TDD cells to be stored in USIM	32	
MaxGSMCellList	Maximum number of GSM cells to be stored in USIM	32	
Other information			
MaxGERANSI	Maximum number of GERAN SI blocks that can be provided as part of NACC information	8	REL-5
maxNumGSMFreqRanges	Maximum number of GSM Frequency Ranges to store	32	
MaxNumFDDFreqs	Maximum number of FDD centre frequencies to store	8	
MaxNumTDDFreqs	Maximum number of TDD centre frequencies to store	8	
maxNumCDMA200Freqs	Maximum number of CDMA2000 centre frequencies to store	8	

11.2 PDU definitions

```

-- *****
--
-- CELL UPDATE CONFIRM
--
-- *****

CellUpdateConfirm ::= CHOICE {
  r3
    SEQUENCE {
      cellUpdateConfirm-r3          CellUpdateConfirm-r3-IEs,
      v3a0NonCriticalExtensions     SEQUENCE {
        cellUpdateConfirm-v3a0ext   CellUpdateConfirm-v3a0ext,
        laterNonCriticalExtensions SEQUENCE {
          -- Container for additional R99 extensions
          cellUpdateConfirm-r3-add-ext BIT STRING OPTIONAL,
          v4b0NonCriticalExtensions   SEQUENCE {
            cellUpdateConfirm-v4b0ext CellUpdateConfirm-v4b0ext-IEs,
            v590NonCriticalExtensions SEQUENCE {
              cellUpdateConfirm-v590ext CellUpdateConfirm-v590ext-IEs,
              nonCriticalExtensions    SEQUENCE {} OPTIONAL
            } OPTIONAL
          } OPTIONAL
        } OPTIONAL
      } OPTIONAL
    } OPTIONAL
  },
  later-than-r3
    SEQUENCE {
      rrc-TransactionIdentifier RRC-TransactionIdentifier,
      criticalExtensions        CHOICE {
        r4
          SEQUENCE {
            cellUpdateConfirm-r4          CellUpdateConfirm-r4-IEs,
            v4d0NonCriticalExtensions     SEQUENCE {
              -- Container for adding non critical extensions after freezing REL-5
              cellUpdateConfirm-r4-add-ext BIT STRING OPTIONAL,
              v590NonCriticalExtensions   SEQUENCE {
                cellUpdateConfirm-v590ext CellUpdateConfirm-v590ext-IEs,
                nonCriticalExtensions     SEQUENCE {} OPTIONAL
              } OPTIONAL
            } OPTIONAL
          } OPTIONAL
        },
        criticalExtensions        CHOICE {
          r5
            SEQUENCE {
              cellUpdateConfirm-r5          CellUpdateConfirm-r5-IEs,
              -- Container for adding non critical extensions after freezing REL-6
              cellUpdateConfirm-r5-add-ext BIT STRING OPTIONAL,
              nonCriticalExtensions       SEQUENCE {} OPTIONAL
            }
          },
        criticalExtensions        SEQUENCE {}
      }
    }
  }
}

CellUpdateConfirm-r3-IEs ::= SEQUENCE {
  -- User equipment IES
  rrc-TransactionIdentifier RRC-TransactionIdentifier,
  integrityProtectionModeInfo IntegrityProtectionModeInfo OPTIONAL,
  cipheringModeInfo         CipheringModeInfo             OPTIONAL,
  activationTime            ActivationTime                 OPTIONAL,
  new-U-RNTI                U-RNTI                       OPTIONAL,
  new-C-RNTI                C-RNTI                       OPTIONAL,
  rrc-StateIndicator        RRC-StateIndicator,
  utran-DRX-CycleLengthCoeff UTRAN-DRX-CycleLengthCoefficient OPTIONAL,
  rlc-Re-establishIndicatorRb2-3or4 BOOLEAN,
  rlc-Re-establishIndicatorRb5orAbove BOOLEAN,
  -- CN information elements
  cn-InformationInfo        CN-InformationInfo             OPTIONAL,
  -- UTRAN mobility IES
  ura-Identity              URA-Identity                 OPTIONAL,
  -- Radio bearer IES
  rb-InformationReleaseList RB-InformationReleaseList     OPTIONAL,
  rb-InformationReconfigList RB-InformationReconfigList   OPTIONAL,
  rb-InformationAffectedList RB-InformationAffectedList   OPTIONAL,
  dl-CounterSynchronisationInfo DL-CounterSynchronisationInfo OPTIONAL,
  -- Transport channel IES
  ul-CommonTransChInfo      UL-CommonTransChInfo         OPTIONAL,

```

```

ul-deletedTransChInfoList      UL-DeletedTransChInfoList      OPTIONAL,
ul-AddReconfTransChInfoList    UL-AddReconfTransChInfoList    OPTIONAL,
modeSpecificTransChInfo        CHOICE {
  fdd                            SEQUENCE {
    cpch-SetID                    CPCH-SetID                    OPTIONAL,
    -- dummy is not used in this version of the specification, it should
    -- not be sent and if received it should be ignored.
    addReconfTransChDRAC-Infodummy DRAC-StaticInformationList OPTIONAL
  },
  tdd                            NULL
},
dl-CommonTransChInfo            DL-CommonTransChInfo            OPTIONAL,
dl-DeletedTransChInfoList       DL-DeletedTransChInfoList       OPTIONAL,
dl-AddReconfTransChInfoList     DL-AddReconfTransChInfoList     OPTIONAL,
-- Physical channel IES
frequencyInfo                   FrequencyInfo                    OPTIONAL,
maxAllowedUL-TX-Power           MaxAllowedUL-TX-Power           OPTIONAL,
ul-ChannelRequirement           UL-ChannelRequirement           OPTIONAL,
modeSpecificPhysChInfo          CHOICE {
  fdd                            SEQUENCE {
    dl-PDSCH-Information          DL-PDSCH-Information          OPTIONAL
  },
  tdd                            NULL
},
dl-CommonInformation            DL-CommonInformation            OPTIONAL,
dl-InformationPerRL-List        DL-InformationPerRL-List        OPTIONAL
}

CellUpdateConfirm-v3a0ext ::= SEQUENCE {
  new-DSCH-RNTI                  DSCH-RNTI                        OPTIONAL
}

CellUpdateConfirm-v4b0ext-IES ::= SEQUENCE {
  -- Physical channel IES
  -- ssdt-UL extends SSdT-Information, which is included in
  -- DL-CommonInformation. FDD only.
  ssdt-UL-r4                      SSdT-UL                            OPTIONAL,
  -- The order of the RLs in IE cell-id-PerRL-List is the same as
  -- in IE DL-InformationPerRL-List included in this message
  cell-id-PerRL-List              CellIdentity-PerRL-List          OPTIONAL
}

CellUpdateConfirm-v590ext-IES ::= SEQUENCE {
  -- Physical channel IES
  dl-TPC-PowerOffsetPerRL-List    DL-TPC-PowerOffsetPerRL-List    OPTIONAL
}

CellUpdateConfirm-r4-IES ::= SEQUENCE {
  -- User equipment IES
  integrityProtectionModeInfo     IntegrityProtectionModeInfo      OPTIONAL,
  cipheringModeInfo               CipheringModeInfo                 OPTIONAL,
  activationTime                   ActivationTime                     OPTIONAL,
  new-U-RNTI                       U-RNTI                           OPTIONAL,
  new-C-RNTI                       C-RNTI                           OPTIONAL,
  new-DSCH-RNTI                   DSCH-RNTI                         OPTIONAL,
  rrc-StateIndicator              RRC-StateIndicator,
  utran-DRX-CycleLengthCoeff      UTRAN-DRX-CycleLengthCoefficient OPTIONAL,
  rlc-Re-establishIndicatorRb2-3or4 BOOLEAN,
  rlc-Re-establishIndicatorRb5orAbove BOOLEAN,
  -- CN information elements
  cn-InformationInfo              CN-InformationInfo                OPTIONAL,
  -- UTRAN mobility IES
  ura-Identity                     URA-Identity                       OPTIONAL,
  -- Radio bearer IES
  rb-InformationReleaseList        RB-InformationReleaseList         OPTIONAL,
  rb-InformationReconfigList       RB-InformationReconfigList-r4     OPTIONAL,
  rb-InformationAffectedList       RB-InformationAffectedList        OPTIONAL,
  dl-CounterSynchronisationInfo    DL-CounterSynchronisationInfo     OPTIONAL,
  -- Transport channel IES
  ul-CommonTransChInfo            UL-CommonTransChInfo-r4          OPTIONAL,
  ul-deletedTransChInfoList        UL-DeletedTransChInfoList        OPTIONAL,
  ul-AddReconfTransChInfoList      UL-AddReconfTransChInfoList      OPTIONAL,
  modeSpecificTransChInfo          CHOICE {
    fdd                            SEQUENCE {
      cpch-SetID                    CPCH-SetID                    OPTIONAL,
      -- dummy is not used in this version of the specification, it should
      -- not be sent and if received it should be ignored.
      addReconfTransChDRAC-Infodummy DRAC-StaticInformationList OPTIONAL
    }
  }
}

```

```

    },
    tdd
        NULL
    },
    dl-CommonTransChInfo          DL-CommonTransChInfo-r4          OPTIONAL,
    dl-DeletedTransChInfoList     DL-DeletedTransChInfoList        OPTIONAL,
    dl-AddReconfTransChInfoList   DL-AddReconfTransChInfoList-r4   OPTIONAL,
-- Physical channel IES
    frequencyInfo                 FrequencyInfo                      OPTIONAL,
    maxAllowedUL-TX-Power         MaxAllowedUL-TX-Power            OPTIONAL,
    ul-ChannelRequirement         UL-ChannelRequirement-r4        OPTIONAL,
    modeSpecificPhysChInfo        CHOICE {
        fdd
            dl-PDSCH-Information    DL-PDSCH-Information            OPTIONAL
        },
    tdd
        NULL
    },
    dl-CommonInformation          DL-CommonInformation-r4          OPTIONAL,
    dl-InformationPerRL-List      DL-InformationPerRL-List-r4     OPTIONAL
}

CellUpdateConfirm-r5-IEs ::= SEQUENCE {
-- User equipment IES
    integrityProtectionModeInfo  IntegrityProtectionModeInfo     OPTIONAL,
    cipheringModeInfo            CipheringModeInfo                OPTIONAL,
    activationTime               ActivationTime                    OPTIONAL,
    new-U-RNTI                   U-RNTI                          OPTIONAL,
    new-C-RNTI                   C-RNTI                          OPTIONAL,
    new-DSCH-RNTI                DSCH-RNTI                       OPTIONAL,
    new-H-RNTI                   H-RNTI                          OPTIONAL,
    rrc-StateIndicator           RRC-StateIndicator,
    utran-DRX-CycleLengthCoeff   UTRAN-DRX-CycleLengthCoefficient OPTIONAL,
    rlc-Re-establishIndicatorRb2-3or4 BOOLEAN,
    rlc-Re-establishIndicatorRb5orAbove BOOLEAN,
-- CN information elements
    cn-InformationInfo           CN-InformationInfo              OPTIONAL,
-- UTRAN mobility IES
    ura-Identity                 URA-Identity                    OPTIONAL,
-- Radio bearer IES
    rb-InformationReleaseList     RB-InformationReleaseList       OPTIONAL,
    rb-InformationReconfigList    RB-InformationReconfigList-r5   OPTIONAL,
    rb-InformationAffectedList    RB-InformationAffectedList-r5   OPTIONAL,
    dl-CounterSynchronisationInfo DL-CounterSynchronisationInfo-r5 OPTIONAL,
-- Transport channel IES
    ul-CommonTransChInfo         UL-CommonTransChInfo-r4        OPTIONAL,
    ul-deletedTransChInfoList     UL-DeletedTransChInfoList       OPTIONAL,
    ul-AddReconfTransChInfoList   UL-AddReconfTransChInfoList    OPTIONAL,
    modeSpecificTransChInfo       CHOICE {
        fdd
            cpch-SetID              CPCH-SetID                      OPTIONAL,
            -- dummy is not used in this version of the specification, it should
            -- not be sent and if received it should be ignored.
            addReconfTransChDRAC-Infodummy DRAC-StaticInformationList OPTIONAL
        },
    tdd
        NULL
    },
    dl-CommonTransChInfo          DL-CommonTransChInfo-r4          OPTIONAL,
    dl-DeletedTransChInfoList     DL-DeletedTransChInfoList-r5    OPTIONAL,
    dl-AddReconfTransChInfoList   DL-AddReconfTransChInfoList-r5  OPTIONAL,
-- Physical channel IES
    frequencyInfo                 FrequencyInfo                      OPTIONAL,
    maxAllowedUL-TX-Power         MaxAllowedUL-TX-Power            OPTIONAL,
    ul-ChannelRequirement         UL-ChannelRequirement-r5        OPTIONAL,
    modeSpecificPhysChInfo        CHOICE {
        fdd
            dl-PDSCH-Information    DL-PDSCH-Information            OPTIONAL
        },
    tdd
        NULL
    },
    dl-HSPDSCH-Information        DL-HSPDSCH-Information          OPTIONAL,
    dl-CommonInformation          DL-CommonInformation-r5         OPTIONAL,
    dl-InformationPerRL-List      DL-InformationPerRL-List-r5     OPTIONAL
}

-- *****
--
-- RADIO BEARER RECONFIGURATION
--
-- *****

```

```

RadioBearerReconfiguration ::= CHOICE {
  r3 SEQUENCE {
    radioBearerReconfiguration-r3 RadioBearerReconfiguration-r3-IEs,
    -- Prefix "v3ao" is used (in one instance) to keep alignment with R99
    v3aoNonCriticalExtensions SEQUENCE {
      radioBearerReconfiguration-v3aoext RadioBearerReconfiguration-v3aoext,
      laterNonCriticalExtensions SEQUENCE {
        -- Container for additional R99 extensions
        radioBearerReconfiguration-r3-add-ext BIT STRING OPTIONAL,
        v4b0NonCriticalExtensions SEQUENCE {
          radioBearerReconfiguration-v4b0ext
          RadioBearerReconfiguration-v4b0ext-IEs,
        } SEQUENCE {
          v590NonCriticalExtensions SEQUENCE {
            radioBearerReconfiguration-v590ext
            RadioBearerReconfiguration-v590ext-IEs,
          } SEQUENCE {} OPTIONAL
        } SEQUENCE {} OPTIONAL
      } OPTIONAL
    } OPTIONAL
  },
  later-than-r3 SEQUENCE {
    rrc-TransactionIdentifier RRC-TransactionIdentifier,
    criticalExtensions CHOICE {
      r4 SEQUENCE {
        radioBearerReconfiguration-r4 RadioBearerReconfiguration-r4-IEs,
        v4d0NonCriticalExtensions SEQUENCE {
          -- Container for adding non critical extensions after freezing REL-5
          radioBearerReconfiguration-r4-add-ext BIT STRING OPTIONAL,
          v590NonCriticalExtensions SEQUENCE {
            radioBearerReconfiguration-v590ext
            RadioBearerReconfiguration-v590ext-IEs,
          } SEQUENCE {} OPTIONAL
        } OPTIONAL
      } OPTIONAL
    },
    criticalExtensions CHOICE {
      r5 SEQUENCE {
        radioBearerReconfiguration-r5 RadioBearerReconfiguration-r5-IEs,
        -- Container for adding non critical extensions after freezing REL-6
        radioBearerReconfiguration-r5-add-ext BIT STRING OPTIONAL,
        nonCriticalExtensions SEQUENCE {} OPTIONAL
      },
      criticalExtensions SEQUENCE {}
    }
  }
}

```

```

RadioBearerReconfiguration-r3-IEs ::= SEQUENCE {
  -- User equipment IEs
  rrc-TransactionIdentifier RRC-TransactionIdentifier,
  integrityProtectionModeInfo IntegrityProtectionModeInfo OPTIONAL,
  cipheringModeInfo CipheringModeInfo OPTIONAL,
  activationTime ActivationTime OPTIONAL,
  new-U-RNTI U-RNTI OPTIONAL,
  new-C-RNTI C-RNTI OPTIONAL,
  rrc-StateIndicator RRC-StateIndicator,
  utran-DRX-CycleLengthCoeff UTRAN-DRX-CycleLengthCoefficient OPTIONAL,
  -- Core network IEs
  cn-InformationInfo CN-InformationInfo OPTIONAL,
  -- UTRAN mobility IEs
  ura-Identity URA-Identity OPTIONAL,
  -- Radio bearer IEs
  rab-InformationReconfigList RAB-InformationReconfigList OPTIONAL,
  -- NOTE: IE rb-InformationReconfigList should be optional in later versions
  -- of this message
  rb-InformationReconfigList RB-InformationReconfigList,
  rb-InformationAffectedList RB-InformationAffectedList OPTIONAL,
  -- Transport channel IEs
  ul-CommonTransChInfo UL-CommonTransChInfo OPTIONAL,
  ul-deletedTransChInfoList UL-DeletedTransChInfoList OPTIONAL,
  ul-AddReconfTransChInfoList UL-AddReconfTransChInfoList OPTIONAL,
  modeSpecificTransChInfo CHOICE {
    fdd SEQUENCE {
      cpch-SetID CPCH-SetID OPTIONAL,
      -- dummy is not used in this version of the specification, it should

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```

-- not be sent and if received it should be ignored.
addReconfTransChDRAC-Infodummy DRAC-StaticInformationList OPTIONAL
},
tdd NULL
}
dl-CommonTransChInfo DL-CommonTransChInfo OPTIONAL,
dl-DeletedTransChInfoList DL-DeletedTransChInfoList OPTIONAL,
dl-AddReconfTransChInfoList DL-AddReconfTransChInfo2List OPTIONAL,
-- Physical channel IEs
frequencyInfo FrequencyInfo OPTIONAL,
maxAllowedUL-TX-Power MaxAllowedUL-TX-Power OPTIONAL,
ul-ChannelRequirement UL-ChannelRequirement OPTIONAL,
modeSpecificPhysChInfo CHOICE {
fdd SEQUENCE {
dl-PDSCH-Information DL-PDSCH-Information OPTIONAL
},
tdd NULL
},
dl-CommonInformation DL-CommonInformation OPTIONAL,
-- NOTE: IE dl-InformationPerRL-List should be optional in later versions
-- of this message
dl-InformationPerRL-List DL-InformationPerRL-List
}

RadioBearerReconfiguration-v3a0ext ::= SEQUENCE {
new-DSCH-RNTI DSCH-RNTI OPTIONAL
}

RadioBearerReconfiguration-v4b0ext-IEs ::= SEQUENCE {
-- Physical channel IEs
-- ssdt-UL extends SSdT-Information, which is included in
-- DL-CommonInformation. FDD only.
ssdt-UL-r4 SSdT-UL OPTIONAL,
-- The order of the RLs in IE cell-id-PerRL-List is the same as
-- in IE DL-InformationPerRL-List included in this message
cell-id-PerRL-List CellIdentity-PerRL-List OPTIONAL
}

RadioBearerReconfiguration-v590ext-IEs ::= SEQUENCE {
-- Physical channel IEs
dl-TPC-PowerOffsetPerRL-List DL-TPC-PowerOffsetPerRL-List OPTIONAL
}

RadioBearerReconfiguration-r4-IEs ::= SEQUENCE {
-- User equipment IEs
integrityProtectionModeInfo IntegrityProtectionModeInfo OPTIONAL,
cipheringModeInfo CipheringModeInfo OPTIONAL,
activationTime ActivationTime OPTIONAL,
new-U-RNTI U-RNTI OPTIONAL,
new-C-RNTI C-RNTI OPTIONAL,
new-DSCH-RNTI DSCH-RNTI OPTIONAL,
rrc-StateIndicator RRC-StateIndicator,
utran-DRX-CycleLengthCoeff UTRAN-DRX-CycleLengthCoefficient OPTIONAL,
-- Core network IEs
cn-InformationInfo CN-InformationInfo OPTIONAL,
-- UTRAN mobility IEs
ura-Identity URA-Identity OPTIONAL,
-- Radio bearer IEs
rab-InformationReconfigList RAB-InformationReconfigList OPTIONAL,
rb-InformationReconfigList RB-InformationReconfigList-r4 OPTIONAL,
rb-InformationAffectedList RB-InformationAffectedList OPTIONAL,
-- Transport channel IEs
ul-CommonTransChInfo UL-CommonTransChInfo-r4 OPTIONAL,
ul-deletedTransChInfoList UL-DeletedTransChInfoList OPTIONAL,
ul-AddReconfTransChInfoList UL-AddReconfTransChInfoList OPTIONAL,
modeSpecificTransChInfo CHOICE {
fdd SEQUENCE {
cpch-SetID CPCH-SetID OPTIONAL,
-- dummy is not used in this version of the specification, it should
-- not be sent and if received it should be ignored.
addReconfTransChDRAC-Infodummy DRAC-StaticInformationList OPTIONAL
},
tdd NULL
}
dl-CommonTransChInfo DL-CommonTransChInfo-r4 OPTIONAL,
dl-DeletedTransChInfoList DL-DeletedTransChInfoList OPTIONAL,
dl-AddReconfTransChInfoList DL-AddReconfTransChInfoList-r4 OPTIONAL,
-- Physical channel IEs

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frequencyInfo          FrequencyInfo          OPTIONAL,
maxAllowedUL-TX-Power  MaxAllowedUL-TX-Power  OPTIONAL,
ul-ChannelRequirement  UL-ChannelRequirement-r4  OPTIONAL,
modeSpecificPhysChInfo CHOICE {
    fdd                  SEQUENCE {
        dl-PDSCH-Information  DL-PDSCH-Information  OPTIONAL
    },
    tdd                  NULL
},
dl-CommonInformation  DL-CommonInformation-r4  OPTIONAL,
dl-InformationPerRL-List  DL-InformationPerRL-List-r4  OPTIONAL
}

RadioBearerReconfiguration-r5-IEs ::= SEQUENCE {
-- User equipment IEs
    integrityProtectionModeInfo  IntegrityProtectionModeInfo  OPTIONAL,
    cipheringModeInfo            CipheringModeInfo            OPTIONAL,
    activationTime                ActivationTime                OPTIONAL,
    new-U-RNTI                   U-RNTI                      OPTIONAL,
    new-C-RNTI                   C-RNTI                      OPTIONAL,
    new-DSCH-RNTI               DSCH-RNTI                   OPTIONAL,
    new-H-RNTI                   H-RNTI                      OPTIONAL,
    rrc-StateIndicator           RRC-StateIndicator,
    utran-DRX-CycleLengthCoeff   UTRAN-DRX-CycleLengthCoefficient  OPTIONAL,
-- Core network IEs
    cn-InformationInfo           CN-InformationInfo           OPTIONAL,
-- UTRAN mobility IEs
    ura-Identity                 URA-Identity                 OPTIONAL,
-- Specification mode information
    specificationMode            CHOICE {
        complete                 SEQUENCE {
-- Radio bearer IEs
            rab-InformationReconfigList  RAB-InformationReconfigList  OPTIONAL,
            rb-InformationReconfigList  RB-InformationReconfigList-r5  OPTIONAL,
            rb-InformationAffectedList  RB-InformationAffectedList-r5  OPTIONAL,
            rb-PDCPContextRelocationList  RB-PDCPContextRelocationList  OPTIONAL,
-- Transport channel IEs
            ul-CommonTransChInfo        UL-CommonTransChInfo-r4        OPTIONAL,
            ul-deletedTransChInfoList    UL-DeletedTransChInfoList      OPTIONAL,
            ul-AddReconfTransChInfoList  UL-AddReconfTransChInfoList    OPTIONAL,
            modeSpecificTransChInfo      CHOICE {
                fdd                  SEQUENCE {
                    cpch-SetID        CPCH-SetID        OPTIONAL,
                    -- dummy is not used in this version of the specification, it should
                    -- not be sent and if received it should be ignored.
                    addReconfTransChDRAC-Infodummy  DRAC-StaticInformationList  OPTIONAL
                },
                tdd                  NULL
            }
        },
        dl-CommonTransChInfo        DL-CommonTransChInfo-r4        OPTIONAL,
        dl-DeletedTransChInfoList    DL-DeletedTransChInfoList-r5    OPTIONAL,
        dl-AddReconfTransChInfoList  DL-AddReconfTransChInfoList-r5  OPTIONAL
    },
    preconfiguration              SEQUENCE {
-- All IEs that include an FDD/TDD choice are split in two IEs for this message,
-- one for the FDD only elements and one for the TDD only elements, so that one
-- FDD/TDD choice in this level is sufficient.
        preConfigMode              CHOICE {
            predefinedConfigIdentity  PredefinedConfigIdentity,
            defaultConfig             SEQUENCE {
                defaultConfigMode    DefaultConfigMode,
                defaultConfigIdentity  DefaultConfigIdentity-r5
            }
        }
    }
},
-- Physical channel IEs
    frequencyInfo          FrequencyInfo          OPTIONAL,
    maxAllowedUL-TX-Power  MaxAllowedUL-TX-Power  OPTIONAL,
    ul-ChannelRequirement  UL-ChannelRequirement-r5  OPTIONAL,
    modeSpecificPhysChInfo CHOICE {
        fdd                  SEQUENCE {
            dl-PDSCH-Information  DL-PDSCH-Information  OPTIONAL
        },
        tdd                  NULL
    },
    dl-HSPDSCH-Information  DL-HSPDSCH-Information  OPTIONAL,
    dl-CommonInformation    DL-CommonInformation-r5  OPTIONAL
}

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        dl-InformationPerRL-List          DL-InformationPerRL-List-r5          OPTIONAL
    }
-- *****
--
-- RADIO BEARER RELEASE
--
-- *****

RadioBearerRelease ::= CHOICE {
    r3
        SEQUENCE {
            radioBearerRelease-r3          RadioBearerRelease-r3-IEs,
            v3a0NonCriticalExtensions      SEQUENCE {
                radioBearerRelease-v3a0ext  RadioBearerRelease-v3a0ext,
            laterNonCriticalExtensions      SEQUENCE {
                -- Container for additional R99 extensions
                radioBearerRelease-r3-add-ext  BIT STRING          OPTIONAL,
                v4b0NonCriticalExtensions      SEQUENCE {
                    radioBearerRelease-v4b0ext  RadioBearerRelease-v4b0ext-IEs,
                    v590NonCriticalExtensions    SEQUENCE {
                        radioBearerRelease-v590ext  RadioBearerRelease-v590ext-IEs,
                        nonCriticalExtensions      SEQUENCE {} OPTIONAL
                    } OPTIONAL
                } OPTIONAL
            } OPTIONAL
        } OPTIONAL
    },
    later-than-r3
        SEQUENCE {
            rrc-TransactionIdentifier      RRC-TransactionIdentifier,
            criticalExtensions             CHOICE {
                r4
                    SEQUENCE {
                        radioBearerRelease-r4          RadioBearerRelease-r4-IEs,
                        v4d0NonCriticalExtensions      SEQUENCE {
                            -- Container for adding non critical extensions after freezing REL-5
                            radioBearerRelease-r4-add-ext  BIT STRING          OPTIONAL,
                            v590NonCriticalExtensions    SEQUENCE {
                                radioBearerRelease-v590ext  RadioBearerRelease-v590ext-IEs,
                                nonCriticalExtensions      SEQUENCE {}          OPTIONAL
                            } OPTIONAL
                        } OPTIONAL
                    } OPTIONAL
            },
            criticalExtensions             CHOICE {
                r5
                    SEQUENCE {
                        radioBearerRelease-r5          RadioBearerRelease-r5-IEs,
                        -- Container for adding non critical extensions after freezing REL-6
                        radioBearerRelease-r5-add-ext  BIT STRING          OPTIONAL,
                        nonCriticalExtensions          SEQUENCE {}          OPTIONAL
                    },
                criticalExtensions         SEQUENCE {}
            }
        }
    }
}

RadioBearerRelease-r3-IEs ::= SEQUENCE {
    -- User equipment IEs
    rrc-TransactionIdentifier      RRC-TransactionIdentifier,
    integrityProtectionModeInfo    IntegrityProtectionModeInfo          OPTIONAL,
    cipheringModeInfo              CipheringModeInfo                      OPTIONAL,
    activationTime                  ActivationTime                          OPTIONAL,
    new-U-RNTI                      U-RNTI                              OPTIONAL,
    new-C-RNTI                      C-RNTI                              OPTIONAL,
    rrc-StateIndicator              RRC-StateIndicator,
    utran-DRX-CycleLengthCoeff      UTRAN-DRX-CycleLengthCoefficient    OPTIONAL,
    -- Core network IEs
    cn-InformationInfo              CN-InformationInfo                      OPTIONAL,
    signallingConnectionRelIndication  CN-DomainIdentity                    OPTIONAL,
    -- UTRAN mobility IEs
    ura-Identity                    URA-Identity                          OPTIONAL,
    -- Radio bearer IEs
    rab-InformationReconfigList      RAB-InformationReconfigList          OPTIONAL,
    rb-InformationReleaseList        RB-InformationReleaseList,
    rb-InformationAffectedList       RB-InformationAffectedList           OPTIONAL,
    dl-CounterSynchronisationInfo    DL-CounterSynchronisationInfo        OPTIONAL,
    -- Transport channel IEs
    ul-CommonTransChInfo             UL-CommonTransChInfo                 OPTIONAL,
    ul-deletedTransChInfoList        UL-DeletedTransChInfoList            OPTIONAL,
    ul-AddReconfTransChInfoList      UL-AddReconfTransChInfoList          OPTIONAL,

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modeSpecificTransChInfo      CHOICE {
  fdd                        SEQUENCE {
    cpch-SetID                CPCH-SetID                OPTIONAL,
    -- dummy is not used in this version of the specification, it should
    -- not be sent and if received it should be ignored.
    addReconfTransChDRAC-Infodummy                DRAC-StaticInformationList  OPTIONAL
  },
  tdd                        NULL
}
dl-CommonTransChInfo        DL-CommonTransChInfo        OPTIONAL,
dl-DeletedTransChInfoList   DL-DeletedTransChInfoList   OPTIONAL,
dl-AddReconfTransChInfoList DL-AddReconfTransChInfo2List OPTIONAL,
-- Physical channel IEs
frequencyInfo               FrequencyInfo                OPTIONAL,
maxAllowedUL-TX-Power       MaxAllowedUL-TX-Power      OPTIONAL,
ul-ChannelRequirement       UL-ChannelRequirement      OPTIONAL,
modeSpecificPhysChInfo     CHOICE {
  fdd                        SEQUENCE {
    dl-PDSCH-Information     DL-PDSCH-Information     OPTIONAL
  },
  tdd                        NULL
},
dl-CommonInformation        DL-CommonInformation        OPTIONAL,
dl-InformationPerRL-List    DL-InformationPerRL-List    OPTIONAL
}

RadioBearerRelease-v3a0ext ::= SEQUENCE {
  new-DSCH-RNTI              DSCH-RNTI                OPTIONAL
}

RadioBearerRelease-v4b0ext-IEs ::= SEQUENCE {
  -- Physical channel IEs
  -- IE ssdt-UL extends SSdT-Information, which is included in
  -- DL-CommonInformation. FDD only.
  ssdt-UL-r4                 SSdT-UL                OPTIONAL,
  -- The order of the RLs in IE cell-id-PerRL-List is the same as
  -- in IE DL-InformationPerRL-List included in this message
  cell-id-PerRL-List         CellIdentity-PerRL-List  OPTIONAL
}

RadioBearerRelease-v590ext-IEs ::= SEQUENCE {
  -- Physical channel IEs
  dl-TPC-PowerOffsetPerRL-List DL-TPC-PowerOffsetPerRL-List  OPTIONAL
}

RadioBearerRelease-r4-IEs ::= SEQUENCE {
  -- User equipment IEs
  integrityProtectionModeInfo IntegrityProtectionModeInfo    OPTIONAL,
  cipheringModeInfo          CipheringModeInfo              OPTIONAL,
  activationTime              ActivationTime                    OPTIONAL,
  new-U-RNTI                  U-RNTI                          OPTIONAL,
  new-C-RNTI                  C-RNTI                          OPTIONAL,
  new-DSCH-RNTI              DSCH-RNTI                       OPTIONAL,
  rrc-StateIndicator          RRC-StateIndicator,              OPTIONAL,
  utran-DRX-CycleLengthCoeff UTRAN-DRX-CycleLengthCoefficient  OPTIONAL,
  -- Core network IEs
  cn-InformationInfo          CN-InformationInfo                OPTIONAL,
  signallingConnectionRelIndication CN-DomainIdentity          OPTIONAL,
  -- UTRAN mobility IEs
  ura-Identity                URA-Identity                    OPTIONAL,
  -- Radio bearer IEs
  rab-InformationReconfigList RAB-InformationReconfigList  OPTIONAL,
  rb-InformationReleaseList   RB-InformationReleaseList,   OPTIONAL,
  rb-InformationAffectedList  RB-InformationAffectedList   OPTIONAL,
  dl-CounterSynchronisationInfo DL-CounterSynchronisationInfo  OPTIONAL,
  -- Transport channel IEs
  ul-CommonTransChInfo       UL-CommonTransChInfo-r4     OPTIONAL,
  ul-deletedTransChInfoList   UL-DeletedTransChInfoList   OPTIONAL,
  ul-AddReconfTransChInfoList UL-AddReconfTransChInfoList  OPTIONAL,
  modeSpecificTransChInfo     CHOICE {
    fdd                        SEQUENCE {
      cpch-SetID                CPCH-SetID                OPTIONAL,
      -- dummy is not used in this version of the specification, it should
      -- not be sent and if received it should be ignored.
      addReconfTransChDRAC-Infodummy                DRAC-StaticInformationList  OPTIONAL
    },
    tdd                        NULL
  }
}

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dl-CommonTransChInfo          DL-CommonTransChInfo-r4          OPTIONAL,
dl-DeletedTransChInfoList     DL-DeletedTransChInfoList         OPTIONAL,
dl-AddReconfTransChInfoList   DL-AddReconfTransChInfoList-r4    OPTIONAL,
-- Physical channel IEs
frequencyInfo                  FrequencyInfo                       OPTIONAL,
maxAllowedUL-TX-Power         MaxAllowedUL-TX-Power             OPTIONAL,
ul-ChannelRequirement         UL-ChannelRequirement-r4          OPTIONAL,
modeSpecificPhysChInfo        CHOICE {
    fdd                          SEQUENCE {
        dl-PDSCH-Information     DL-PDSCH-Information             OPTIONAL
    },
    tdd                          NULL
},
dl-CommonInformation          DL-CommonInformation-r4           OPTIONAL,
dl-InformationPerRL-List      DL-InformationPerRL-List-r4       OPTIONAL
}

RadioBearerRelease-r5-IEs ::= SEQUENCE {
-- User equipment IEs
integrityProtectionModeInfo   IntegrityProtectionModeInfo       OPTIONAL,
cipheringModeInfo             CipheringModeInfo                  OPTIONAL,
activationTime                 ActivationTime                      OPTIONAL,
new-U-RNTI                     U-RNTI                            OPTIONAL,
new-C-RNTI                     C-RNTI                            OPTIONAL,
new-DSCH-RNTI                 DSCH-RNTI                        OPTIONAL,
new-H-RNTI                     H-RNTI                            OPTIONAL,
rrc-StateIndicator            RRC-StateIndicator,
utran-DRX-CycleLengthCoeff    UTRAN-DRX-CycleLengthCoefficient  OPTIONAL,
-- Core network IEs
cn-InformationInfo             CN-InformationInfo                OPTIONAL,
signallingConnectionRelIndication CN-DomainIdentity                OPTIONAL,
-- UTRAN mobility IEs
ura-Identity                   URA-Identity                      OPTIONAL,
-- Radio bearer IEs
rab-InformationReconfigList    RAB-InformationReconfigList       OPTIONAL,
rb-InformationReleaseList      RB-InformationReleaseList,
rb-InformationAffectedList     RB-InformationAffectedList-r5     OPTIONAL,
dl-CounterSynchronisationInfo DL-CounterSynchronisationInfo-r5  OPTIONAL,
-- Transport channel IEs
ul-CommonTransChInfo          UL-CommonTransChInfo-r4          OPTIONAL,
ul-deletedTransChInfoList     UL-DeletedTransChInfoList         OPTIONAL,
ul-AddReconfTransChInfoList   UL-AddReconfTransChInfoList      OPTIONAL,
modeSpecificTransChInfo        CHOICE {
    fdd                          SEQUENCE {
        cpch-SetID              CPCH-SetID                      OPTIONAL,
        -- dummy is not used in this version of the specification, it should
        -- not be sent and if received it should be ignored.
        addReconfTransChDRAC-InfoDummy DRAC-StaticInformationList  OPTIONAL
    },
    tdd                          NULL
}
},
dl-CommonTransChInfo          DL-CommonTransChInfo-r4          OPTIONAL,
dl-DeletedTransChInfoList     DL-DeletedTransChInfoList-r5     OPTIONAL,
dl-AddReconfTransChInfoList   DL-AddReconfTransChInfoList-r5   OPTIONAL,
-- Physical channel IEs
frequencyInfo                  FrequencyInfo                       OPTIONAL,
maxAllowedUL-TX-Power         MaxAllowedUL-TX-Power             OPTIONAL,
ul-ChannelRequirement         UL-ChannelRequirement-r5          OPTIONAL,
modeSpecificPhysChInfo        CHOICE {
    fdd                          SEQUENCE {
        dl-PDSCH-Information     DL-PDSCH-Information             OPTIONAL
    },
    tdd                          NULL
},
dl-HSPDSCH-Information        DL-HSPDSCH-Information            OPTIONAL,
dl-CommonInformation          DL-CommonInformation-r5           OPTIONAL,
dl-InformationPerRL-List      DL-InformationPerRL-List-r5       OPTIONAL
}

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-- *****
--
-- RADIO BEARER SETUP
--
-- *****

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RadioBearerSetup ::= CHOICE {
    r3                      SEQUENCE {

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radioBearerSetup-r3          RadioBearerSetup-r3-IEs,
v3a0NonCriticalExtensions    SEQUENCE {
  radioBearerSetup-v3a0ext    RadioBearerSetup-v3a0ext,
  laterNonCriticalExtensions  SEQUENCE {
    -- Container for additional R99 extensions
    radioBearerSetup-r3-add-ext BIT STRING OPTIONAL,
    v4b0NonCriticalExtensions  SEQUENCE {
      radioBearerSetup-v4b0ext  RadioBearerSetup-v4b0ext-IEs,
      v590NonCriticalExtensions SEQUENCE {
        radioBearerSetup-v590ext RadioBearerSetup-v590ext-IEs,
        nonCriticalExtensions    SEQUENCE {} OPTIONAL
      } OPTIONAL
    } OPTIONAL
  } OPTIONAL
} OPTIONAL
},
later-than-r3                SEQUENCE {
  rrc-TransactionIdentifier    RRC-TransactionIdentifier,
  criticalExtensions           CHOICE {
    r4                          SEQUENCE {
      radioBearerSetup-r4      RadioBearerSetup-r4-IEs,
      v4d0NonCriticalExtensions SEQUENCE {
        -- Container for adding non critical extensions after freezing REL-5
        radioBearerSetup-r4-add-ext BIT STRING OPTIONAL,
        v590NonCriticalExtensions SEQUENCE {
          radioBearerSetup-v590ext RadioBearerSetup-v590ext-IEs,
          nonCriticalExtensions    SEQUENCE {} OPTIONAL
        } OPTIONAL
      } OPTIONAL
    }
  },
  criticalExtensions           CHOICE {
    r5                          SEQUENCE {
      radioBearerSetup-r5      RadioBearerSetup-r5-IEs,
      -- Container for adding non critical extensions after freezing REL-6
      radioBearerSetup-r5-add-ext BIT STRING OPTIONAL,
      nonCriticalExtensions    SEQUENCE {} OPTIONAL
    }
  },
  criticalExtensions           SEQUENCE {}
}
}
}
}

RadioBearerSetup-r3-IEs ::= SEQUENCE {
  -- User equipment IEs
  rrc-TransactionIdentifier    RRC-TransactionIdentifier,
  integrityProtectionModeInfo  IntegrityProtectionModeInfo    OPTIONAL,
  cipheringModeInfo           CipheringModeInfo                OPTIONAL,
  activationTime               ActivationTime                        OPTIONAL,
  new-U-RNTI                   U-RNTI                               OPTIONAL,
  new-C-RNTI                   C-RNTI                               OPTIONAL,
  rrc-StateIndicator           RRC-StateIndicator,
  utran-DRX-CycleLengthCoeff   UTRAN-DRX-CycleLengthCoefficient OPTIONAL,
  -- UTRAN mobility IEs
  ura-Identity                 URA-Identity                        OPTIONAL,
  -- Core network IEs
  cn-InformationInfo           CN-InformationInfo                OPTIONAL,
  -- Radio bearer IEs
  srb-InformationSetupList     SRB-InformationSetupList     OPTIONAL,
  rab-InformationSetupList     RAB-InformationSetupList     OPTIONAL,
  rb-InformationAffectedList   RB-InformationAffectedList   OPTIONAL,
  dl-CounterSynchronisationInfo DL-CounterSynchronisationInfo OPTIONAL,
  -- Transport channel IEs
  ul-CommonTransChInfo         UL-CommonTransChInfo         OPTIONAL,
  ul-deletedTransChInfoList    UL-DeletedTransChInfoList    OPTIONAL,
  ul-AddReconfTransChInfoList  UL-AddReconfTransChInfoList  OPTIONAL,
  modeSpecificTransChInfo      CHOICE {
    fdd                          SEQUENCE {
      cpch-SetID                 CPCH-SetID                    OPTIONAL,
      -- dummy is not used in this version of the specification, it should
      -- not be sent and if received it should be ignored.
      addReconfTransChDRAC-Info dummy DRAC-StaticInformationList OPTIONAL
    }
  },
  tdd                          NULL
}
dl-CommonTransChInfo          DL-CommonTransChInfo          OPTIONAL,
dl-DeletedTransChInfoList     DL-DeletedTransChInfoList     OPTIONAL,
dl-AddReconfTransChInfoList   DL-AddReconfTransChInfoList   OPTIONAL,

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-- Physical channel IEs
frequencyInfo          FrequencyInfo          OPTIONAL,
maxAllowedUL-TX-Power  MaxAllowedUL-TX-Power  OPTIONAL,
ul-ChannelRequirement  UL-ChannelRequirement  OPTIONAL,
modeSpecificPhysChInfo CHOICE {
    fdd
        dl-PDSCH-Information  DL-PDSCH-Information  OPTIONAL
    },
    tdd
        NULL
},
dl-CommonInformation  DL-CommonInformation  OPTIONAL,
dl-InformationPerRL-List  DL-InformationPerRL-List  OPTIONAL
}

RadioBearerSetup-v3a0ext ::= SEQUENCE {
    new-DSCH-RNTI          DSCH-RNTI          OPTIONAL
}

RadioBearerSetup-v4b0ext-IEs ::= SEQUENCE {
    -- Physical channel IEs
    -- ssdt-UL extends SSDT-Information, which is included in
    -- DL-CommonInformation. FDD only.
    ssdt-UL-r4            SSDT-UL            OPTIONAL,
    -- The order of the RLs in IE cell-id-PerRL-List is the same as
    -- in IE DL-InformationPerRL-List included in this message
    cell-id-PerRL-List    CellIdentity-PerRL-List  OPTIONAL
}

RadioBearerSetup-v590ext-IEs ::= SEQUENCE {
    -- Physical channel IEs
    dl-TPC-PowerOffsetPerRL-List  DL-TPC-PowerOffsetPerRL-List  OPTIONAL
}

RadioBearerSetup-r4-IEs ::= SEQUENCE {
    -- User equipment IEs
    integrityProtectionModeInfo  IntegrityProtectionModeInfo  OPTIONAL,
    cipheringModeInfo            CipheringModeInfo            OPTIONAL,
    activationTime                ActivationTime                OPTIONAL,
    new-U-RNTI                    U-RNTI                    OPTIONAL,
    new-C-RNTI                    C-RNTI                    OPTIONAL,
    new-DSCH-RNTI                DSCH-RNTI                OPTIONAL,
    rrc-StateIndicator            RRC-StateIndicator,
    utran-DRX-CycleLengthCoeff    UTRAN-DRX-CycleLengthCoefficient  OPTIONAL,
    -- UTRAN mobility IEs
    ura-Identity                  URA-Identity                  OPTIONAL,
    -- Core network IEs
    cn-InformationInfo            CN-InformationInfo            OPTIONAL,
    -- Radio bearer IEs
    srb-InformationSetupList      SRB-InformationSetupList      OPTIONAL,
    rab-InformationSetupList      RAB-InformationSetupList-r4  OPTIONAL,
    rb-InformationAffectedList     RB-InformationAffectedList     OPTIONAL,
    dl-CounterSynchronisationInfo DL-CounterSynchronisationInfo  OPTIONAL,
    -- Transport channel IEs
    ul-CommonTransChInfo          UL-CommonTransChInfo-r4      OPTIONAL,
    ul-deletedTransChInfoList     UL-DeletedTransChInfoList     OPTIONAL,
    ul-AddReconfTransChInfoList   UL-AddReconfTransChInfoList   OPTIONAL,
    modeSpecificTransChInfo        CHOICE {
        fdd
            SEQUENCE {
                cpch-SetID          CPCH-SetID          OPTIONAL,
                -- dummy is not used in this version of the specification, it should
                -- not be sent and if received it should be ignored.
                addReconfTransChDRAC-Infodummy  DRAC-StaticInformationList  OPTIONAL
            },
            tdd
                NULL
        },
        dl-CommonTransChInfo          DL-CommonTransChInfo-r4      OPTIONAL,
        dl-DeletedTransChInfoList     DL-DeletedTransChInfoList     OPTIONAL,
        dl-AddReconfTransChInfoList-r4 DL-AddReconfTransChInfoList-r4  OPTIONAL
    -- Physical channel IEs
    frequencyInfo          FrequencyInfo          OPTIONAL,
    maxAllowedUL-TX-Power  MaxAllowedUL-TX-Power  OPTIONAL,
    ul-ChannelRequirement  UL-ChannelRequirement-r4  OPTIONAL,
    modeSpecificPhysChInfo CHOICE {
        fdd
            dl-PDSCH-Information  DL-PDSCH-Information  OPTIONAL
        },
        tdd
            NULL
    },
}

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    dl-CommonInformation          DL-CommonInformation-r4          OPTIONAL,
    dl-InformationPerRL-List      DL-InformationPerRL-List-r4      OPTIONAL,
}

RadioBearerSetup-r5-IEs ::= SEQUENCE {
-- User equipment IES
    integrityProtectionModeInfo  IntegrityProtectionModeInfo    OPTIONAL,
    cipheringModeInfo            CipheringModeInfo              OPTIONAL,
    activationTime               ActivationTime                  OPTIONAL,
    new-U-RNTI                   U-RNTI                        OPTIONAL,
    new-C-RNTI                   C-RNTI                        OPTIONAL,
    new-DSCH-RNTI               DSCH-RNTI                     OPTIONAL,
    new-H-RNTI                   H-RNTI                        OPTIONAL,
    rrc-StateIndicator           RRC-StateIndicator,
    utran-DRX-CycleLengthCoeff  UTRAN-DRX-CycleLengthCoefficient OPTIONAL,
-- UTRAN mobility IES
    ura-Identity                 URA-Identity                  OPTIONAL,
-- Core network IES
    cn-InformationInfo           CN-InformationInfo            OPTIONAL,
-- Radio bearer IES
    srb-InformationSetupList     SRB-InformationSetupList-r5   OPTIONAL,
    rab-InformationSetupList     RAB-InformationSetupList-r5   OPTIONAL,
    rb-InformationAffectedList   RB-InformationAffectedList-r5  OPTIONAL,
    dl-CounterSynchronisationInfo DL-CounterSynchronisationInfo-r5 OPTIONAL,
-- Transport channel IES
    ul-CommonTransChInfo        UL-CommonTransChInfo-r4       OPTIONAL,
    ul-deletedTransChInfoList    UL-DeletedTransChInfoList     OPTIONAL,
    ul-AddReconfTransChInfoList  UL-AddReconfTransChInfoList   OPTIONAL,
    modeSpecificTransChInfo      CHOICE {
        fdd                      SEQUENCE {
            cpch-SetID           CPCH-SetID                    OPTIONAL,
            -- dummy is not used in this version of the specification, it should
            -- not be sent and if received it should be ignored.
            addReconfTransChDRAC-Info dummy DRAC-StaticInformationList OPTIONAL
        },
        tdd                      NULL
    }
    dl-CommonTransChInfo        DL-CommonTransChInfo-r4       OPTIONAL,
    dl-DeletedTransChInfoList    DL-DeletedTransChInfoList-r5  OPTIONAL,
    dl-AddReconfTransChInfoList  DL-AddReconfTransChInfoList-r5 OPTIONAL,
-- Physical channel IES
    frequencyInfo               FrequencyInfo                   OPTIONAL,
    maxAllowedUL-TX-Power       MaxAllowedUL-TX-Power          OPTIONAL,
    ul-ChannelRequirement       UL-ChannelRequirement-r5       OPTIONAL,
    modeSpecificPhysChInfo      CHOICE {
        fdd                      SEQUENCE {
            dl-PDSCH-Information  DL-PDSCH-Information          OPTIONAL
        },
        tdd                      NULL
    },
    dl-HSPDSCH-Information      DL-HSPDSCH-Information         OPTIONAL,
    dl-CommonInformation        DL-CommonInformation-r5        OPTIONAL,
    dl-InformationPerRL-List     DL-InformationPerRL-List-r5    OPTIONAL,
}

-- *****
--
-- TRANSPORT CHANNEL RECONFIGURATION
--
-- *****

TransportChannelReconfiguration ::= CHOICE {
    r3                          SEQUENCE {
        transportChannelReconfiguration-r3
        TransportChannelReconfiguration-r3-IEs,
    v3a0NonCriticalExtensions    SEQUENCE {
        transportChannelReconfiguration-v3a0ext
        TransportChannelReconfiguration-v3a0ext,
    laterNonCriticalExtensions    SEQUENCE {
        -- Container for additional R99 extensions
        transportChannelReconfiguration-r3-add-ext    BIT STRING    OPTIONAL,
    v4b0NonCriticalExtensions    SEQUENCE {
        transportChannelReconfiguration-v4b0ext
        TransportChannelReconfiguration-v4b0ext-IEs,
    v590NonCriticalExtensions    SEQUENCE {
        transportChannelReconfiguration-v590ext
        TransportChannelReconfiguration-v590ext-IEs,

```



```

}

TransportChannelReconfiguration-v3a0ext ::= SEQUENCE {
    new-DSCH-RNTI          DSCH-RNTI          OPTIONAL
}

TransportChannelReconfiguration-v4b0ext-IEs ::= SEQUENCE {
    -- Physical channel IEs
    -- ssdt-UL extends SSDT-Information, which is included in
    -- DL-CommonInformation. FDD only.
    ssdt-UL-r4            SSDT-UL            OPTIONAL,
    -- The order of the RLs in IE cell-id-PerRL-List is the same as
    -- in IE DL-InformationPerRL-List included in this message
    cell-id-PerRL-List    CellIdentity-PerRL-List    OPTIONAL
}

TransportChannelReconfiguration-v590ext-IEs ::= SEQUENCE {
    -- Physical channel IEs
    dl-TPC-PowerOffsetPerRL-List    DL-TPC-PowerOffsetPerRL-List    OPTIONAL
}

TransportChannelReconfiguration-r4-IEs ::= SEQUENCE {
    -- User equipment IEs
    integrityProtectionModeInfo    IntegrityProtectionModeInfo    OPTIONAL,
    cipheringModeInfo              CipheringModeInfo              OPTIONAL,
    activationTime                  ActivationTime              OPTIONAL,
    new-U-RNTI                     U-RNTI                     OPTIONAL,
    new-C-RNTI                     C-RNTI                     OPTIONAL,
    new-DSCH-RNTI                  DSCH-RNTI                  OPTIONAL,
    rrc-StateIndicator             RRC-StateIndicator,
    utran-DRX-CycleLengthCoeff      UTRAN-DRX-CycleLengthCoefficient    OPTIONAL,
    -- Core network IEs
    cn-InformationInfo             CN-InformationInfo             OPTIONAL,
    -- UTRAN mobility IEs
    ura-Identity                   URA-Identity                   OPTIONAL,
    -- Radio bearer IEs
    dl-CounterSynchronisationInfo    DL-CounterSynchronisationInfo    OPTIONAL,
    -- Transport channel IEs
    ul-CommonTransChInfo          UL-CommonTransChInfo-r4          OPTIONAL,
    ul-AddReconfTransChInfoList    UL-AddReconfTransChInfoList    OPTIONAL,
    modeSpecificTransChInfo        CHOICE {
        fdd                        SEQUENCE {
            cpch-SetID            CPCH-SetID            OPTIONAL,
            -- dummy is not used in this version of the specification, it should
            -- not be sent and if received it should be ignored.
            addReconfTransChDRAC-Infodummy    DRAC-StaticInformationList    OPTIONAL
        },
        tdd                        NULL
    }
    dl-CommonTransChInfo          DL-CommonTransChInfo-r4          OPTIONAL,
    dl-AddReconfTransChInfoList    DL-AddReconfTransChInfoList-r4    OPTIONAL,
    -- Physical channel IEs
    frequencyInfo                 FrequencyInfo                 OPTIONAL,
    maxAllowedUL-TX-Power          MaxAllowedUL-TX-Power          OPTIONAL,
    ul-ChannelRequirement          UL-ChannelRequirement-r4          OPTIONAL,
    modeSpecificPhysChInfo        CHOICE {
        fdd                        SEQUENCE {
            dl-PDSCH-Information    DL-PDSCH-Information    OPTIONAL
        },
        tdd                        NULL
    },
    dl-CommonInformation          DL-CommonInformation-r4          OPTIONAL,
    dl-InformationPerRL-List      DL-InformationPerRL-List-r4      OPTIONAL
}

TransportChannelReconfiguration-r5-IEs ::= SEQUENCE {
    -- User equipment IEs
    integrityProtectionModeInfo    IntegrityProtectionModeInfo    OPTIONAL,
    cipheringModeInfo              CipheringModeInfo              OPTIONAL,
    activationTime                  ActivationTime              OPTIONAL,
    new-U-RNTI                     U-RNTI                     OPTIONAL,
    new-C-RNTI                     C-RNTI                     OPTIONAL,
    new-DSCH-RNTI                  DSCH-RNTI                  OPTIONAL,
    new-H-RNTI                     H-RNTI                     OPTIONAL,
    rrc-StateIndicator             RRC-StateIndicator,
    utran-DRX-CycleLengthCoeff      UTRAN-DRX-CycleLengthCoefficient    OPTIONAL,
    -- Core network IEs
    cn-InformationInfo             CN-InformationInfo             OPTIONAL,

```

```

-- UTRAN mobility IEs
  ura-Identity          URA-Identity          OPTIONAL,
-- Radio bearer IEs
  dl-CounterSynchronisationInfo  DL-CounterSynchronisationInfo-r5  OPTIONAL,
-- Transport channel IEs
  ul-CommonTransChInfo          UL-CommonTransChInfo-r4          OPTIONAL,
  ul-AddReconfTransChInfoList    UL-AddReconfTransChInfoList    OPTIONAL,
  modeSpecificTransChInfo        CHOICE {
    fdd                            SEQUENCE {
      cpch-SetID                    CPCH-SetID                    OPTIONAL,
      -- dummy is not used in this version of the specification, it should
      -- not be sent and if received it should be ignored.
      addReconfTransChDRAC-Infodummy          DRAC-StaticInformationList  OPTIONAL
    },
    tdd                            NULL
  }
  dl-CommonTransChInfo          DL-CommonTransChInfo-r4          OPTIONAL,
  dl-AddReconfTransChInfoList    DL-AddReconfTransChInfoList-r5    OPTIONAL,
-- Physical channel IEs
  frequencyInfo              FrequencyInfo              OPTIONAL,
  maxAllowedUL-TX-Power      MaxAllowedUL-TX-Power      OPTIONAL,
  ul-ChannelRequirement      UL-ChannelRequirement-r5    OPTIONAL,
  modeSpecificPhysChInfo      CHOICE {
    fdd                            SEQUENCE {
      dl-PDSCH-Information          DL-PDSCH-Information          OPTIONAL
    },
    tdd                            NULL
  },
  dl-HSPDSCH-Information      DL-HSPDSCH-Information      OPTIONAL,
  dl-CommonInformation        DL-CommonInformation-r5    OPTIONAL,
  dl-InformationPerRL-List    DL-InformationPerRL-List-r5  OPTIONAL
}

```

11.3 Information element definitions

```

DL-PhysChCapabilityFDD ::=                               SEQUENCE {
    maxNoDPCH-PDSCH-Codes                               INTEGER (1..8),
    maxNoPhysChBitsReceived                             MaxNoPhysChBitsReceived,
    supportForSF-512                                    BOOLEAN,
    supportOfPDSCH                                       BOOLEAN,
    simultaneousSCCPCH-DPCH-Reception simultaneousSCCPCH-DPCH-Reception dummy SimultaneousSCCPCH-DPCH-Reception
}

-- PhysicalChannelCapability-hspdsch-r5 describes the HS-PDSCH physical channel capability
PhysicalChannelCapability-hspdsch-r5 ::=                SEQUENCE {
    fdd-hspdsch                                         CHOICE {
        supported                                         SEQUENCE {
            hsdSCH-physical-layer-category                HSDSCH-physical-layer-category,
            supportOfDedicatedPilotsForChannelEstimationOfHSDSCH BOOLEAN,
            simultaneousSCCPCH-DPCH-HSDSCH-Reception simultaneousSCCPCH-DPCH-HSDSCH-Reception dummy BOOLEAN
        },
        unsupported                                       NULL
    },
    tdd384-hspdsch                                       CHOICE {
        supported                                         HSDSCH-physical-layer-category,
        unsupported                                       NULL
    },
    tdd128-hspdsch                                       CHOICE {
        supported                                         HSDSCH-physical-layer-category,
        unsupported                                       NULL
    }
}

DL-InformationPerRL ::=                                 SEQUENCE {
    modeSpecificInfo                                     CHOICE {
        fdd                                                 SEQUENCE {
            primaryCPICH-Info                             PrimaryCPICH-Info,
            pdsch-SHO-DCH-Info                             PDSCH-SHO-DCH-Info           OPTIONAL,
            pdsch-CodeMapping                             PDSCH-CodeMapping           OPTIONAL
        },
        tdd                                                 PrimaryCCPCH-Info
    },
    dl-DPCH-InfoPerRL                                     DL-DPCH-InfoPerRL           OPTIONAL,
    seePCH-InfoForFACH seePCH-InfoForFACH dummy SCCPCH-InfoForFACH           OPTIONAL
}

DL-InformationPerRL-r4 ::=                             SEQUENCE {
    modeSpecificInfo                                     CHOICE {
        fdd                                                 SEQUENCE {
            primaryCPICH-Info                             PrimaryCPICH-Info,
            pdsch-SHO-DCH-Info                             PDSCH-SHO-DCH-Info           OPTIONAL,
            pdsch-CodeMapping                             PDSCH-CodeMapping           OPTIONAL
        },
        tdd                                                 PrimaryCCPCH-Info-r4
    },
    dl-DPCH-InfoPerRL                                     DL-DPCH-InfoPerRL-r4       OPTIONAL,
    seePCH-InfoForFACH seePCH-InfoForFACH dummy SCCPCH-InfoForFACH-r4           OPTIONAL,
    cell-id                                               CellIdentity                 OPTIONAL
}

DL-InformationPerRL-r5 ::=                             SEQUENCE {
    modeSpecificInfo                                     CHOICE {
        fdd                                                 SEQUENCE {
            primaryCPICH-Info                             PrimaryCPICH-Info,
            pdsch-SHO-DCH-Info                             PDSCH-SHO-DCH-Info           OPTIONAL,

```

```

        pdsch-CodeMapping          PDSCH-CodeMapping          OPTIONAL,
        servingHSDSCH-RL-indicator  BOOLEAN
    },
    tdd                            PrimaryCCPCH-Info-r4
},
dl-DPCH-InfoPerRL                DL-DPCH-InfoPerRL-r5          OPTIONAL,
-- dummy is not used in this version of the specification, it should
-- not be sent and if received it should be ignored.
scpch-InfoForFACHdummy        SCCPCH-InfoForFACH-r4      OPTIONAL,
cell-id                          CellIdentity                OPTIONAL
}

DL-InformationPerRL-r5bis ::=      SEQUENCE {
    modeSpecificInfo              CHOICE {
        fdd                       SEQUENCE {
            primaryCPICH-Info      PrimaryCPICH-Info,
            pdsch-SHO-DCH-Info     PDSCH-SHO-DCH-Info          OPTIONAL,
            pdsch-CodeMapping      PDSCH-CodeMapping          OPTIONAL
        },
        tdd                       PrimaryCCPCH-Info-r4
    },
    dl-DPCH-InfoPerRL            DL-DPCH-InfoPerRL-r5          OPTIONAL,
-- dummy is not used in this version of the specification, it should
-- not be sent and if received it should be ignored.
scpch-InfoForFACHdummy        SCCPCH-InfoForFACH-r4      OPTIONAL,
cell-id                          CellIdentity                OPTIONAL
}

SysInfoType10 ::=                 SEQUENCE {
    -- User equipment IEs
-- dummy is not used in this version of the specification, it should
-- not be sent and if received it should be ignored.
drac-SysInfoListdummy        DRAC-SysInfoList,
    -- Extension mechanism for non- release99 information
    nonCriticalExtensions         SEQUENCE {}                OPTIONAL
}

```

11.5 RRC information between network nodes

```

SRNC-RelocationInfo-r3-IEs ::=          SEQUENCE {
  -- Non-RRC IEs
  stateOfRRC                StateOfRRC,
  stateOfRRC-Procedure      StateOfRRC-Procedure,
  -- Ciphering related information IEs
  -- If the extension v380 is included use the extension for the ciphering status per CN domain
  cipheringStatus           CipheringStatus,
  calculationTimeForCiphering CalculationTimeForCiphering          OPTIONAL,
  -- The order of occurrence in the IE cipheringInfoPerRB-List is the
  -- same as the RBs in SRB-InformationSetupList in RAB-InformationSetupList.
  -- The signalling RBs are supposed to be listed
  -- first. Only UM and AM RBs that are ciphered are listed here
  cipheringInfoPerRB-List   CipheringInfoPerRB-List                OPTIONAL,
  count-C-List              COUNT-C-List                          OPTIONAL,
  integrityProtectionStatus IntegrityProtectionStatus,
  -- In the IE srb-SpecificIntegrityProtInfo, the first information listed corresponds to
  -- signalling radio bearer RB0 and after the order of occurrence is the same as the SRBs in
  -- SRB-InformationSetupList
  -- The target RNC may ignore the IE srb-SpecificIntegrityProtInfo if the
  -- IE integrityProtectionStatus has the value "not started".
  srb-SpecificIntegrityProtInfo SRB-SpecificIntegrityProtInfoList,
  implementationSpecificParams ImplementationSpecificParams        OPTIONAL,
  -- User equipment IEs
  u-RNTI                    U-RNTI,
  c-RNTI                    C-RNTI                                OPTIONAL,
  ue-RadioAccessCapability  UE-RadioAccessCapability,
  ue-Positioning-LastKnownPos UE-Positioning-LastKnownPos          OPTIONAL,
  -- Other IEs
  ue-RATSpecificCapability  InterRAT-UE-RadioAccessCapabilityList  OPTIONAL,
  -- UTRAN mobility IEs
  ura-Identity              URA-Identity                        OPTIONAL,
  -- Core network IEs
  cn-CommonGSM-MAP-NAS-SysInfo NAS-SystemInformationGSM-MAP,
  cn-DomainInformationList  CN-DomainInformationList          OPTIONAL,
  -- Measurement IEs
  ongoingMeasRepList        OngoingMeasRepList                OPTIONAL,
  -- Radio bearer IEs
  predefinedConfigStatusList PredefinedConfigStatusList,
  srb-InformationList       SRB-InformationSetupList,
  rab-InformationList       RAB-InformationSetupList          OPTIONAL,
  -- Transport channel IEs
  ul-CommonTransChInfo     UL-CommonTransChInfo                OPTIONAL,
  ul-TransChInfoList       UL-AddReconfTransChInfoList          OPTIONAL,
  modeSpecificInfo         CHOICE {
    fdd                     SEQUENCE {
      cpch-SetID            CPCH-SetID                OPTIONAL,
      -- dummy is not used in this version of the specification, it should
      -- not be sent and if received it should be ignored.
      transChDRAC-Info      DRAC-StaticInformationList  OPTIONAL
    },
    tdd                     NULL
  },
  dl-CommonTransChInfo     DL-CommonTransChInfo                OPTIONAL,
  dl-TransChInfoList       DL-AddReconfTransChInfoList          OPTIONAL,
  -- Measurement report
  measurementReport        MeasurementReport                OPTIONAL
}

```

```

SRNC-RelocationInfo-r4-IEs ::=          SEQUENCE {
  -- Non-RRC IEs
  -- IE rb-IdentityForHOMessage includes the identity of the RB used by the source SRNC
  -- to send the message contained in the IE "TargetRNC-ToSourceRNC-Container".
  -- Only included if type is "UE involved"
  rb-IdentityForHOMessage   RB-Identity                                OPTIONAL,
  stateOfRRC                StateOfRRC,
  stateOfRRC-Procedure      StateOfRRC-Procedure,
  -- Ciphering related information IEs
  cipheringStatusList       CipheringStatusList-r4,
  latestConfiguredCN-Domain CN-DomainIdentity,
  calculationTimeForCiphering CalculationTimeForCiphering          OPTIONAL,
  count-C-List              COUNT-C-List                          OPTIONAL,
  cipheringInfoPerRB-List   CipheringInfoPerRB-List-r4          OPTIONAL,
}

```

```

-- Integrity protection related information IEs
  integrityProtectionStatus      IntegrityProtectionStatus,
  -- The target RNC may ignore the IE srb-SpecificIntegrityProtInfo if the
  -- IE integrityProtectionStatus has the value "not started".
  srb-SpecificIntegrityProtInfo  SRB-SpecificIntegrityProtInfoList,
  implementationSpecificParams  ImplementationSpecificParams      OPTIONAL,
-- User equipment IEs
  u-RNTI                          U-RNTI,
  c-RNTI                          C-RNTI                          OPTIONAL,
  ue-RadioAccessCapability        UE-RadioAccessCapability-r4,
  ue-RadioAccessCapability-ext    UE-RadioAccessCapabBandFDDList  OPTIONAL,
  ue-Positioning-LastKnownPos    UE-Positioning-LastKnownPos    OPTIONAL,
  ueSpecificBehaviourInformationlidle  UESpecificBehaviourInformationlidle  OPTIONAL,
  ueSpecificBehaviourInformationlinterRAT  UESpecificBehaviourInformationlinterRAT
OPTIONAL,
-- Other IEs
  ue-RATSpecificCapability        InterRAT-UE-RadioAccessCapabilityList  OPTIONAL,
-- UTRAN mobility IEs
  ura-Identity                    URA-Identity                    OPTIONAL,
-- Core network IEs
  cn-CommonGSM-MAP-NAS-SysInfo   NAS-SystemInformationGSM-MAP,
  cn-DomainInformationList       CN-DomainInformationListFull  OPTIONAL,
-- Measurement IEs
  ongoingMeasRepList             OngoingMeasRepList-r4        OPTIONAL,
-- Radio bearer IEs
  predefinedConfigStatusList     PredefinedConfigStatusList,
  srb-InformationList            SRB-InformationSetupList,
  rab-InformationList            RAB-InformationSetupList-r4  OPTIONAL,
-- Transport channel IEs
  ul-CommonTransChInfo          UL-CommonTransChInfo-r4      OPTIONAL,
  ul-TransChInfoList            UL-AddReconfTransChInfoList  OPTIONAL,
  modeSpecificInfo               CHOICE {
    fdd                          SEQUENCE {
      cpch-SetID                 CPCH-SetID                 OPTIONAL,
      -- dummy is not used in this version of the specification, it should
      -- not be sent and if received it should be ignored.
      transChDRAC-Infodummy  DRAC-StaticInformationList  OPTIONAL
    },
    tdd                          NULL
  }
  dl-CommonTransChInfo          DL-CommonTransChInfo-r4      OPTIONAL,
  dl-TransChInfoList            DL-AddReconfTransChInfoList-r4  OPTIONAL,
-- Measurement report
  measurementReport              MeasurementReport              OPTIONAL,
  failureCause                   FailureCauseWithProtErr      OPTIONAL
}

SRNC-RelocationInfo-r5-IEs ::= SEQUENCE {
  -- Non-RRC IEs
  -- IE rb-IdentityForHOMessage includes the identity of the RB used by the source SRNC
  -- to send the message contained in the IE "TargetRNC-ToSourceRNC-Container".
  -- Only included if type is "UE involved"
  rb-IdentityForHOMessage        RB-Identity                    OPTIONAL,
  stateOfRRC                     StateOfRRC,
  stateOfRRC-Procedure           StateOfRRC-Procedure,
-- Ciphering related information IEs
  cipheringStatusList            CipheringStatusList-r4,
  latestConfiguredCN-Domain      CN-DomainIdentity,
  calculationTimeForCiphering    CalculationTimeForCiphering    OPTIONAL,
  count-C-List                   COUNT-C-List                   OPTIONAL,
  cipheringInfoPerRB-List        CipheringInfoPerRB-List-r4    OPTIONAL,
-- Integrity protection related information IEs
  integrityProtectionStatus      IntegrityProtectionStatus,
  srb-SpecificIntegrityProtInfo  SRB-SpecificIntegrityProtInfoList  OPTIONAL,
  implementationSpecificParams  ImplementationSpecificParams  OPTIONAL,
-- User equipment IEs
  u-RNTI                          U-RNTI,
  c-RNTI                          C-RNTI                          OPTIONAL,
  ue-RadioAccessCapability        UE-RadioAccessCapability-r5,
  ue-RadioAccessCapability-ext    UE-RadioAccessCapabBandFDDList  OPTIONAL,
  ue-Positioning-LastKnownPos    UE-Positioning-LastKnownPos    OPTIONAL,
  ueSpecificBehaviourInformationlidle  UESpecificBehaviourInformationlidle  OPTIONAL,
  ueSpecificBehaviourInformationlinterRAT  UESpecificBehaviourInformationlinterRAT  OPTIONAL,
-- Other IEs
  ue-RATSpecificCapability        InterRAT-UE-RadioAccessCapabilityList-r5  OPTIONAL,
-- UTRAN mobility IEs

```

```

ura-Identity                URA-Identity                OPTIONAL,
-- Core network IEs
cn-CommonGSM-MAP-NAS-SysInfo  NAS-SystemInformationGSM-MAP,
cn-DomainInformationList      CN-DomainInformationListFull    OPTIONAL,
-- Measurement IEs
ongoingMeasRepList           OngoingMeasRepList-r5          OPTIONAL,
-- Radio bearer IEs
predefinedConfigStatusList   PredefinedConfigStatusList,
srb-InformationList           SRB-InformationSetupList-r5,
rab-InformationList           RAB-InformationSetupList-r5    OPTIONAL,
-- Transport channel IEs
ul-CommonTransChInfo         UL-CommonTransChInfo-r4        OPTIONAL,
ul-TransChInfoList           UL-AddReconfTransChInfoList    OPTIONAL,
modeSpecificInfo             CHOICE {
    fdd                        SEQUENCE {
        cpch-SetID            CPCH-SetID                    OPTIONAL,
        -- dummy is not used in this version of the specification, it should
        -- not be sent and if received it should be ignored.
        transChDRAC-Infodummy      DRAC-StaticInformationList  OPTIONAL
    },
    tdd                        NULL
}
dl-CommonTransChInfo         DL-CommonTransChInfo-r4        OPTIONAL,
dl-TransChInfoList           DL-AddReconfTransChInfoList-r5  OPTIONAL,
-- PhyCH IEs
tpc-CombinationInfoList      TPC-CombinationInfoList        OPTIONAL,
-- Measurement report
measurementReport             MeasurementReport                OPTIONAL,
-- Other IEs
failureCause                  FailureCauseWithProtErr         OPTIONAL
}

DL-PhysChCapabilityFDD-r4 ::= SEQUENCE {
    maxNoDPCH-PDSCH-Codes      INTEGER (1..8),
    maxNoPhysChBitsReceived    MaxNoPhysChBitsReceived,
    supportForSF-512           BOOLEAN,
    supportOfPDSCH              BOOLEAN,
    -- dummy is not used in this version of the specification and
    -- it should be ignored by the receiver.
    simultaneousSCCPCH-DPCH-Receptiondummy SimultaneousSCCPCH-DPCH-Reception,
    supportOfDedicatedPilotsForChEstimation SupportOfDedicatedPilotsForChEstimation  OPTIONAL
}

DL-PhysChCapabilityFDD-r5 ::= SEQUENCE {
    maxNoDPCH-PDSCH-Codes      INTEGER (1..8),
    maxNoPhysChBitsReceived    MaxNoPhysChBitsReceived,
    supportForSF-512           BOOLEAN,
    supportOfPDSCH              BOOLEAN,
    simultaneousSCCPCH-DPCH-Reception SimultaneousSCCPCH-DPCH-Reception,
    supportOfDedicatedPilotsForChEstimation SupportOfDedicatedPilotsForChEstimation  OPTIONAL,
    fdd-hspdsch                CHOICE {
        supported              SEQUENCE {
            hsdSCH-physical-layer-category HSDSCH-physical-layer-category,
            supportOfDedicatedPilotsForChannelEstimationOfHSDSCH BOOLEAN,
            simultaneousSCCPCH-DPCH-HSDSCH-Reception shall be true only if the
            -- IE SimultaneousSCCPCH-DPCH-Reception indicates support of simultaneous-
            -- reception of S-CCPCH and DPCH
            -- dummy is not used in this version of the specification and
            -- it should be ignored by the receiver.
            simultaneousSCCPCH-DPCH-HSDSCH-Receptiondummy  BOOLEAN
        },
        unsupported            NULL
    }
}
}

```

13.5.2 RRC procedure performance values

NOTE: Times indicated in the table do not include cell reselection.

Procedure title:	UTRAN -> UE	UE -> UTRAN	N1	N2	Notes
RRC Connection Management Procedures					
Broadcast of system information	SYSTEM INFORMATION				N2 is not applicable for any system information messages, because there is no response message from the UE.
Master Information Block	SYSTEM INFORMATION		5	NA	No system information data shall be lost due to processing of a MIB received with no detectable errors. This means that the UE shall buffer all system information data received after the MIB until the data can be processed according to the information in the MIB, unless the MIB was received erroneously.
System Information Block type 1	SYSTEM INFORMATION		10	NA	
System Information Block type 2	SYSTEM INFORMATION		10	NA	
System Information Block type 3	SYSTEM INFORMATION		10	NA	
System Information Block type 4	SYSTEM INFORMATION		10	NA	
System Information Block type 5	SYSTEM INFORMATION		10	NA	
System Information Block type 6	SYSTEM INFORMATION		10	NA	
System Information Block type 7	SYSTEM INFORMATION		5	NA	
System Information Block type 8	SYSTEM INFORMATION		10	NA	
System Information Block type 9	SYSTEM INFORMATION		5	NA	
System Information Block type 10	SYSTEM INFORMATION		5	NA	
System Information Block type 11	SYSTEM INFORMATION		10	NA	
System Information Block type 12	SYSTEM INFORMATION		10	NA	
System Information Block type 13	SYSTEM INFORMATION		10	NA	
System Information Block type 14	SYSTEM INFORMATION		10	NA	
System Information Block type 15	SYSTEM INFORMATION		10	NA	
System Information Block type 16	SYSTEM INFORMATION		10	NA	
System Information Block type 18	SYSTEM INFORMATION		10	NA	

Procedure title:	UTRAN -> UE	UE -> UTRAN	N1	N2	Notes
RRC connection establishment <i>Target state CELL_DCH</i>	RRC CONNECTION SETUP	RRC CONNECTION SETUP COMPLETE	10	NA	N1 measures time to the start of tx / rx on DPCH. N2 cannot be specified, because RRC CONNECTION SETUP COMPLETE message is transmitted only after physical layer synchronisation, which also depends on the Node B. The performance of the physical layer synchronisation procedure is specified in [19] and [20]
RRC connection establishment <i>Target state CELL_FACH</i>	RRC CONNECTION SETUP	RRC CONNECTION SETUP COMPLETE	10	11	N1 and N2 applicable as defined (N2 can be tested from the initiation of the power ramp on RACH).
RRC connection release <i>From CELL_DCH state</i>	RRC CONNECTION RELEASE	RRC CONNECTION RELEASE COMPLETE	5	8	N1 sets the requirement for the time from the completion of the last repetition of the RRC CONNECTION RELEASE COMPLETE message to the release of the physical channel. N2 sets the requirement from the end of successful reception of the RRC CONNECTION RELEASE message to the start of the first transmission of the RRC CONNECTION RELEASE COMPLETE message.
RRC connection release <i>From CELL_FACH state</i>	RRC CONNECTION RELEASE	RRC CONNECTION RELEASE COMPLETE	NA	11	N1 represents UE internal configuration that cannot be externally observed.
Paging	PAGING TYPE 1	CELL UPDATE	10	11+ T	T is the repetition period of SIB7 (applicable for FDD) and SIB14 (applicable for TDD)
UE capability enquiry	UE CAPABILITY ENQUIRY	UE CAPABILITY INFORMATION	NA	8	N1 is not applicable because the UE configuration does not change.
Security mode control	SECURITY MODE COMMAND	SECURITY MODE COMPLETE	5	8	
Signalling connection release procedure	SIGNALLING CONNECTION RELEASE		5	NA	N2 is not applicable because there is no response message.
Counter check	COUNTER CHECK	COUNTER CHECK RESPONSE	NA	8	N1 is not applicable because the UE configuration does not change.
Radio Bearer control procedures					
Radio bearer establishment <i>Target state CELL_DCH</i>	RADIO BEARER SETUP	RADIO BEARER SETUP COMPLETE / FAILURE	10	NA	N2 cannot be specified, because the RADIO BEARER SETUP COMPLETE / FAILURE message is transmitted only after physical layer synchronisation, which depends also on Node B.
Radio bearer establishment <i>From state CELL_FACH to state CELL_FACH</i>	RADIO BEARER SETUP	RADIO BEARER SETUP COMPLETE / FAILURE	10	11	

Procedure title:	UTRAN -> UE	UE -> UTRAN	N1	N2	Notes
Radio bearer establishment <i>From CELL_DCH to CELL_FACH</i>	RADIO BEARER SETUP	RADIO BEARER SETUP COMPLETE	NA	NA	N1 and N2 cannot be specified, because UE need to read SIBs on BCH before sending RADIO BEARER SETUP COMPLETE
Radio bearer reconfiguration <i>Target state CELL_DCH</i>	RADIO BEARER RECONFIGURATION	RADIO BEARER RECONFIGURATION COMPLETE / FAILURE	10	NA	N2 cannot be specified, because the RADIO BEARER RECONFIGURATION COMPLETE / FAILURE message is transmitted only after physical layer synchronisation, which depends also on Node B.
Radio bearer reconfiguration <i>From state CELL_FACH to state CELL_FACH</i>	RADIO BEARER RECONFIGURATION	RADIO BEARER RECONFIGURATION COMPLETE / FAILURE	10	11	
Radio bearer reconfiguration <i>From state CELL_DCH to state CELL_FACH</i>	RADIO BEARER RECONFIGURATION	RADIO BEARER RECONFIGURATION COMPLETE	NA	NA	N1 and N2 cannot be specified, because UE need to read SIBs on BCH before sending RADIO BEARER RECONFIGURATION COMPLETE
Radio bearer release <i>Target state CELL_DCH</i>	RADIO BEARER RELEASE	RADIO BEARER RELEASE COMPLETE / FAILURE	10	11	
Radio bearer release <i>From state CELL_FACH to state CELL_FACH</i>	RADIO BEARER RELEASE	RADIO BEARER RELEASE COMPLETE / FAILURE	10	11	
Radio bearer release <i>From state CELL_DCH to state CELL_FACH</i>	RADIO BEARER RELEASE	RADIO BEARER RELEASE COMPLETE	NA	NA	N1 and N2 cannot be specified, because UE need to read SIBs on BCH before sending RADIO BEARER RECONFIGURATION COMPLETE
Transport channel reconfiguration <i>Target state CELL_DCH</i>	TRANSPORT CHANNEL RECONFIGURATION	TRANSPORT CHANNEL RECONFIGURATION COMPLETE / FAILURE	10	NA	N2 cannot be specified, because the TRANSPORT CHANNEL RECONFIGURATION COMPLETE / FAILURE message is transmitted only after physical layer synchronisation, which depends also on Node B.
Transport channel reconfiguration <i>From state CELL_FACH to state CELL_FACH</i>	TRANSPORT CHANNEL RECONFIGURATION	TRANSPORT CHANNEL RECONFIGURATION COMPLETE / FAILURE	10	11	
Transport channel reconfiguration <i>From state CELL_DCH to state CELL_FACH</i>	TRANSPORT CHANNEL RECONFIGURATION	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	NA	NA	N1 and N2 cannot be specified, because UE need to read SIBs on BCH before sending TRANSPORT CHANNEL RECONFIGURATION COMPLETE
Transport format combination control <i>AM or UM RLC mode</i>	TRANSPORT FORMAT COMBINATION CONTROL	TRANSPORT FORMAT COMBINATION CONTROL FAILURE	5	8	
Transport format combination control <i>Transparent mode</i>	TRANSPORT FORMAT COMBINATION CONTROL		5	NA	N2 is not applicable because no response message is defined.

Procedure title:	UTRAN -> UE	UE -> UTRAN	N1	N2	Notes
Physical channel reconfiguration <i>Target state CELL_DCH</i>	PHYSICAL CHANNEL RECONFIGURATION	PHYSICAL CHANNEL RECONFIGURATION COMPLETE / FAILURE	8	NA	N2 cannot be specified, because the PHYSICAL CHANNEL RECONFIGURATION COMPLETE / FAILURE message is transmitted only after physical layer synchronisation, which depends also on Node B.
Physical channel reconfiguration <i>From state CELL_FACH to state CELL_FACH</i>	PHYSICAL CHANNEL RECONFIGURATION	PHYSICAL CHANNEL RECONFIGURATION COMPLETE / FAILURE	8	9	
Physical channel reconfiguration <i>From state CELL_DCH to state CELL_FACH</i>	PHYSICAL CHANNEL RECONFIGURATION	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	NA	NA	N1 and N2 cannot be specified, because UE need to read SIBs on BCH before sending PHYSICAL CHANNEL RECONFIGURATION COMPLETE
Physical Shared Channel Allocation [TDD only]	PHYSICAL SHARED CHANNEL ALLOCATION		5	NA	N2 is not applicable because no response message is defined.
Uplink Physical Channel Control [TDD only]	UPLINK PHYSICAL CHANNEL CONTROL		8	NA	Requirements for outer loop and timing advance adjustments are defined in [22] and [20]. N2 is not applicable because there is no response message.
RRC connection mobility procedures					
Cell update	CELL UPDATE CONFIRM	UTRAN MOBILITY INFORMATION CONFIRM	5	8	
		PHYSICAL CHANNEL RECONFIGURATION COMPLETE <i>Target state CELL_FACH</i>	8	9	
		PHYSICAL CHANNEL RECONFIGURATION COMPLETE <i>Target state CELL_DCH</i>	8	NA	N2 cannot be specified, because the PHYSICAL CHANNEL RECONFIGURATION COMPLETE / FAILURE message is transmitted only after physical layer synchronisation, which depends also on Node B.
		TRANSPORT CHANNEL RECONFIGURATION COMPLETE <i>Target state CELL_FACH</i>	10	11	

Procedure title:	UTRAN -> UE	UE -> UTRAN	N1	N2	Notes
		TRANSPORT CHANNEL RECONFIGURATION COMPLETE <i>Target state</i> CELL_DCH	10	NA	N2 cannot be specified, because the PHYSICAL CHANNEL RECONFIGURATION COMPLETE / FAILURE message is transmitted only after physical layer synchronisation, which depends also on Node B.
		RADIO BEARER RECONFIGURATION COMPLETE <i>Target state</i> CELL_FACH	10	11	
		RADIO BEARER RECONFIGURATION COMPLETE <i>Target state</i> CELL_DCH	10	NA	N2 cannot be specified, because the PHYSICAL CHANNEL RECONFIGURATION COMPLETE / FAILURE message is transmitted only after physical layer synchronisation, which depends also on Node B.
		RADIO BEARER RELEASE COMPLETE <i>Target state</i> CELL_DCH	10	11	
URA update	URA UPDATE CONFIRM	UTRAN MOBILITY INFORMATION CONFIRM	5	8	
UTRAN mobility information	UTRAN MOBILITY INFORMATION	UTRAN MOBILITY INFORMATION CONFIRM / FAILURE	5	8	
Active set update	ACTIVE SET UPDATE	ACTIVE SET UPDATE COMPLETE / FAILURE	NA	8	The requirements on UE combining and power control performance for both UL and DL are specified by RAN WG4 in [21] and [19]. Also in case of branch addition the COMPLETE / FAILURE message is transmitted without waiting for the new branch to stabilise, therefore N2 is specified.
Inter-RAT handover to UTRAN	HANDOVER TO UTRAN COMMAND (other system)	HANDOVER TO UTRAN COMPLETE	NA	NA	The performance of this procedure is specified in 05.10.
Inter-RAT handover from UTRAN	HANDOVER FROM UTRAN COMMAND	HANDOVER FROM UTRAN FAILURE	NA	NA	The performance of this procedure is specified in [19] and [20].
Measurement procedures					
Measurement control	MEASUREMENT CONTROL	MEASUREMENT CONTROL FAILURE	5	8	Response to measurement inquiry depends on physical layer measurement. Response time is defined in [19] and [20]. N1 and N2 only define the processing of the message.

14.8 ~~Dynamic Resource Allocation Control of Uplink DCH (FDD-only)~~ Void

~~The network uses this procedure to dynamically control the allocation of resources on an uplink DCH.~~

~~This procedure shall be activated in the UE when it has been allocated an uplink DCH with DRAC static information elements. Such uplink DCHs can be established through RB establishment procedure, RB reconfiguration procedure, RB release procedure or Transport Channel Reconfiguration procedure by setting the DRAC static information elements to indicate that the DCH is controlled by the DRAC procedure.~~

~~The UE shall periodically listen to the System Information Block 10 of each cell in its Active Set. The scheduling information of System Information Block 10 and the SCCPCH info on which the System Information Block 10 is transmitted are provided to the UE when the DCH is set up and when a cell is added in its active set. In case several System Information Block 10 messages from different cells are scheduled at the same time, the UE shall only listen to the System Information Block 10 broadcast in the cell of its Active Set having the best CPICH measurements.~~

~~Upon reception of a SYSTEM INFORMATION message comprising a System Information Block 10, the UE shall:~~

- ~~1. Determine and store the most stringent DRAC parameters from the last received values from each cell of its active set (i.e. select the lowest product $p_{if} \cdot \text{maximum bit rate}$ corresponding to its DRAC class identity)~~
- ~~2. Determine the allowed subset of TFCS according to the selected maximum bit rate value, and store it for later usage.
The allowed subset of TFCS are the ones of the TFCS for which the sum of bit rates of the DCH controlled by DRAC is lower than Maximum Bit Rate IE, i.e.~~

$$\sum TBSSize_i / TTI_i < \text{MaximumBitRate}$$

~~DCH_i controlled by DRAC~~

~~After the first System Information Block 10 has been received, the UE shall start the following process:~~

- ~~1. At the start of the next TTI, the UE shall randomly select $p \in \{0,1\}$.~~
- ~~2. If $p < p_{tr}$, the UE shall transmit on the DCH controlled by DRAC during T_{validity} frames using the last stored allowed subset of TFCS and comes back to step 1, otherwise the UE shall stop transmission on these DCH during T_{retry} frames and then comes back to step 1.~~

~~Transmission time validity (T_{validity}) and Time duration before retry (T_{retry}) are indicated to the UE at the establishment of a DCH controlled by this procedure and may be changed through RB or transport channel reconfiguration. The UE shall always use the latest received DRAC static parameters.~~

~~A UE that supports the simultaneous reception of one SCCPCH and one DPCH shall support the DRAC procedure.~~

14.12.4.2 SRNS RELOCATION INFO

This RRC message is sent between network nodes when preparing for an SRNS relocation or a handover/cell reselection from GERAN *Iu mode*.

With the presence or absence of the IE "RB identity for Hard Handover message" the source RNC indicates to the target SRNC whether the source RNC expects to receive the choice "DL DCCH message" in the IE "RRC information, target RNC to source RNC" in case the SRNS relocation is of type "UE involved". Furthermore the target RNC uses this information for the calculation of the MAC-I.

Direction: source RNC/RAT→target RNC

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
Non RRC IEs					
>RB identity for Handover message	OP		RB identity 10.3.4.16	Gives the id of the radio bearer on which the source RNC will transmit the RRC message in the case the relocation is of type "UE involved". In handover from GERAN <i>Iu mode</i> this IE is always set to 2.	
>State of RRC	MP		RRC state indicator, 10.3.3.35a		
>State of RRC procedure	MP		Enumerated (await no RRC message, await RB Release Complete, await RB Setup Complete, await RB Reconfiguration Complete, await Transport CH Reconfiguration Complete, await Physical CH Reconfiguration Complete, await Active Set Update Complete, await Handover Complete, send Cell Update Confirm, send URA Update Confirm, , others)		
Ciphering related information					
>Ciphering status for each CN domain	MP	<1 to maxCNDomains>			

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>>CN domain identity	MP		CN domain identity 10.3.1.1		
>>Ciphering status	MP		Enumerated(Not started, Started)		
>>START	MP		START 10.3.3.38	START value to be used in this CN domain.	
>Latest configured CN domain	MP		CN domain identity 10.3.1.1	Value contained in the variable of the same name. In case this variable is empty, the source RNC can set any CN domain identity. In that case, the Ciphering status and the Integrity protection status should be Not started and the target RNC should not initialise the variable Latest configured CN domain.	
>Calculation time for ciphering related information	CV- <i>Ciphering</i>			Time when the ciphering information of the message were calculated, relative to a cell of the target RNC. In handover and cell reselection from GERAN <i>lu mode</i> this field is not present.	
>>Cell Identity	MP		Cell Identity 10.3.2.2	Identity of one of the cells under the target RNC and included in the active set of the current call	
>>SFN	MP		Integer(0..4095)		
>COUNT-C list	OP	1 to <maxCNdo mains>		COUNT-C values for radio bearers using transparent mode RLC	
>>CN domain identity	MP		CN domain identity 10.3.1.1		
>>COUNT-C	MP		Bit string(32)		
>Ciphering info per radio bearer	OP	1 to <maxRB>		For signalling radio bearers this IE is mandatory.	
>>RB identity	MP		RB identity 10.3.4.16		
>>Downlink HFN	MP		Bit string(20..25)	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)	
>>Downlink SN	CV- <i>SRB1</i>		Bit String(7)	VT(US) of RLC UM	
>>Uplink HFN	MP		Bit string(20..25)	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)	
Integrity protection related information					
>Integrity protection status	MP		Enumerated(Not started, Started)		
>Signalling radio bearer specific integrity protection information	CV- <i>IP</i>	4 to <maxSRBs etup>			
>>Uplink RRC HFN	MP		Bit string (28)	For each SRB, in the case activation times for the next IP configuration to be applied on this SRB have already been reached this IE corresponds to the last value used. Else this value corresponds to the value	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
				the source would have initialized the HFN to at the activation time. Increment of HFN due to RRC SN roll over is taken care of by target based on value sent by the source.	
>>Downlink RRC HFN	MP		Bit string (28)	For each SRB, in the case activation times for the next IP configuration to be applied on this SRB have already been reached this IE corresponds to the last value used. Else this value corresponds to the value the source would have initialized the HFN to at the activation time. Increment of HFN due to RRC SN roll over is taken care of by target based on value sent by the source. In particular, for SRB2, this IE should not take into account the RRC message that will trigger the relocation.	
>>Uplink RRC Message sequence number	MP		Integer (0..15)	For each SRB, this IE corresponds to the last value received or in the case activation time was not reached for a configuration the value equals (activation time - 1).	
>>Downlink RRC Message sequence number	MP		Integer (0..15)	For each SRB, this IE corresponds to the last value used or in the case activation time was not reached for a configuration the value equals (activation time -1). In particular, for SRB2, this IE should not take into account the RRC message that will trigger the relocation.	
>Implementation specific parameters	OP		Bit string (1..512)		
RRC IEs					
UE Information elements					
>U-RNTI	MP		U-RNTI 10.3.3.47	G-RNTI is placed in this field when performing handover or cell reselection from GERAN <i>lu mode</i> .	
>C-RNTI	OP		C-RNTI 10.3.3.8		
>UE radio access Capability	MP		UE radio access capability 10.3.3.42		
>UE radio access capability extension	OP		UE radio access capability extension 10.3.3.42a		
>Last known UE position	OP				
>>SFN	MP		Integer (0..4095)	Time when position was estimated	
>>Cell ID	MP		Cell identity; 10.3.2.2	Indicates the cell, the SFN is valid for.	
>>CHOICE <i>Position estimate</i>	MP				

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>>>Ellipsoid Point			Ellipsoid Point; 10.3.8.4a		
>>>Ellipsoid point with uncertainty circle			Ellipsoid point with uncertainty circle 10.3.8.4d		
>>>Ellipsoid point with uncertainty ellipse			Ellipsoid point with uncertainty ellipse 10.3.8.4e		
>>>Ellipsoid point with altitude			Ellipsoid point with altitude 10.3.8.4b		
>>>Ellipsoid point with altitude and uncertainty ellipsoid			Ellipsoid point with altitude and uncertainty ellipsoid 10.3.8.4c		
>UE Specific Behaviour Information 1 idle	OP		UE Specific Behaviour Information idle 1 10.3.3.51	This IE should be included if received via the "INTER RAT HANDOVER INFO", the "RRC CONNECTION REQUEST", the IE "SRNS RELOCATION INFO" or the "Inter RAT Handover Info with Inter RAT Capabilities"	
>UE Specific Behaviour Information 1 interRAT	OP		UE Specific Behaviour Information 1 interRAT 10.3.3.52	This IE should be included if received via the "INTER RAT HANDOVER INFO", the "RRC CONNECTION REQUEST", the IE "SRNS RELOCATION INFO" or the "Inter RAT Handover Info with Inter RAT Capabilities"	
Other Information elements					
>UE system specific capability	OP	1 to <maxSystemCapability>			
>>Inter-RAT UE radio access capability	MP		Inter-RAT UE radio access capability 10.3.8.7		
UTRAN Mobility Information elements					
>URA Identifier	OP		URA identity 10.3.2.6		
CN Information Elements					
>CN common GSM-MAP NAS system information	MP		NAS system information (GSM-MAP) 10.3.1.9		
>CN domain related information	OP	1 to <MaxCNdomains>		CN related information to be provided for each CN domain	
>>CN domain identity	MP				
>>CN domain specific GSM-MAP NAS system info	MP		NAS system information (GSM-MAP) 10.3.1.9		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>>CN domain specific DRX cycle length coefficient	MP		CN domain specific DRX cycle length coefficient, 10.3.3.6		
Measurement Related Information elements					
>For each ongoing measurement reporting	OP	1 to <MaxNoOf Meas>			
>>Measurement Identity	MP		Measurement identity 10.3.7.48		
>>Measurement Command	MP		Measurement command 10.3.7.46		
>>Measurement Type	CV-Setup		Measurement type 10.3.7.50		
>>Measurement Reporting Mode	OP		Measurement reporting mode 10.3.7.49		
>>Additional Measurements list	OP		Additional measurements list 10.3.7.1		
>>CHOICE <i>Measurement</i>	OP				
>>>Intra-frequency					
>>>>Intra-frequency cell info	OP		Intra-frequency cell info list 10.3.7.33		
>>>>Intra-frequency measurement quantity	OP		Intra-frequency measurement quantity 10.3.7.38		
>>>>Intra-frequency reporting quantity	OP		Intra-frequency reporting quantity 10.3.7.41		
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61		
>>>>Measurement validity	OP		Measurement validity 10.3.7.51		
>>>>CHOICE <i>report criteria</i>	OP				
>>>>>Intra-frequency measurement reporting criteria			Intra-frequency measurement reporting criteria 10.3.7.39		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>>>Inter-frequency					

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>>>>Inter-frequency cell info	OP		Inter-frequency cell info list 10.3.7.13		
>>>>Inter-frequency measurement quantity	OP		Inter-frequency measurement quantity 10.3.7.18		
>>>>Inter-frequency reporting quantity	OP		Inter-frequency reporting quantity 10.3.7.21		
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61		
>>>>Measurement validity	OP		Measurement validity 10.3.7.51		
>>>>Inter-frequency set update	OP		Inter-frequency set update 10.3.7.22		
>>>>CHOICE <i>report criteria</i>	OP				
>>>>>Intra-frequency measurement reporting criteria			Intra-frequency measurement reporting criteria 10.3.7.39		
>>>>>Inter-frequency measurement reporting criteria			Inter-frequency measurement reporting criteria 10.3.7.19		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>Inter-RAT					
>>>>Inter-RAT cell info	OP		Inter-RAT cell info list 10.3.7.23		
>>>>Inter-RAT measurement quantity	OP		Inter-RAT measurement quantity 10.3.7.29		
>>>>Inter-RAT reporting quantity	OP		Inter-RAT reporting quantity 10.3.7.32		
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61		
>>>>Measurement validity	OP		Measurement validity 10.3.7.51		
>>>>CHOICE <i>report criteria</i>	OP				
>>>>>Inter-RAT measurement reporting criteria			Inter-RAT measurement reporting criteria 10.3.7.30		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>No reporting			NULL		
>>>Traffic Volume					
>>>>Traffic volume measurement Object	OP		Traffic volume measurement object 10.3.7.70		
>>>>Traffic volume measurement quantity	OP		Traffic volume measurement quantity 10.3.7.71		
>>>>Traffic volume reporting quantity	OP		Traffic volume reporting quantity 10.3.7.74		
>>>>Measurement validity	OP		Measurement validity 10.3.7.51		
>>>>CHOICE <i>report criteria</i>	OP				
>>>>>Traffic volume measurement reporting criteria			Traffic volume measurement reporting criteria 10.3.7.72		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>Quality					
>>>>Quality measurement quantity	OP		Quality measurement quantity 10.3.7.59		
>>>>CHOICE <i>report criteria</i>	OP				
>>>>>Quality measurement reporting criteria			Quality measurement reporting criteria 10.3.7.58		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>UE internal					
>>>>UE internal measurement quantity	OP		UE internal measurement quantity 10.3.7.79		
>>>>UE internal reporting quantity	OP		UE internal reporting quantity 10.3.7.82		
>>>>CHOICE <i>report criteria</i>	OP				
>>>>>UE internal measurement reporting criteria			UE internal measurement reporting		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
			criteria 10.3.7.80		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>UE positioning					
>>>>LCS reporting quantity	OP		LCS reporting quantity 10.3.7.111		
>>>>CHOICE <i>report criteria</i>	OP				
>>>>>LCS reporting criteria			LCS reporting criteria 10.3.7.110		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting					
Radio Bearer Information Elements					
>Predefined configuration status information	OP		Predefined configuration status information 10.3.4.5a		
>Signalling RB information list	MP	1 to <maxSRBs etup>		For each signalling radio bearer	
>>Signalling RB information	MP		Signalling RB information to setup 10.3.4.24		
>RAB information list	OP	1 to <maxRABs etup>		Information for each RAB	
>>RAB information	MP		RAB information to setup 10.3.4.10		
Transport Channel Information Elements					
Uplink transport channels					
>UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24		
>UL transport channel information list	OP	1 to <MaxTrCH >			
>>UL transport channel information	MP		Added or reconfigured UL TrCH information 10.3.5.2		
>CHOICE <i>mode</i>	OP				
>>FDD					
>>>CPCH set ID	OP		CPCH set ID		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
			10.3.5.5		
>>>Transport channel information for DRAC list	OP	1 to <MaxTrCH >			
>>>>DRAC static information	MP		DRAC static information 10.3.5.7		
>>TDD				(no data)	
Downlink transport channels					
>DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6		
>DL transport channel information list	OP	1 to <MaxTrCH >			
>>DL transport channel information	MP		Added or reconfigured DL TrCH information 10.3.5.1		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
PhyCH information elements					
>TPC Combination Info list	OP	1 to <maxRL>			
>>Primary CPICH info	MP		Primary CPICH info 10.3.6.60		
>>TPC combination index	MP		TPC combination index 10.3.6.85		
>Transmission gap pattern sequence	OP	1 to <maxTGP S>			REL-5
>>TGPSI	MP		TGPSI 10.3.6.82		
>> Current TGPS Status Flag	MP		Enumerated(active, inactive)	This flag indicates the current status of the Transmission Gap Pattern Sequence, whether it is active or inactive	
>>TGCFN	CV-Active		Integer (0..255)	Connection Frame Number of the latest past frame of the first pattern within the Transmission Gap Pattern Sequence.	
>>Transmission gap pattern sequence configuration parameters	OP				
>>>TGMP	MP		Enumerated(TDD measurement, FDD measurement, GSM carrier RSSI measurement, GSM Initial BSIC identification, GSM BSIC re-confirmation, Multi-carrier measurement)	Transmission Gap pattern sequence Measurement Purpose.	
>>>TGPRC	MP		Integer (1..511, Infinity)	The number of remaining transmission gap patterns within the Transmission Gap Pattern Sequence.	
>>>TGSN	MP		Integer (0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.	
>>>TGL1	MP		Integer(1..14	The length of the first Transmission Gap within the	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
)	transmission gap pattern expressed in number of slots	
>>>TGL2	MD		Integer (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1. The value of TGL2 shall be ignored if TGD is set to "undefined"	
>>>TGD	MP		Integer(15..269, undefined)	Transmission gap distance indicates the number of slots between starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to undefined.	
>>>TGPL1	MP		Integer (1..144)	The duration of transmission gap pattern 1.	
>>>TGPL2	MD		Integer (1..144)	The duration of transmission gap pattern 2. If omitted, then TGPL2=TGPL1.	
>>>RPP	MP		Enumerated (mode 0, mode 1).	Recovery Period Power control mode during the frame after the transmission gap within the compressed frame. Indicates whether normal PC mode or compressed PC mode is applied	
>>>ITP	MP		Enumerated (mode 0, mode 1).	Initial Transmit Power is the uplink power control method to be used to compute the initial transmit power after the compressed mode gap.	
>>>CHOICE <i>UL/DL mode</i>	MP				
>>>>DL only				Compressed mode used in DL only	
>>>>>Downlink compressed mode method	MP		Enumerated (puncturing, SF/2, higher layer scheduling)	Method for generating downlink compressed mode gap	
>>>>>UL only				Compressed mode used in UL only	
>>>>>Uplink compressed mode method	MP		Enumerated (SF/2, higher layer)	Method for generating uplink compressed mode gap	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
			scheduling)		
>>>>UL and DL				Compressed mode used in UL and DL	
>>>>>Downlink compressed mode method	MP		Enumerated (puncturing, SF/2, higher layer scheduling)	Method for generating downlink compressed mode gap	
>>>>>Uplink compressed mode method	MP		Enumerated (SF/2, higher layer scheduling)	Method for generating uplink compressed mode gap	
>>>Downlink frame type	MP		Enumerated (A, B)		
>>>DeltaSIR1	MP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)	
>>>DeltaSIRafter1	MP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE one frame after the frame containing the start of the first transmission gap in the transmission gap pattern.	
>>>DeltaSIR2	OP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1.	
>>>DeltaSIRafter2	OP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1.	
>>>N Identify abort	CV-Initial BSIC		Integer(1..12 8)	Indicates the maximum number of repeats of patterns that the UE shall use to attempt to decode the unknown BSIC of the GSM cell in the initial BSIC identification procedure	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>>>T Reconfirm abort	CV-Re-confirm BSIC		Real(0.5..10.0 by step of 0.5)	Indicates the maximum time allowed for the re-confirmation of the BSIC of one GSM cell in the BSIC re-confirmation procedure. The time is given in steps of 0.5 seconds.	
>Scrambling Code Change List	CH-SF/2	1 to <maxRL>			REL-5
>>Primary CPICH info	MP		Primary CPICH info 10.3.6.60		
>>Scrambling code change	MP		Enumerated (code change, no code change)	Indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'.	
Other Information elements					
>Measurement report	OP		MEASUREMENT REPORT 10.2.1.9		
>Failure cause	OP		Failure cause 10.3.3.13	Diagnostics information related to an earlier SRNC Relocation request (see NOTE 2 in 14.12.0a)	
>Protocol error information	CV-ProtErr		Protocol error information 10.3.8.12		

Multi Bound	Explanation
MaxNoOfMeas	Maximum number of active measurements, upper limit 16

Condition	Explanation
<i>Setup</i>	The IE is mandatory present when the IE Measurement command has the value "Setup", otherwise the IE is not needed.
<i>Ciphering</i>	The IE is mandatory present when the IE Ciphering Status has the value "started" and the ciphering counters need not be reinitialised, otherwise the IE is not needed.
<i>IP</i>	The IE is mandatory present when the IE Integrity protection status has the value "started" and the integrity protection counters need not be reinitialised, otherwise the IE is not needed.
<i>ProtErr</i>	This IE is mandatory present if the IE "Protocol error indicator" is included and has the value "TRUE". Otherwise it is not needed.
<i>SRB1</i>	The IE is mandatory present for RB1. Otherwise it is not needed.
<i>Active</i>	This IE is mandatory present when the value of the IE "Current TGPS Status Flag" is "Active" and not needed otherwise.
<i>Initial BSIC</i>	This IE is mandatory present when the value of the IE "TGMP" is set to "GSM Initial BSIC identification" and not needed otherwise.
<i>Re-confirm BSIC</i>	This IE is mandatory present when the value of the IE "TGMP" is set to "GSM BSIC re-confirmation" and not needed otherwise.
<i>SF/2</i>	The IE is mandatory present if the IE "Transmission Gap Pattern Sequence" is included and has the value "SF/2" as the compressed mode method, and already sent the UE the IE "Scrambling Code Change" for each RL in the active set. Otherwise the IE is not needed.

CHANGE REQUEST

25.331 CR 2593 # rev - # Current version: 6.5.0

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Feature Clean Up: Removal of DRAC		
Source:	# RAN WG2		
Work item code:	# TEI5	Date:	# 20/04/2005
Category:	# C	Release:	# Rel-6
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> Ph2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) Rel-7 (Release 7)

Reason for change:	# At RAN#27 it was agreed to remove the DRAC feature from the specifications as part of a feature cleanup process.
Summary of change:	# The DRAC feature is removed from the specification. <i>Implementation of this CR by a Release 99/4 UE will not cause compatibility issues</i>
Consequences if not approved:	# If the CR is not approved then decision taken in RAN#23 will not be applied to the specs. The redundant DRAC feature will remain in the specifications.

Clauses affected:	# 3.2, 7.2.2.3, 8.1.1.1.2, 8.1.1.6.10, 8.6.5.11, 8.6.6.4, 10.2.8, 10.2.27, 10.2.30, 10.2.33, 10.2.48.8.13, 10.2.50, 10.3.3.9, 10.3.3.20, 10.3.3.25, 10.3.3.39, 10.3.5.7, 10.3.6.27, 10.3.6.68, 10.3.6.70, 10.3.10, 11.2, 11.3, 14.8, 14.12.4.2										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;">X</td> <td style="width: 20px;"></td> </tr> <tr> <td style="width: 20px;"></td> <td style="width: 20px;"></td> </tr> <tr> <td style="width: 20px;"></td> <td style="width: 20px;"></td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	X						# 25.306, 25.302 TS 25.423, TR 25.931	
Y	N										
X											
Other comments:	#										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☒ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ACK	Acknowledgement
AICH	Acquisition Indicator CHannel
AM	Acknowledged Mode
AS	Access Stratum
ASC	Access Service Class
ASN.1	Abstract Syntax Notation.1
BCCH	Broadcast Control Channel
BCFE	Broadcast Control Functional Entity
BER	Bit Error Rate
BLER	Block Error Rate
BSS	Base Station Sub-system
CCCH	Common Control Channel
CCPCH	Common Control Physical CHannel
CH	Conditional on history
CM	Connection Management
CN	Core Network
CPCH	Common Packet CHannel
C-RNTI	Cell RNTI
CTCH	Common Traffic CHannel
CTFC	Calculated Transport Format Combination
CV	Conditional on value
DCA	Dynamic Channel Allocation
DCCH	Dedicated Control Channel
DCFE	Dedicated Control Functional Entity
DCH	Dedicated Channel
DC-SAP	Dedicated Control SAP
DDI	Data Description Indicator
DGPS	Differential Global Positioning System
DL	Downlink
DRAC	Dynamic Resource Allocation Control
DSCH	Downlink Shared Channel
DTCH	Dedicated Traffic Channel
E-AGCH	E-DCH Absolute Grant Channel
E-DCH	Enhanced uplink DCH
E-DPCCH	E-DCH Dedicated Physical Control Channel
E-DPDCH	E-DCH Dedicated Physical Data Channel
E-HICH	E-DCH HARQ Acknowledgement Indicator Channel
E-RGCH	E-DCH Relative Grant Channel
E-RNTI	E-DCH RNTI
FACH	Forward Access Channel
FDD	Frequency Division Duplex
F-DPCH	Fractional DPCH
GC-SAP	General Control SAP
GERAN	GSM/EDGE Radio Access Network
GRA	GERAN Registration Area
G-RNTI	GERAN Radio Network Temporary Identity
HCS	Hierarchical Cell Structure
HFN	Hyper Frame Number
H-RNTI	HS-DSCH RNTI
HS-DSCH	High Speed Downlink Shared Channel
ID	Identifier
IDNNS	Intra Domain NAS Node Selector
IE	Information element
IETF	Internet Engineering Task Force
IMEI	International Mobile Equipment Identity
IMSI	International Mobile Subscriber Identity
IP	Internet Protocol

ISCP	Interference on Signal Code Power
L1	Layer 1
L2	Layer 2
L3	Layer 3
LAI	Location Area Identity
MAC	Media Access Control
MBMS	Multimedia Broadcast Multicast Service
MCC	Mobile Country Code
MCCH	MBMS point-to-multipoint Control Channel
MD	Mandatory default
MICH	MBMS notification Indicator Channel
MM	Mobility Management
MNC	Mobile Network Code
MP	Mandatory present
MTCH	MBMS point-to-multipoint Traffic Channel
MSCH	MBMS point-to-multipoint Scheduling Channel
NACC	Network Assisted Cell Change
NAS	Non Access Stratum
Nt-SAP	Notification SAP
NW	Network
OP	Optional
PCCH	Paging Control Channel
PCH	Paging Channel
PDCP	Packet Data Convergence Protocol
PDSCH	Physical Downlink Shared Channel
PDU	Protocol Data Unit
PLMN	Public Land Mobile Network
PNFE	Paging and Notification Control Functional Entity
PRACH	Physical Random Access CHannel
PSI	Packet System Information
p-t-m	Point-to-Multipoint
P-TMSI	Packet Temporary Mobile Subscriber Identity
p-t-p	Point-to-Point
PUSCH	Physical Uplink Shared Channel
QoS	Quality of Service
RAB	Radio access bearer
RACH	Random Access CHannel
RAI	Routing Area Identity
RAT	Radio Access Technology
RB	Radio Bearer
RFE	Routing Functional Entity
RL	Radio Link
RLC	Radio Link Control
RNC	Radio Network Controller
RNTI	Radio Network Temporary Identifier
RRC	Radio Resource Control
RSCP	Received Signal Code Power
RSSI	Received Signal Strength Indicator
SAP	Service Access Point
SCFE	Shared Control Function Entity
SCTD	Space Code Transmit Diversity
SF	Spreading Factor
SHCCH	Shared Control Channel
SI	System Information
SIR	Signal to Interference Ratio
S-RNTI	SRNC - RNTI
SSDT	Site Selection Diversity Transmission
TDD	Time Division Duplex
TF	Transport Format
TFCS	Transport Format Combination Set
TFS	Transport Format Set
TM	Transparent Mode

TME	Transfer Mode Entity
TMSI	Temporary Mobile Subscriber Identity
Tr	Transparent
Tx	Transmission
UE	User Equipment
UL	Uplink
UM	Unacknowledged Mode
URA	UTRAN Registration Area
U-RNTI	UTRAN-RNTI
USCH	Uplink Shared Channel
UTRAN	Universal Terrestrial Radio Access Network

7.2.2.3 CELL_DCH state

In the CELL_DCH state the UE shall perform the following actions:

NOTE: DCCH and, if configured, DTCH are available in this state.

~~1> read system information broadcast on FACH as specified in subclause 8.1.1.3 (applicable only to UEs with certain capabilities and in FDD mode);~~

1> read the system information as specified in subclause 8.1.1 (for UEs in TDD mode);

1> perform measurements process according to measurement control information as specified in subclause 8.4 and in clause 14;

1> select and configure the RB multiplexing options applicable for the transport channels to be used in this RRC state;

1> act on RRC messages received on DCCH;

1> act on RRC messages received on BCCH (applicable only to UEs with certain capabilities and in FDD mode);

1> act on RRC messages received on BCCH (TDD only) and, if available, SHCCH (TDD only).

8.1.1.1.2 System information blocks

Table 8.1.1 specifies all system information blocks and their characteristics.

The *area scope column* in table 8.1.1 specifies the area where a system information block's value tag is valid. If the area scope is *cell*, the UE shall consider the system information block to be valid only in the cell in which it was read. If system information blocks have been previously stored for this cell, the UE shall check whether the value tag for the system information block in the entered cell is different compared to the stored value tag. If the area scope is *PLMN* or *Equivalent PLMN*, the UE shall check the value tag for the system information block when a new cell is selected. If the value tag for the system information block in the new cell is different compared to the value tag for the system information block stored in the UE, the UE shall re-read the system information block. If the area scope is *PLMN*, the UE shall consider the system information block to be valid only within the PLMN in which it was read. If the area scope is *Equivalent PLMN*, the UE shall consider the system information block to be valid within the PLMN in which it was received and all PLMNs which are indicated by higher layers to be equivalent.

For System information block types 15.2, 15.3 and 16, which may have multiple occurrences, each occurrence has its own independent value tag. The UE shall re-read a particular occurrence if the value tag of this occurrence has changed compared to that stored in the UE.

The *UE mode/state column when block is valid* in Table 8.1.1 specifies in which UE mode or UE state the IEs in a system information block shall be regarded as valid by the UE. In other words, the indicated system information block becomes invalid upon change to a mode/state that is not included in this column. System Information Block Type 16 remains also valid upon transition to or from GSM/GPRS. In some cases, the states are inserted in brackets to indicate that the validity is dependent on the broadcast of the associated System Information Blocks by the network as explained in the relevant procedure subclause.

The *UE mode/state column when block is read* in Table 8.1.1 specifies in which UE mode or UE state the IEs in a system information block may be read by the UE. The UE shall have the necessary information prior to execution of any procedure requiring information to be obtained from the appropriate system information block. The requirements on the UE in terms of when to read the system information may therefore be derived from the procedure specifications that specify which IEs are required in the different UE modes/states in conjunction with the different performance requirements that are specified.

~~System Information Block type 10 shall only be read by the UE while in CELL_DCH.~~

The UE shall:

- 1> if System Information Block type 11 is referenced in the master information block or in the scheduling blocks:
 - 2> if System Information Block type 12 is not referenced in the master information block or in the scheduling blocks, or broadcast of System Information Block type 12 is not indicated in System Information Block type 11:
 - 3> have read and acted upon System Information Block type 11 in a cell when the UE transmits an RRC message on RACH.
 - 2> else:
 - 3> have read and acted upon System Information Block type 11 in a cell before the UE transmits the RRC CONNECTION REQUEST message.
 - 3> have read and acted upon both System Information Block type 11 and System Information Block type 12 in a cell when:
 - 4> the UE transmits an RRC message on RACH in RRC connected mode; or
 - 4> the UE receives a message commanding to enter Cell_DCH state.

NOTE 1: There are a number of system information blocks that include the same IEs while the UE mode/state in which the information is valid differs. This approach is intended to allow the use of different IE values in different UE mode/states.

NOTE 2: System Information Block Type 16 is also obtained by a UE while in GSM/GPRS. The details of this are not within the scope of this specification.

The *Scheduling information* column in table 8.1.1 specifies the position and repetition period for the System Information Block.

The *modification of system information* column in table 8.1.1 specifies the update mechanisms applicable for a certain system information block. For system information blocks with a value tag, the UE shall update the information according to subclause 8.1.1.7.1 or 8.1.1.7.2. For system information blocks with an expiration timer, the UE shall, when the timer expires, perform an update of the information according to subclause 8.1.1.7.4.

Table 8.1.1: Specification of system information block characteristics

System information block	Area scope	UE mode/state when block is valid	UE mode/state when block is read	Scheduling information	Modification of system information	Additional comment
Master information block	Cell	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	SIB_POS = 0 SIB_REP = 8 (FDD) SIB_REP = 8, 16, 32 (TDD) SIB_OFF=2	Value tag	
Scheduling block 1	Cell	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	Specified by the IE "Scheduling information" in MIB	Value tag	
Scheduling block 2	Cell	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	Specified by the IE "Scheduling information" in MIB	Value tag	
System information block type 1	PLMN	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH	Idle, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 2	Cell	URA_PCH	URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 3	Cell	Idle mode, (CELL_FACH, CELL_PCH, URA_PCH)	Idle mode, (CELL_FACH, CELL_PCH, URA_PCH)	Specified by the IE "Scheduling information"	Value tag	
System information block type 4	Cell	CELL_FACH, CELL_PCH, URA_PCH	CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	If System information block type 4 is not broadcast in a cell, the connected mode UE shall apply information in System information block type 3 in connected mode.
System information block type 5 and 5bis	Cell	Idle mode, (CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only))	Idle mode, (CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only))	Specified by the IE "Scheduling information"	Value tag	System information block type 5bis is sent instead of system information block type 5 in networks that use Band IV.

System information block	Area scope	UE mode/state when block is valid	UE mode/state when block is read	Scheduling information	Modification of system information	Additional comment
System information block type 6	Cell	CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	Specified by the IE "Scheduling information"	Value tag	<p>If system information block type 6 is not broadcast in a cell, the connected mode UE shall read System information block type 5.</p> <p>If some of the optional IEs are not included in System information block type 6, the UE shall read the corresponding IEs in System information block type 5</p> <p>In TDD mode system information block 6 shall only be read in CELL_DCH if required for open loop power control as specified in subclause 8.5.7 and/or if shared transport channels are assigned to the UE. If in these cases system information block type 6 is not broadcast the UE shall read system information block type 5.</p>
System information block type 7	Cell	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH (TDD only)	Specified by the IE "Scheduling information"	Expiration timer = MAX(32 , SIB_REP * ExpirationTimeFactor)	In TDD mode system information block type 7 shall only be read in CELL_DCH if shared transport channels are assigned to the UE.
System information block type 8	Cell	CELL_FACH, CELL_PCH, URA_PCH	CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 9	Cell	CELL_FACH, CELL_PCH, URA_PCH	CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Expiration timer = SIB_REP	
System information block type 10	Cell	CELL_DCH	CELL_DCH	Specified by the IE "Scheduling information"	Expiration timer = SIB_REP	
System information block type 11	Cell	Idle mode (CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH)	Idle mode (CELL_FACH, CELL_PCH, URA_PCH)	Specified by the IE "Scheduling information"	Value tag	

System information block	Area scope	UE mode/state when block is valid	UE mode/state when block is read	Scheduling information	Modification of system information	Additional comment
System information block type 12	Cell	CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH	Idle mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	If system information block type 12 is not broadcast in a cell, the connected mode UE shall read System information block type 11. If some of the optional IEs are not included in System information block type 12, the UE shall read the corresponding IEs in System information block type 11.
System information block type 13	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 13.1	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 13.2	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 13.3	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 13.4	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 14	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH	Specified by the IE "Scheduling information"	Expiration timer = MAX(32, SIB_REP * ExpirationTimeFactor)	This system information block is used in 3.84 Mcps TDD mode only. System information block type 14 shall only be read in CELL_DCH if required for open loop power control as specified in subclause 8.5.7.
System information block type 15	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 15.1	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 15.2	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	For this system information block there may be multiple occurrences
System information block type 15.3	PLMN	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	For this system information block there may be multiple occurrences

System information block	Area scope	UE mode/state when block is valid	UE mode/state when block is read	Scheduling information	Modification of system information	Additional comment
System information block type 15.4	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 15.5	Cell	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	
System information block type 16	Equivalent PLMN	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH	Idle Mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	For this system information block there may be multiple occurrences. This system information block is also valid while in GSM/GPRS.
System information block type 17	Cell	CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH	CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH	Specified by the IE "Scheduling information"	Expiration timer = SIB_REP	This system information block is used in TDD mode only. System information block type 17 shall only be read if shared transport channels are assigned to the UE.
System Information Block type 18	Cell	Idle mode, CELL_FACH, CELL_PCH, URA_PCH, CELL_DCH	Idle mode, CELL_FACH, CELL_PCH, URA_PCH	Specified by the IE "Scheduling information"	Value tag	

~~The UE shall acquire all system information blocks except system information block type 10 on BCH. System Information Block type 10 shall be acquired on the FACH and only by UEs with support for simultaneous reception of one SCCPCH and one DPCH. If System Information Block type 10 is not broadcast in a cell, the DRAC procedures do not apply in this cell. System Information Block type 10 is used in FDD mode only.~~

8.1.1.6.10 ~~System Information Block type 10~~[Void](#)

~~This system information block type is used only in FDD.~~

~~If in state CELL_DCH, the UE should store all relevant IEs included in this system information block. The UE shall:~~

- ~~1> start a timer set to the value given by the repetition period (SIB_REP) for that system information block;~~
- ~~1> perform actions defined in subclause 14.8.~~

~~If in idle mode, state CELL_FACH, state CELL_PCH or state URA_PCH, the UE shall not use the values of the IEs in this system information block.~~

8.6.5.11 ~~DRAC static information~~ Void

If the IE "DRAC static information" is included the UE shall:

- 1> ~~store the content of the IE "Transmission Time Validity";~~
- 1> ~~store the content of the IE "Time duration before retry";~~
- 1> ~~store the content of the IE "DRAC Class identity".~~

8.6.6.4 Downlink information for each radio link

If the IE "Downlink information for each radio link" is included in a received message, the UE shall:

1> if the UE would enter CELL_DCH state according to subclause 8.6.3.3 applied on the received message:

~~2> if the IE "SCCPCH Information for FACH" is included; and~~

~~2> if the UE is in FDD mode and is not capable of simultaneous reception of DPCH and Secondary CCPCH:~~

~~3> set the variable UNSUPPORTED_CONFIGURATION to TRUE;~~

~~2> if the UE is in FDD mode and is capable of simultaneous reception of DPCH and SCCPCH:~~

~~3> start to receive the indicated Secondary CCPCH.~~

2> if the UE is in TDD mode and shared transport channels are assigned to the UE:

3> start to receive the indicated Secondary CCPCH.

2> if the UE is in TDD mode and no shared transport channels are assigned to the UE:

3> set the variable UNSUPPORTED_CONFIGURATION to TRUE.

2> if the IE "Serving HS-DSCH radio link indicator" is set to "TRUE":

3> consider this radio link as the serving HS-DSCH radio link.

2> if the IE "Serving E-DCH radio link indicator" is set to "TRUE":

3> consider this radio link as the serving E-DCH radio link.

2> if the IE "E-AGCH Info" is included:

3> store the newly received E-AGCH configuration.

2> if the IE "E-HICH information" is included:

3> store this E-HICH configuration for the concerning radio link.

2> if the IE "E-RGCH information" is included:

3> store this E-RGCH configuration for the concerning radio link.

2> determine the value for the E_DCH_TRANSMISSION variable and take the corresponding actions as described in subclause 8.5.28.

2> act on the other IEs contained in the IE "Downlink information for each radio link" as specified in subclause 8.6 applied on this radio link.

1> in addition, if the message was received in CELL_DCH state and the UE remains in CELL_DCH state according to subclause 8.6.3.3 applied on the received message:

2> if the IE "Serving HS-DSCH radio link indicator" is set to "TRUE":

3> consider this radio link as the serving HS-DSCH radio link;

3> if the serving HS-DSCH radio link was another radio link than this radio link prior to reception of the message and the IE "H-RNTI" is not included:

4> clear the variable H_RNTI.

2> if the IE "Serving HS-DSCH radio link indicator" is set to 'FALSE' and this radio link was considered the serving HS-DSCH radio link prior to reception of this message:

3> no longer consider this radio link as the serving HS-DSCH radio link.

- 2> determine the value for the HS_DSCH_RECEPTION variable and take the corresponding actions as described in subclause 8.5.25.
- 2> if the IE "Serving E-DCH radio link indicator" is set to 'TRUE':
 - 3> if the serving E-DCH radio link was another radio link than this radio link prior to reception of the message and the IE "E-RNTI" is not included:
 - 4> clear the variable E_RNTI.
- 2> if the IE "Serving E-DCH radio link indicator" is set to 'FALSE' and this radio link was considered the serving E-DCH radio link prior to reception of this message:
 - 3> no longer consider this radio link as the serving E-DCH radio link.
- 2> for each optional IE part of the IE "Downlink information for each radio link" that is not present:
 - 3> do not change its current downlink physical channel configuration corresponding to the IE, which is absent, if not stated otherwise elsewhere.

NOTE: The Release '99 RADIO BEARER RECONFIGURATION message always includes at least one IE "Downlink information for each radio link" containing the mandatory IEs, even if UTRAN does not require the reconfiguration of any radio link.

- 1> if the UE would enter either the CELL_FACH, CELL_PCH or URA_PCH state according to subclause 8.6.3.3 applied on the received message:
 - 2> if the received message is CELL UPDATE CONFIRM:
 - 3> ignore the IE "Downlink information for each radio link".
 - 2> if the received message is any other message than CELL UPDATE CONFIRM; and
 - 2> if IEs other than the IE "Primary CPICH info" (for FDD) or the IE "Primary CCPCH info" (for TDD) are included in the IE "Downlink information for each radio link":
 - 3> ignore these IEs.
- 2> act on the other IEs contained in the IE "Downlink information for each radio link" as specified in subclause 8.6 applied on this radio link.

10.2.8 CELL UPDATE CONFIRM

This message confirms the cell update procedure and can be used to reallocate new RNTI information for the UE valid in the new cell.

RLC-SAP: UM

Logical channel: CCCH or DCCH

Direction: UTRAN→UE

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Message Type	MP		Message Type		
UE Information Elements					
U-RNTI	CV- <i>CCCH</i>		U-RNTI 10.3.3.47		
RRC transaction identifier	MP		RRC transaction identifier 10.3.3.36		
Integrity check info	CH		Integrity check info 10.3.3.16		
Integrity protection mode info	OP		Integrity protection mode info 10.3.3.19	The UTRAN should not include this IE unless it is performing an SRNS relocation or a cell reselection from GERAN <i>lu mode</i>	
Ciphering mode info	OP		Ciphering mode info 10.3.3.5	The UTRAN should not include this IE unless it is performing either an SRNS relocation or a cell reselection from GERAN <i>lu mode</i> , and a change in ciphering algorithm.	
Activation time	MD		Activation time 10.3.3.1	Default value is "now"	
New U-RNTI	OP		U-RNTI 10.3.3.47		
New C-RNTI	OP		C-RNTI 10.3.3.8		
New DSCH-RNTI	OP		DSCH-RNTI 10.3.3.9a		
New H-RNTI	OP		H-RNTI 10.3.3.14a		REL-5
New E-RNTI	OP		E-RNTI 10.3.3.10a		REL-6
RRC State Indicator	MP		RRC State Indicator 10.3.3.35a		
UTRAN DRX cycle length coefficient	OP		UTRAN DRX cycle length coefficient 10.3.3.49		
RLC re-establish indicator (RB2, RB3 and RB4)	MP		RLC re-establish indicator 10.3.3.35	Should not be set to TRUE if IE "Downlink counter synchronisation"	

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
				info" is included in message.	
RLC re-establish indicator (RB5 and upwards)	MP		RLC re-establish indicator 10.3.3.35	Should not be set to TRUE if IE "Downlink counter synchronisation info" is included in message.	
CN Information Elements					
CN Information info	OP		CN Information info 10.3.1.3		
UTRAN Information Elements					
URA identity	OP		URA identity 10.3.2.6		
RB information elements					
RB information to release list	OP	1 to <maxRB>			
>RB information to release	MP		RB information to release 10.3.4.19		
RB information to reconfigure list	OP	1 to <maxRB>			
>RB information to reconfigure	MP		RB information to reconfigure 10.3.4.18		
RB information to be affected list	OP	1 to <maxRB>			
>RB information to be affected	MP		RB information to be affected 10.3.4.17		
Downlink counter synchronisation info	OP				
>RB with PDCP information list	OP	1 to <maxRBall RABs>			
>>RB with PDCP information	MP		RB with PDCP information 10.3.4.22	This IE is needed for each RB having PDCP in the case of lossless SRNS relocation	
>>PDCP context relocation info	OP		PDCP context relocation info 10.3.4.1a	This IE is needed for each RB having PDCP and performing PDCP context relocation	REL-5
TrCH Information Elements					
Uplink transport channels					
UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24		

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Deleted TrCH information list	OP	1 to <maxTrCH >			
>Deleted UL TrCH information	MP		Deleted UL TrCH information 10.3.5.5		
Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>Added or Reconfigured UL TrCH information	MP		Added or Reconfigured UL TrCH information 10.3.5.2		
CHOICE <i>mode</i>	MP				
>FDD					
>>CPCH set ID	OP		CPCH set ID 10.3.5.3		
>>>Added or Reconfigured TrCH information for DRAC list	OP	1 to <maxTrCH >			
>>>>DRAC static information	MP		DRAC static information 10.3.5.7		
>TDD				(no data)	
Downlink transport channels					
DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6		
Deleted TrCH information list	OP	1 to <maxTrCH >			
>Deleted DL TrCH information	MP		Deleted DL TrCH information 10.3.5.4		
Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>Added or Reconfigured DL TrCH information	MP		Added or Reconfigured DL TrCH information 10.3.5.1		
PhyCH information elements					
Frequency info	OP		Frequency info 10.3.6.36		
Uplink radio resources					
Maximum allowed UL TX power	MD		Maximum allowed UL TX power 10.3.6.39	Default value is the existing maximum UL TX power	
CHOICE <i>channel requirement</i>	OP				
>Uplink DPCH info			Uplink DPCH info 10.3.6.88.		
>CPCH SET Info			CPCH SET Info 10.3.6.13		

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
E-DCH Info	OP		E-DCH Info 10.3.6.97		REL-6
Downlink radio resources					
CHOICE <i>mode</i>	MP				
>FDD					
>>Downlink PDSCH information	OP		Downlink PDSCH information 10.3.6.30		
>TDD				(no data)	
Downlink HS-PDSCH Information	OP		Downlink HS_PDSCH Information 10.3.6.23a		REL-5
Downlink information common for all radio links	OP		Downlink information common for all radio links 10.3.6.24		
Downlink information per radio link list	OP	1 to <maxRL>		Send downlink information for each radio link to be set-up	
>Downlink information for each radio link	MP		Downlink information for each radio link 10.3.6.27		
MBMS PL Service Restriction Information	OP		Enumerated (TRUE)	Absence means that on the MBMS Preferred Layer (PL) no restrictions apply concerning the use of non-MBMS services i.e. the PL is not congested	REL-6

Condition	Explanation
CCCH	This IE is mandatory present when CCCH is used and ciphering is not required and not needed otherwise.

10.2.27 RADIO BEARER RECONFIGURATION

This message is sent from UTRAN to reconfigure parameters related to a change of QoS. This procedure can also change the multiplexing of MAC, reconfigure transport channels and physical channels. This message is also used to perform a handover from GERAN *Iu mode* to UTRAN.

RLC-SAP: AM or UM or sent through GERAN *Iu mode*

Logical channel: DCCH or sent through GERAN *Iu mode*

Direction: UTRAN → UE

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Message Type	MP		Message Type		
UE Information elements					
RRC transaction identifier	MP		RRC transaction identifier 10.3.3.36		
Integrity check info	CH		Integrity check info 10.3.3.16		
Integrity protection mode info	OP		Integrity protection mode info 10.3.3.19	The UTRAN should not include this IE unless it is performing an SRNS relocation or a handover from GERAN <i>Iu mode</i>	
Ciphering mode info	OP		Ciphering mode info 10.3.3.5	The UTRAN should not include this IE unless it is performing either an SRNS relocation or a handover from GERAN <i>Iu mode</i> and a change in ciphering algorithm	
Activation time	MD		Activation time 10.3.3.1	Default value is "now"	
New U-RNTI	OP		U-RNTI 10.3.3.47		
New C-RNTI	OP		C-RNTI 10.3.3.8		
New DSCH-RNTI	OP		DSCH-RNTI 10.3.3.9a		
New H-RNTI	OP		H-RNTI 10.3.3.14a		REL-5
New E-RNTI	OP		E-RNTI 10.3.3.10a		REL-6
RRC State Indicator	MP		RRC State Indicator 10.3.3.35a		
UTRAN DRX cycle length coefficient	OP		UTRAN DRX cycle length coefficient 10.3.3.49		
CN information elements					
CN Information info	OP		CN Information info 10.3.1.3		

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
UTRAN mobility information elements					
URA identity	OP		URA identity 10.3.2.6		
CHOICE specification mode	MP				REL-5
>Complete specification					
RB information elements					
>>RAB information to reconfigure list	OP	1 to <maxRABse tup >			
>>>RAB information to reconfigure	MP		RAB information to reconfigure 10.3.4.11		
>>RB information to reconfigure list	MP	1to <maxRB>		Although this IE is not always required, need is MP to align with ASN.1	
	OP				REL-4
>>>RB information to reconfigure	MP		RB information to reconfigure 10.3.4.18		
>>RB information to be affected list	OP	1 to <maxRB>			
>>>RB information to be affected	MP		RB information to be affected 10.3.4.17		
>>RB with PDCP context relocation info list	OP	1 to <maxRBall RABs>		This IE is needed for each RB having PDCP and performing PDCP context relocation	REL-5
>>>PDCP context relocation info	MP		PDCP context relocation info 10.3.4.1a		REL-5
TrCH Information Elements					
Uplink transport channels					
>>UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24		
>>Deleted TrCH information list	OP	1 to <maxTrCH >			
>>>Deleted UL TrCH information	MP		Deleted UL TrCH information 10.3.5.5		
>>Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>>>Added or Reconfigured UL TrCH information	MP		Added or Reconfigured UL TrCH		

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
			information 10.3.5.2		
>>CHOICE <i>mode</i>	OP				
>>>FDD					
>>>>CPCH set ID	OP		CPCH set ID 10.3.5.3		
>>>>Added or Reconfigured TrCH information for DRAC list	OP	1 to <maxTrCH >			
>>>>DRAC static information	MP		DRAC static information 10.3.5.7		
>>>TDD				(no data)	
Downlink transport channels					
>>DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6		
>>Deleted TrCH information list	OP	1 to <maxTrCH >			
>>>Deleted DL TrCH information	MP		Deleted DL TrCH information 10.3.5.4		
>>Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>>>Added or Reconfigured DL TrCH information	MP		Added or Reconfigured DL TrCH information 10.3.5.1		
>Preconfiguration					REL-5
>>CHOICE <i>Preconfiguration mode</i>	MP			This value only applies in case the message is sent through GERAN <i>lu mode</i>	
>>>Predefined configuration identity	MP		Predefined configuration identity 10.3.4.5		
>>>Default configuration					
>>>>Default configuration mode	MP		Enumerated (FDD, TDD)	Indicates whether the FDD or TDD version of the default configuration shall be used	
>>>>Default configuration identity	MP		Default configuration identity 10.3.4.0		
PhyCH information elements					
Frequency info	OP		Frequency info 10.3.6.36		
Uplink radio resources					
Maximum allowed UL TX power	MD		Maximum allowed UL TX power	Default value is the existing maximum UL TX	

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
			10.3.6.39	power	
CHOICE <i>channel requirement</i>	OP				
>Uplink DPCH info			Uplink DPCH info 10.3.6.88		
>CPCH SET Info			CPCH SET Info 10.3.6.13		
E-DCH Info	OP		E-DCH Info 10.3.6.97		REL-6
Downlink radio resources					
CHOICE <i>mode</i>	MP				
>FDD					
>>Downlink PDSCH information	OP		Downlink PDSCH information 10.3.6.30		
>TDD				(no data)	
Downlink HS-PDSCH Information	OP		Downlink HS-PDSCH Information 10.3.6.23a		REL-5
Downlink information common for all radio links	OP		Downlink information common for all radio links 10.3.6.24		
Downlink information per radio link list	MP	1 to <maxRL>		Although this IE is not always required, need is MP to align with ASN.1	
	OP				REL-4
>Downlink information for each radio link	MP		Downlink information for each radio link 10.3.6.27		
MBMS PL Service Restriction Information	OP		Enumerated (TRUE)	Absence means that on the MBMS Preferred Layer (PL) no restrictions apply concerning the use of non-MBMS services i.e. the PL is not congested	REL-6

10.2.30 RADIO BEARER RELEASE

This message is used by UTRAN to release a radio bearer. It can also include modifications to the configurations of transport channels and/or physical channels. It can simultaneously indicate release of a signalling connection when UE is connected to more than one CN domain.

RLC-SAP: AM or UM

Logical channel: DCCH

Direction: UTRAN → UE

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Message Type	MP		Message Type		
UE Information Elements					
RRC transaction identifier	MP		RRC transaction identifier 10.3.3.36		
Integrity check info	CH		Integrity check info 10.3.3.16		
Integrity protection mode info	OP		Integrity protection mode info 10.3.3.19	The UTRAN should not include this IE unless it is performing an SRNS relocation.	
Ciphering mode info	OP		Ciphering mode info 10.3.3.5	The UTRAN should not include this IE unless it is performing an SRNS relocation and a change in ciphering algorithm.	
Activation time	MD		Activation time 10.3.3.1	Default value is "now"	
New U-RNTI	OP		U-RNTI 10.3.3.47		
New C-RNTI	OP		C-RNTI 10.3.3.8		
New DSCH-RNTI	OP		DSCH-RNTI 10.3.3.9a		
New H-RNTI	OP		H-RNTI 10.3.3.14a		REL-5
New E-RNTI	OP		E-RNTI 10.3.3.10a		REL-6
RRC State Indicator	MP		RRC State Indicator 10.3.3.35a		
UTRAN DRX cycle length coefficient	OP		UTRAN DRX cycle length coefficient 10.3.3.49		
CN Information Elements					
CN Information info	OP		CN Information info 10.3.1.3		
Signalling Connection release indication	OP		CN domain identity 10.3.1.1		
UTRAN mobility information elements					
URA identity	OP		URA identity 10.3.2.6		
RB Information Elements					
RAB information to reconfigure list	OP	1 to < maxRABse			

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
		tup >			
>RAB information to reconfigure	MP		RAB information to reconfigure 10.3.4.11		
RB information to release list	MP	1 to <maxRB>			
>RB information to release	MP		RB information to release 10.3.4.19		
RB information to be affected list	OP	1 to <maxRB>			
>RB information to be affected	MP		RB information to be affected 10.3.4.17		
Downlink counter synchronisation info	OP				
>RB with PDCP information list	OP	1 to <maxRBall RABs>			
>>RB with PDCP information	MP		RB with PDCP information 10.3.4.22	This IE is needed for each RB having PDCP in the case of lossless SRNS relocation	
	OP				REL-5
>RB with PDCP context relocation info list	OP	1 to <maxRBall RABs>			REL-5
>>PDCP context relocation info	MP		PDCP context relocation info 10.3.4.1a	This IE is needed for each RB having PDCP and performing PDCP context relocation	REL-5
TrCH Information Elements					
Uplink transport channels					
UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24		
Deleted TrCH information list	OP	1 to <maxTrCH >			
>Deleted UL TrCH information	MP		Deleted UL TrCH information 10.3.5.5		
Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>Added or Reconfigured UL TrCH information	MP		Added or Reconfigured UL TrCH information 10.3.5.2		
CHOICE <i>mode</i>	OP				
>FDD					
>>CPCH set ID	OP		CPCH set ID 10.3.5.3		

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
>>Added or Reconfigured TrCH information for DRAC list	OP	1 to <maxTrCH >			
>>>DRAC static information	MP		DRAC static information-10.3.5.7		
>TDD				(no data)	
Downlink transport channels					
DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6		
Deleted TrCH information list	OP	1 to <maxTrCH >			
>Deleted DL TrCH information	MP		Deleted DL TrCH information 10.3.5.4		
Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>Added or Reconfigured DL TrCH information	MP		Added or Reconfigured DL TrCH information 10.3.5.1		
PhyCH information elements					
Frequency info	OP		Frequency info 10.3.6.36		
Uplink radio resources					
Maximum allowed UL TX power	MD		Maximum allowed UL TX power 10.3.6.39	Default value is the existing maximum UL TX power	
CHOICE <i>channel requirement</i>	OP				
>Uplink DPCH info			Uplink DPCH info 10.3.6.88		
>CPCH SET Info			CPCH SET Info 10.3.6.13		
E-DCH Info	OP		E-DCH Info 10.3.6.97		REL-6
Downlink radio resources					
CHOICE <i>mode</i>	MP				
>FDD					
>>Downlink PDSCH information	OP		Downlink PDSCH information 10.3.6.30		
>TDD				(no data)	
Downlink HS-PDSCH Information	OP		Downlink HS-PDSCH Information 10.3.6.23a		REL-5
Downlink information common for all radio links	OP		Downlink information common for all radio links 10.3.6.24		

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Downlink information per radio link list	OP	1 to <maxRL>		Send downlink information for each radio link to be set-up	
>Downlink information for each radio link	MP		Downlink information for each radio link 10.3.6.27		
MBMS PL Service Restriction Information	OP		Enumerated (TRUE)	Absence means that on the MBMS Preferred Layer (PL) no restrictions apply concerning the use of non-MBMS services i.e. the PL is not congested	REL-6
MBMS RB list released to change transfer mode	OP	1 to <maxRB>			REL-6
>RB information to release	MP		RB information to release 10.3.4.19		REL-6

10.2.33 RADIO BEARER SETUP

This message is sent by UTRAN to the UE to establish new radio bearer(s). It can also include modifications to the configurations of transport channels and/or physical channels.

RLC-SAP: AM or UM

Logical channel: DCCH

Direction: UTRAN → UE

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Message Type	MP		Message Type		
UE Information Elements					
RRC transaction identifier	MP		RRC transaction identifier 10.3.3.36		
Integrity check info	CH		Integrity check info 10.3.3.16		
Integrity protection mode info	OP		Integrity protection mode info 10.3.3.19	The UTRAN should not include this IE unless it is performing an SRNS relocation	
Ciphering mode info	OP		Ciphering mode info 10.3.3.5	The UTRAN should not include this IE unless it is performing an SRNS relocation and a change in ciphering algorithm	
Activation time	MD		Activation time 10.3.3.1	Default value is "now"	
New U-RNTI	OP		U-RNTI 10.3.3.47		
New C-RNTI	OP		C-RNTI 10.3.3.8		
New DSCH-RNTI	OP		DSCH-RNTI 10.3.3.9a		
New H-RNTI	OP		H-RNTI 10.3.3.14a		REL-5
New E-RNTI	OP		E-RNTI 10.3.3.10a		REL-6
RRC State Indicator	MP		RRC State Indicator 10.3.3.35a		
UTRAN DRX cycle length coefficient	OP		UTRAN DRX cycle length coefficient 10.3.3.49		
CN Information Elements					
CN Information info	OP		CN Information info 10.3.1.3		
UTRAN mobility information elements					
URA identity	OP		URA identity 10.3.2.6		
RB Information Elements					
Signalling RB information to setup list	OP	1 to <maxSRBs		For each signalling radio	

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
		etup>		bearer established	
>Signalling RB information to setup	MP		Signalling RB information to setup 10.3.4.24		
RAB information to setup list	OP	1 to <maxRABs etup>		For each RAB established	
>RAB information for setup	MP		RAB information for setup 10.3.4.10		
RB information to be affected list	OP	1 to <maxRB>			
>RB information to be affected	MP		RB information to be affected 10.3.4.17		
Downlink counter synchronisation info	OP				
>RB with PDCP information list	OP	1 to <maxRBall RABs>			
>>RB with PDCP information	MP		RB with PDCP information 10.3.4.22	This IE is needed for each RB having PDCP in the case of lossless SRNS relocation	
	OP				REL-5
>>PDCP context relocation info	OP		PDCP context relocation info 10.3.4.1a	This IE is needed for each RB having PDCP and performing PDCP context relocation	REL-5
TrCH Information Elements					
Uplink transport channels					
UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24		
Deleted TrCH information list	OP	1 to <maxTrCH >			
>Deleted UL TrCH information	MP		Deleted UL TrCH information 10.3.5.5		
Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>Added or Reconfigured UL TrCH information	MP		Added or Reconfigured UL TrCH information 10.3.5.2		
CHOICE <i>mode</i>	OP				
>FDD					
>>CPCH set ID	OP		CPCH set ID 10.3.5.3		

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
>>Added or Reconfigured TrCH information for DRAC list	OP	1 to <maxTrCH >			
>>>DRAC static information	MP		DRAC static information-10.3.5.7		
>TDD				(no data)	
Downlink transport channels					
DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels10.3.5.6		
Deleted TrCH information list	OP	1 to <maxTrCH >			
>Deleted DL TrCH information	MP		Deleted DL TrCH information 10.3.5.4		
Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>Added or Reconfigured DL TrCH information	MP		Added or Reconfigured DL TrCH information 10.3.5.1		
PhyCH information elements					
Frequency info	OP		Frequency info 10.3.6.36		
Uplink radio resources					
Maximum allowed UL TX power	MD		Maximum allowed UL TX power 10.3.6.39	Default value is the existing maximum UL TX power	
CHOICE <i>channel requirement</i>	OP				
>Uplink DPCH info			Uplink DPCH info 10.3.6.88		
>CPCH SET Info			CPCH SET Info 10.3.6.13		
E-DCH Info	OP		E-DCH Info 10.3.6.97		REL-6
Downlink radio resources					
CHOICE <i>mode</i>	MP				
>FDD					
>>Downlink PDSCH information	OP		Downlink PDSCH information 10.3.6.30		
>TDD				(no data)	
Downlink HS-PDSCH Information	OP		Downlink HS-PDSCH Information 10.3.6.23a		REL-5
Downlink information common for all radio links	OP		Downlink information common for all radio links 10.3.6.24		

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Downlink information per radio link list	OP	1 to <maxRL>		Send downlink information for each radio link	
>Downlink information for each radio link	MP		Downlink information for each radio link 10.3.6.27		
MBMS PL Service Restriction Information	OP		Enumerated (TRUE)	Absence means that on the MBMS Preferred Layer (PL) no restrictions apply concerning the use of non-MBMS services i.e. the PL is not congested	REL-6

10.2.48.8.13 ~~System Information Block type 10~~Void

~~NOTE: Only for FDD.~~

~~The system information block type 10 contains information to be used by UEs having their DCH controlled by a DRAC procedure.~~

Information Element/Group name	Need	Multi	Type and reference	Semantics description
UE information				
DRAC-system information	MP		DRAC-system-information-10.3.3.9	DRAC information is sent for each class of terminal

10.2.50 TRANSPORT CHANNEL RECONFIGURATION

This message is used by UTRAN to configure the transport channel of a UE. This also includes a possible reconfiguration of physical channels. The message can also be used to assign a TFC subset and reconfigure physical channel.

RLC-SAP: AM or UM

Logical channel: DCCCH

Direction: UTRAN → UE

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Message Type	MP		Message Type		
UE Information Elements					
RRC transaction identifier	MP		RRC transaction identifier 10.3.3.36		
Integrity check info	CH		Integrity check info 10.3.3.16		
Integrity protection mode info	OP		Integrity protection mode info 10.3.3.19	The UTRAN should not include this IE unless it is performing an SRNS relocation	
Ciphering mode info	OP		Ciphering mode info 10.3.3.5	The UTRAN should not include this IE unless it is performing an SRNS relocation and a change in ciphering algorithm	
Activation time	MD		Activation time 10.3.3.1	Default value is "now"	
New U-RNTI	OP		U-RNTI 10.3.3.47		
New C-RNTI	OP		C-RNTI 10.3.3.8		
New DSCH-RNTI	OP		DSCH-RNTI 10.3.3.9a		
New H-RNTI	OP		H-RNTI 10.3.3.14a		REL-5
New E-RNTI	OP		E-RNTI 10.3.3.10a		REL-6
RRC State Indicator	MP		RRC State Indicator 10.3.3.35a		
UTRAN DRX cycle length coefficient	OP		UTRAN DRX cycle length coefficient 10.3.3.49		
CN Information Elements					
CN Information info	OP		CN Information info 10.3.1.3		
UTRAN mobility information elements					
URA identity	OP		URA identity 10.3.2.6		
RB information elements					
Downlink counter	OP				

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
synchronisation info					
>RB with PDCP information list	OP	1 to <maxRBall RABs>			
>>RB with PDCP information	MP		RB with PDCP information 10.3.4.22	This IE is needed for each RB having PDCP in the case of lossless SRNS relocation	
	OP				REL-5
>>>PDCP context relocation info	OP		PDCP context relocation info 10.3.4.1a	This IE is needed for each RB having PDCP and performing PDCP context relocation	REL-5
TrCH Information Elements					
Uplink transport channels					
UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24		
Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>Added or Reconfigured UL TrCH information	MP		Added or Reconfigured UL TrCH information 10.3.5.2		
CHOICE mode	OP				
>FDD					
>>CPCH set ID	OP		CPCH set ID 10.3.5.3		
>>>Added or Reconfigured TrCH information for DRAC list	OP	1 to <maxTrCH >			
>>>>DRAC static information	MP		DRAC static information 10.3.5.7		
>TDD				(no data)	
Downlink transport channels					
DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6		
Added or Reconfigured TrCH information list	OP	1 to <maxTrCH >			
>Added or Reconfigured DL TrCH information	MP		Added or Reconfigured DL TrCH information 10.3.5.1		
PhyCH information elements					
Frequency info	OP		Frequency info 10.3.6.36		
Uplink radio resources					

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Maximum allowed UL TX power	MD		Maximum allowed UL TX power 10.3.6.39	Default value is the existing maximum UL TX power	
CHOICE <i>channel requirement</i>	OP				
>Uplink DPCH info			Uplink DPCH info 10.3.6.88		
>CPCH SET Info			CPCH SET Info 10.3.6.13		
E-DCH Info	OP		E-DCH Info 10.3.6.97		REL-6
Downlink radio resources					
CHOICE <i>mode</i>	MP				
>FDD					
>>Downlink PDSCH information	OP		Downlink PDSCH information 10.3.6.30		
>TDD				(no data)	
Downlink HS-PDSCH Information	OP		Downlink HS-PDSCH Information 10.3.6.23a		REL-5
Downlink information common for all radio links	OP		Downlink information common for all radio links 10.3.6.24		
Downlink information per radio link list	OP	1 to <maxRL>		Send downlink information for each radio link	
>Downlink information for each radio link	MP		Downlink information for each radio link 10.3.6.27		
MBMS PL Service Restriction Information	OP		Enumerated (TRUE)	Absence means that on the MBMS Preferred Layer (PL) no restrictions apply concerning the use of non-MBMS services i.e. the PL is not congested	REL-6

10.3.3.9 ~~DRAC system information~~ Void

Information element	Need	Multi	Type and reference	Semantics description
DRAC system information	MP	1 to <maxDRA Cclasses>		DRAC information is sent for each class of terminal
>Transmission probability	MP		Transmission probability- 10.3.3.39	
>Maximum bit rate	MP		Maximum bit rate- 10.3.3.20	

10.3.3.20 ~~Maximum bit rate~~ Void

~~NOTE:—Only for FDD.~~

~~Indicates the maximum user bit rate allowed on a DCH controlled by DRAC procedure for the transmission period (Transmission time validity).~~

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Maximum bit rate	MP		integer(0..512 by step of 16)	=kbit/s

10.3.3.25 Physical channel capability

Information Element/Group name	Need	Multi	Type and Reference	Semantics description	Version
Downlink physical channel capability information elements					
FDD downlink physical channel capability	CH- fdd_req_su p				
>Max no DPCH/PDSCH codes	MP		Integer (1..8)	Maximum number of DPCH/PDSCH codes to be simultaneously received	
>Max no physical channel bits received	MP		Integer (1200, 2400, 3600, 4800, 7200, 9600, 14400, 19200, 28800, 38400, 48000, 57600, 67200, 76800)	Maximum number of physical channel bits received in any 10 ms interval (DPCH, PDSCH, S-CCPCH)	
>Support for SF 512	MP		Boolean	TRUE means supported	
>Support of PDSCH	MP		Boolean	TRUE means supported	
>CHOICE Support of HS-PDSCH	CV- not_iRAT_ HoInfo				REL-5
>>Supported					REL-5
>>>HS-DSCH physical layer category	MP		Integer (1..64)		REL-5
>>>Support of dedicated pilots for channel estimation of HS-DSCH	MP		Boolean	TRUE means supported	REL-5
>>>Simultaneous reception of SCCPCH, DPCH and HS-PDSCH	MP		Boolean	TRUE means supported. This IE shall only be set to TRUE in the case the IE "Simultaneous reception of SCCPCH and DPCH" is set to TRUE	REL-5
>>Unsupported				(no data)	REL-5
>Simultaneous reception of SCCPCH and DPCH	MP		Boolean	TRUE means supported	
>Simultaneous reception of SCCPCH, DPCH and PDSCH	CV- #_sim_rec _pdsch- _sup		Boolean	TRUE means supported	
>Max no of S-CCPCH RL	CV- #_sim_rec		Integer(1)	Maximum number of simultaneous S-CCPCH radio links	
>Support of dedicated pilots for channel estimation	MD		Enumerated (true)	Presence of this element means supported and absence not supported. This IE shall be set to TRUE in this	

Information Element/Group name	Need	Multi	Type and Reference	Semantics description	Version
				version of the protocol.	
3.84 Mcps TDD downlink physical channel capability	CH-3.84_Mcps_tdd_req_s up				Name changed in REL-4
>Maximum number of timeslots per frame	MP		Integer (1..14)		
>Maximum number of physical channels per frame	MP		Integer (5..224)		
>Minimum SF	MP		Integer (1, 16)		
>Support of PDSCH	MP		Boolean	TRUE means supported	
>CHOICE <i>Support of HS-PDSCH</i>	CV-not_iRAT_HoInfo				REL-5
>>Supported					REL-5
>>>HS-DSCH physical layer category	MP		Integer (1..64)		REL-5
>>Unsupported				(no data)	REL-5
>Maximum number of physical channels per timeslot	MP		Integer (5..16)		
1.28 Mcps TDD downlink physical channel capability	CH-1.28_Mcps_tdd_req_s up				REL-4
>Maximum number of timeslots per subframe	MP		Integer (1..6)		REL-4
>Maximum number of physical channels per subframe	MP		Integer (1..96)		REL-4
>Minimum SF	MP		Integer (1, 16)		REL-4
>Support of PDSCH	MP		Boolean	TRUE means supported	REL-4
>CHOICE <i>Support of HS-PDSCH</i>	CV-not_iRAT_HoInfo				REL-5
>>Supported					REL-5
>>>HS-DSCH physical layer category	MP		Integer (1..64)		REL-5
>>Unsupported				(no data)	REL-5
>Maximum number of physical channels per timeslot	MP		Integer (1..16)		REL-4
>Support of 8PSK	MP		Boolean	TRUE means supported	REL-4
Uplink physical channel capability information elements					
FDD uplink physical channel capability	CH-fdd_req_s up				
>Maximum number of DPDCH bits transmitted per 10 ms	MP		Integer (600, 1200, 2400, 4800, 9600, 19200, 28800, 38400, 48000, 57600)		
>Support of PCPCH	MP		Boolean	TRUE means supported	
3.84 Mcps TDD uplink physical channel capability	CH-3.84_Mcps				Name changed

Information Element/Group name	Need	Multi	Type and Reference	Semantics description	Version
	<i>_tdd_req_sup</i>				in REL-4
>Maximum Number of timeslots per frame	MP		Integer (1..14)		
>Maximum number of physical channels per timeslot	MP		Integer (1, 2)		
>Minimum SF	MP		Integer (1, 2, 4, 8)		
>Support of PUSCH	MP		Boolean	TRUE means supported	
1.28 Mcps TDD uplink physical channel capability	CH- <i>1.28_Mcps_tdd_req_sup</i>				REL-4
>Maximum Number of timeslots per subframe	MP		Integer (1..6)		REL-4
>Maximum number of physical channels per timeslot	MP		Integer (1, 2)		REL-4
>Minimum SF	MP		Integer (1, 2, 4, 8, 16)		REL-4
>Support of PUSCH	MP		Boolean	TRUE means supported	REL-4
>Support of 8PSK	MP		Boolean	TRUE means supported	REL-4

Condition	Explanation
<i>if_sim_rec_pdsch_sup</i>	The IE is mandatory present if the IE "Simultaneous reception of SCCPCH and DPCH" = True and IE "Support of PDSCH" = True. Otherwise this field is not needed in the message.
<i>if_sim_rec</i>	The IE is mandatory present if the IE "capability-Simultaneous reception of SCCPCH and DPCH" = True. Otherwise this field is not needed in the message.
<i>3.84_Mcps_tdd_req_sup</i>	The IE is mandatory present if the IE "TDD RF capability" is present with the IE "Chip rate capability" set to "3.84 Mcps" and a 3.84 Mcps TDD capability update has been requested in a previous message. Otherwise this field is not needed in the message.
<i>1.28_Mcps_tdd_req_sup</i>	The IE is mandatory present if the IE "TDD RF capability" is present with the IE "Chip rate capability" set to "1.28 Mcps" and a 1.28 Mcps TDD capability update has been requested in a previous message. Otherwise this field is not needed in the message.
<i>fdd_req_sup</i>	The IE is mandatory present if the IE "Multi-mode capability" has the value "FDD" or "FDD/TDD" and a FDD capability update has been requested in a previous message. Otherwise this field is not needed in the message.
<i>not_iRAT_HoInfo</i>	The CHOICE <i>Support of HS-PDSCH</i> is not needed in the INTER RAT HANDOVER INFO message. Otherwise, it is mandatory present.

10.3.3.39 ~~Transmission probability~~Void

~~NOTE:—Only for FDD.~~

~~Indicates the probability for a mobile to be allowed to transmit on a DCH controlled by DRAC procedure.~~

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Transmission probability	MP		Real(0.125--1.0 by step of 0.125)	probability

10.3.5.7 ~~DRAC-Static-Information~~Void

~~NOTE:—Only for FDD.~~

~~Contains static parameters used by the DRAC procedure. Meaning and use is described in subclause 14.8.~~

Information Element/Group-name	Need	Multi	Type and reference	Semantics description
Transmission Time Validity	MP		Integer(1..256)	number of frames
Time duration before retry	MP		Integer(1..256)	number of frames
DRAC-Class-Identity	MP		Integer(1..maxDRACclasses)	Indicates the class of DRAC-parameters to use in SIB10-message

10.3.6.27 Downlink information for each radio link

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Choice mode	MP				
>FDD					
>>Primary CPICH info	MP		Primary CPICH info 10.3.6.60		
>>>Cell ID	OP		Cell ID 10.3.2.2		REL-4
>>>PDSCH with SHO DCH Info	OP		PDSCH with SHO DCH Info 10.3.6.47		
>>>PDSCH code mapping	OP		PDSCH code mapping 10.3.6.43		
>>>Serving HS-DSCH radio link indicator	CV-not_rrcConnectionSetup		Boolean	The value "TRUE" indicates that this radio link is the serving HS-DSCH radio link	REL-5
>>> Serving E-DCH radio link	CV-not_rrcConnectionSetup		Boolean	The value "TRUE" indicates that this radio link is the serving E-DCH radio link	REL-6
>TDD					
>>Primary CCPCH info	MP		Primary CCPCH info 10.3.6.57		
CHOICE DPCH info	OP				REL-6
>Downlink DPCH info for each RL	MP		Downlink DPCH info for each RL 10.3.6.21		
>Downlink F-DPCH info for each RL	MP		Downlink F-DPCH info for each RL 10.3.6.23ob		REL-6
SCCPCH Information for FACH	OP		SCCPCH Information for FACH 10.3.6.70		
E-AGCH Info	CV-not_rrcConnectionSetup		E-AGCH Info 10.3.6.100		REL-6
E-HICH Information	CV-not_rrcConnectionSetup		E-HICH Info 10.3.6.101		REL-6
E-RGCH Information	CV-not_rrcConnectionSetup		E-RGCH Info 10.3.6.102		REL-6

Condition	Explanation
not_rrcConnectionSetup	This IE is not needed in the RRC CONNECTION SETUP message. Otherwise it is mandatory present.

10.3.6.68 Radio link addition information

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Primary CPICH info	MP		Primary CPICH info 10.3.6.60		
Cell ID	OP		Cell ID 10.3.2.2		REL-4
CHOICE DPCH info	MP				REL-6
>Downlink DPCH info for each RL	MP		Downlink DPCH info for each RL 10.3.6.21		
>Downlink F-DPCH info for each RL	MP		Downlink F-F-DPCH info for each RL 10.3.6.23ob		REL-6
TFCI combining indicator	MP		TFCI combining indicator 10.3.6.81		
SCGPCH Information for FACH	OP		SCGPCH Information for FACH 10.3.6.70	Note 1	

~~NOTE 1: These IEs are present when the UE needs to listen to system information on FACH in CELL_DCH state.~~

10.3.6.70 **SCCPCH Information for FACH**Void

Information Element/Group-name	Need	Multi	Type and reference	Semantics description
Secondary CCPCH info	MP		Secondary-CCPCH info-10.3.6.71	
TFCs	MP		Transport-format-combination-set 10.3.5.20	For FACHs and PCH
FACH/PCH information	MP	1 to <maxFAG HPCH>		
>TFS	MP		Transport-format-set 10.3.5.23	For each FACHs and PCH
>Transport channel identity	MP		Transport-channel-identity-10.3.5.18	
>CTCH indicator	MP		Boolean	The value "TRUE" indicates that a CTCH is mapped on the FACH, and "FALSE" that no CTCH is mapped.
CHOICE mode				
>FDD				
>>References to system-information blocks	MP	1 to <maxSIB-FACH>		
>>>Scheduling information	MP		Scheduling-information-10.3.8.16	
>>>SIB type-SIBs only	MP		SIB Type-SIBs only, 10.3.8.22	
>TDD				(No data)

NOTE:—TFS for PCH shall be the first "FACH/PCH information" in the list if a PCH exists for the respective secondary CCPCH.

10.3.10 Multiplicity values and type constraint values

The following table includes constants that are either used as multi bounds (name starting with "max") or as high or low value in a type specification (name starting with "lo" or "hi"). Constants are specified only for values appearing more than once in the RRC specification. In case a constant is related to one or more other constants, an expression is included in the "value" column instead of the actual value.

Constant	Explanation	Value	Version
CN information			
maxCNdomains	Maximum number of CN domains	4	
UTRAN mobility information			
maxRAT	Maximum number of Radio Access Technologies	maxOtherRAT + 1	
maxOtherRAT	Maximum number of other Radio Access Technologies	15	
maxURA	Maximum number of URAs in a cell	8	
maxInterSysMessages	Maximum number of Inter System Messages	4	
maxRABsetup	Maximum number of RABs to be established	16	
UE information			
maxtransactions	Maximum number of parallel RRC transactions in downlink	25	
maxPDCPalgoType	Maximum number of PDCP algorithm types	8	
maxDRACclasses	Maximum number of UE classes which would require different DRAC parameters	8	
maxFreqBandsFDD	Maximum number of frequency bands supported by the UE as defined in [21]	8	
maxFreqBandsTDD	Maximum number of frequency bands supported by the UE as defined in [22]	4	
maxFreqBandsGSM	Maximum number of frequency bands supported by the UE as defined in [45]	16	
maxPage1	Number of UEs paged in the Paging Type 1 message	8	
maxSystemCapability	Maximum number of system specific capabilities that can be requested in one message.	16	
MaxURNTIgroup	Maximum number of U-RNTI groups in one message	8	REL-5
RB information			
maxPredefConfig	Maximum number of predefined configurations	16	
maxRB	Maximum number of RBs	32	
maxSRBsetup	Maximum number of signalling RBs to be established	8	
maxRBperRAB	Maximum number of RBs per RAB	8	
maxRBallRABs	Maximum number of non signalling RBs	27	
maxRBperTrCh	Maximum number of RB per TrCh	16	REL-6
maxRBMuxOptions	Maximum number of RB multiplexing options	8	
maxLoCHperRLC	Maximum number of logical channels per RLC entity	2	
maxRLCPDUsizePerLogChan	Maximum number of RLC PDU sizes per logical channel	FFS	REL-6
MaxROHC-PacketSizes	Maximum number of packet sizes that are allowed to be produced by ROHC.	16	
MaxROHC-Profiles	Maximum number of profiles supported by ROHC on a given RB.	8	
maxRFC 3095-CID	Maximum number of available CID values per radio bearer	16384	REL-5
TrCH information			
maxE-DCHMACdFlow	Maximum number of E-DCH MAC-d flows	FFS	REL-6
maxHarqRTT	Maximum number of E-DCH HARQ processes	FFS	REL-6
MaxHProcesses	Maximum number of H-ARQ processes	8	REL-5
MaxHSDSCH_TB_index	Maximum number of TB set size configurations for the HS-DSCH.	64 (FDD and 1.28 Mcps TDD); 512 (3.84 Mcps TDD)	REL-5

Constant	Explanation	Value	Version
maxMACdPDUSizes	Maximum number of MAC-d PDU sizes per queue permitted for MAC-hs	8	REL-5
maxTrCH	Maximum number of transport channels used in one direction (UL or DL)	32	
maxTrCHpreconf	Maximum number of preconfigured Transport channels, per direction	16	
maxCCTrCH	Maximum number of CCTrCHs	8	
maxQueueID	Maximum number of Mac-hs queues	8	REL-5
MaxTF	Maximum number of different transport formats that can be included in the Transport format set for one transport channel	32	
maxTF-CPCH	Maximum number of TFs in a CPCH set	16	
maxTFC	Maximum number of Transport Format Combinations	1024	
maxTFCsub	Maximum number of Transport Format Combinations Subset	1024	
maxTFCl-1-Combs	Maximum number of TFCl (field 1) combinations	512	
maxTFCl-2-Combs	Maximum number of TFCl (field 2) combinations	512	
maxCPCHsets	Maximum number of CPCH sets per cell	16	
maxSIBperMsg	Maximum number of complete system information blocks per SYSTEM INFORMATION message	16	
maxSIB	Maximum number of references to other system information blocks.	32	
maxSIB-FACH	Maximum number of references to system information blocks on the FACH	8	
PhyCH information			
maxHSSCCHs	Maximum number of HSSCCH codes that can be assigned to a UE	4	REL-5
maxPCPCH-APsubCH	Maximum number of available sub-channels for AP signature on PCPCH	12	
maxPCPCH-CDsubCH	Maximum number of available sub-channels for CD signature on PCPCH	12	
maxPCPCH-APsig	Maximum number of available signatures for AP on PCPCH	16	
maxPCPCH-CDsig	Maximum number of available signatures for CD on PCPCH	16	
maxAC	Maximum number of access classes	16	
maxASC	Maximum number of access service classes	8	
maxASCmap	Maximum number of access class to access service classes mappings	7	
maxASCpersist	Maximum number of access service classes for which persistence scaling factors are specified	6	
maxPRACH	Maximum number of PRACHs in a cell	16	
MaxPRACH_FPACH	Maximum number of PRACH / FPACH pairs in a cell (1.28 Mcps TDD)	8	REL-4
maxFACHPCH	Maximum number of FACHs and PCHs mapped onto one secondary CCPCHs	8	
maxTrChperSCCPCH	Maximum number of TrCh per S-CCPCH	8	REL-6
maxRL	Maximum number of radio links	8	
maxSCCPCH	Maximum number of secondary CCPCHs per cell	16	
maxDPDCH-UL	Maximum number of DPDCHs per cell	6	
maxDPCH-DLchan	Maximum number of channelisation codes used for DL DPCH	8	
maxPUSCH	Maximum number of PUSCHs	(8)	
maxPDSCH	Maximum number of PDSCHs	8	
maxPDSCHcodes	Maximum number of codes for PDSCH	16	
maxPDSCH-TFCIgroups	Maximum number of TFCI groups for PDSCH	256	
maxPDSCHcodeGroups	Maximum number of code groups for PDSCH	256	
maxPCPCHs	Maximum number of PCPCH channels in a CPCH Set	64	
maxPCPCH-SF	Maximum number of available SFs on PCPCH	7	
maxTS	Maximum number of timeslots used in one direction (UL or DL)	14 (3.84 Mcps TDD)	

Constant	Explanation	Value	Version
		6 (1.28 Mcps TDD)	REL-4
hiPUSCHidentities	Maximum number of PUSCH Identities	64	
hiPDSCHidentities	Maximum number of PDSCH Identities	64	
Measurement information			
maxTGPS	Maximum number of transmission gap pattern sequences	6	
maxAdditionalMeas	Maximum number of additional measurements for a given measurement identity	4	
maxMeasEvent	Maximum number of events that can be listed in measurement reporting criteria	8	
maxMeasParEvent	Maximum number of measurement parameters (e.g. thresholds) per event	2	
maxMeasIntervals	Maximum number of intervals that define the mapping function between the measurements for the cell quality Q of a cell and the representing quality value	1	
maxCellMeas	Maximum number of cells to measure	32	
maxReportedGSMCells	Maximum number of GSM cells to be reported	8	
maxFreq	Maximum number of frequencies to measure	8	
maxSat	Maximum number of satellites to measure	16	
maxSatAlmanacStorage	Maximum number of satellites for which to store GPS Almanac information	32	
HiRM	Maximum number that could be set as rate matching attribute for a transport channel	256	
Frequency information			
MaxFDDFreqList	Maximum number of FDD carrier frequencies to be stored in USIM	4	
MaxTDDFreqList	Maximum number of TDD carrier frequencies to be stored in USIM	4	
MaxFDDFreqCellList	Maximum number of neighbouring FDD cells to be stored in USIM	32	
MaxTDDFreqCellList	Maximum number of neighbouring TDD cells to be stored in USIM	32	
MaxGSMCellList	Maximum number of GSM cells to be stored in USIM	32	
Other information			
MaxGERANSI	Maximum number of GERAN SI blocks that can be provided as part of NACC information	8	REL-5
maxNumGSMFreqRanges	Maximum number of GSM Frequency Ranges to store	32	
MaxNumFDDFreqs	Maximum number of FDD centre frequencies to store	8	
MaxNumTDDFreqs	Maximum number of TDD centre frequencies to store	8	
maxNumCDMA2000Freqs	Maximum number of CDMA2000 centre frequencies to store	8	
maxGSMTargetCells	Maximum number of GSM target cells	32	REL-6
MBMS information			
maxMBMS-CommonCCTrCh	Maximum number of CCTrCh configurations included in the MBMS COMMON P-T-M RB INFORMATION message	32	REL-6
maxMBMS-CommonPhyCh	Maximum number of PhyCh configurations included in the MBMS COMMON P-T-M RB INFORMATION message	32	REL-6
maxMBMS-CommonRB	Maximum number of RB configurations included in the MBMS COMMON P-T-M RB INFORMATION message	32	REL-6
maxMBMS-CommonTrCh	Maximum number of TrCh configurations included in the MBMS COMMON P-T-M RB INFORMATION message	32	REL-6
maxMBMS-Freq	Maximum number of MBMS preferred frequencies	4	REL-6

Constant	Explanation	Value	Version
maxMBMS-L1CP	Maximum number of periods in which layer 1 combining applies	4	REL-6
maxMBMSservCount	Maximum number of MBMS services in a Access Info message	4	REL-6
maxMBMSservDedic	Maximum number of MBMS services in a dedicated notification/ Paging type 2 message	4	REL-6
maxMBMSservModif	Maximum number of MBMS services in a MBMS MODIFIED SERVICES INFORMATION message	4	REL-6
maxMBMSservSched	Maximum number of MBMS services in a MBMS SCHEDULING INFORMATION message	16	REL-6
maxMBMSservUnmodif	Maximum number of MBMS services in a MBMS UNMODIFIED SERVICES INFORMATION message	32	REL-6
maxMBMSTransmis	Maximum number of transmissions for which scheduling information is provided within a scheduling period	4	REL-6

11.2 PDU definitions

```

-- *****
--
-- CELL UPDATE CONFIRM
--
-- *****

CellUpdateConfirm ::= CHOICE {
  r3
    SEQUENCE {
      cellUpdateConfirm-r3          CellUpdateConfirm-r3-IEs,
      v3a0NonCriticalExtensions     SEQUENCE {
        cellUpdateConfirm-v3a0ext   CellUpdateConfirm-v3a0ext,
        laterNonCriticalExtensions  SEQUENCE {
          -- Container for additional R99 extensions
          cellUpdateConfirm-r3-add-ext BIT STRING OPTIONAL,
          v4b0NonCriticalExtensions  SEQUENCE {
            cellUpdateConfirm-v4b0ext CellUpdateConfirm-v4b0ext-IEs,
            v590NonCriticalExtensitions SEQUENCE {
              cellUpdateConfirm-v590ext   CellUpdateConfirm-v590ext-IEs,
              v6xyNonCriticalExtensions SEQUENCE {
                cellUpdateConfirm-v6xyext   CellUpdateConfirm-v6xyext-IEs,
                nonCriticalExtensions      SEQUENCE {} OPTIONAL
              }
            } OPTIONAL
          } OPTIONAL
        } OPTIONAL
      } OPTIONAL
    } OPTIONAL
  },
  later-than-r3
    SEQUENCE {
      rrc-TransactionIdentifier      RRC-TransactionIdentifier,
      criticalExtensions             CHOICE {
        r4
          SEQUENCE {
            cellUpdateConfirm-r4      CellUpdateConfirm-r4-IEs,
            v4d0NonCriticalExtensions SEQUENCE {
              -- Container for adding non critical extensions after freezing REL-5
              cellUpdateConfirm-r4-add-ext BIT STRING OPTIONAL,
              v590NonCriticalExtensitions SEQUENCE {
                cellUpdateConfirm-v590ext   CellUpdateConfirm-v590ext-IEs,
                v6xyNonCriticalExtensions SEQUENCE {
                  cellUpdateConfirm-v6xyext   CellUpdateConfirm-v6xyext-IEs,
                  nonCriticalExtensions      SEQUENCE {} OPTIONAL
                }
              } OPTIONAL
            } OPTIONAL
          } OPTIONAL
        },
        criticalExtensions             CHOICE {
          r5
            SEQUENCE {
              cellUpdateConfirm-r5      CellUpdateConfirm-r5-IEs,
              -- Container for adding non critical extensions after freezing REL-6
              cellUpdateConfirm-r5-add-ext BIT STRING OPTIONAL,
              v6xyNonCriticalExtensions SEQUENCE {
                cellUpdateConfirm-v6xyext   CellUpdateConfirm-v6xyext-IEs,
                nonCriticalExtensions      SEQUENCE {} OPTIONAL
              }
            } OPTIONAL
          },
          criticalExtensions             CHOICE {
            r6
              SEQUENCE {
                cellUpdateConfirm-r6      CellUpdateConfirm-r6-IEs,
                -- Container for adding non critical extensions after freezing REL-7
                cellUpdateConfirm-r6-add-ext BIT STRING OPTIONAL,
                nonCriticalExtensions      SEQUENCE {} OPTIONAL
              },
            criticalExtensions             SEQUENCE {}
          }
        }
      }
    }
  }
}

CellUpdateConfirm-r3-IEs ::= SEQUENCE {
  -- User equipment IEs
  rrc-TransactionIdentifier      RRC-TransactionIdentifier,
  integrityProtectionModeInfo    IntegrityProtectionModeInfo      OPTIONAL,
  cipheringModeInfo              CipheringModeInfo                OPTIONAL,
  activationTime                  ActivationTime                    OPTIONAL,

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new-U-RNTI                U-RNTI                OPTIONAL,
new-C-RNTI                C-RNTI                OPTIONAL,
rrc-StateIndicator        RRC-StateIndicator,
utran-DRX-CycleLengthCoeff  UTRAN-DRX-CycleLengthCoefficient  OPTIONAL,
rlc-Re-establishIndicatorRb2-3or4  BOOLEAN,
rlc-Re-establishIndicatorRb5orAbove  BOOLEAN,
-- CN information elements
  cn-InformationInfo      CN-InformationInfo      OPTIONAL,
-- UTRAN mobility IEs
  ura-Identity            URA-Identity            OPTIONAL,
-- Radio bearer IEs
  rb-InformationReleaseList  RB-InformationReleaseList  OPTIONAL,
  rb-InformationReconfigList  RB-InformationReconfigList  OPTIONAL,
  rb-InformationAffectedList  RB-InformationAffectedList  OPTIONAL,
  dl-CounterSynchronisationInfo  DL-CounterSynchronisationInfo  OPTIONAL,
-- Transport channel IEs
  ul-CommonTransChInfo      UL-CommonTransChInfo      OPTIONAL,
  ul-deletedTransChInfoList  UL-DeletedTransChInfoList  OPTIONAL,
  ul-AddReconfTransChInfoList  UL-AddReconfTransChInfoList  OPTIONAL,
  modeSpecificTransChInfo    CHOICE {
    fdd                     SEQUENCE {
      cpch-SetID            CPCH-SetID            OPTIONAL,
      -- dummy is not used in this version of the specification, it should
      -- not be sent and if received it should be ignored.
      addReconfTransChDRAC-InfoDummy  DRAC-StaticInformationList  OPTIONAL
    },
    tdd                     NULL
  },
  dl-CommonTransChInfo      DL-CommonTransChInfo      OPTIONAL,
  dl-DeletedTransChInfoList  DL-DeletedTransChInfoList  OPTIONAL,
  dl-AddReconfTransChInfoList  DL-AddReconfTransChInfoList  OPTIONAL,
-- Physical channel IEs
  frequencyInfo            FrequencyInfo            OPTIONAL,
  maxAllowedUL-TX-Power     MaxAllowedUL-TX-Power     OPTIONAL,
  ul-ChannelRequirement     UL-ChannelRequirement     OPTIONAL,
  modeSpecificPhysChInfo    CHOICE {
    fdd                     SEQUENCE {
      dl-PDSCH-Information  DL-PDSCH-Information  OPTIONAL
    },
    tdd                     NULL
  },
  dl-CommonInformation      DL-CommonInformation      OPTIONAL,
  dl-InformationPerRL-List   DL-InformationPerRL-List   OPTIONAL
}

CellUpdateConfirm-v3a0ext ::= SEQUENCE {
  new-DSCH-RNTI            DSCH-RNTI            OPTIONAL
}

CellUpdateConfirm-v4b0ext-IEs ::= SEQUENCE {
  -- Physical channel IEs
  -- ssdt-UL extends SSdT-Information, which is included in
  -- DL-CommonInformation. FDD only.
  ssdt-UL-r4              SSdT-UL              OPTIONAL,
  -- The order of the RLs in IE cell-id-PerRL-List is the same as
  -- in IE DL-InformationPerRL-List included in this message
  cell-id-PerRL-List      CellIdentity-PerRL-List      OPTIONAL
}

CellUpdateConfirm-v590ext-IEs ::= SEQUENCE {
  -- Physical channel IEs
  dl-TPC-PowerOffsetPerRL-List  DL-TPC-PowerOffsetPerRL-List  OPTIONAL
}

CellUpdateConfirm-r4-IEs ::= SEQUENCE {
  -- User equipment IEs
  integrityProtectionModeInfo  IntegrityProtectionModeInfo  OPTIONAL,
  cipheringModeInfo            CipheringModeInfo            OPTIONAL,
  activationTime                ActivationTime                OPTIONAL,
  new-U-RNTI                    U-RNTI                    OPTIONAL,
  new-C-RNTI                    C-RNTI                    OPTIONAL,
  new-DSCH-RNTI                DSCH-RNTI                OPTIONAL,
  rrc-StateIndicator            RRC-StateIndicator,
  utran-DRX-CycleLengthCoeff    UTRAN-DRX-CycleLengthCoefficient  OPTIONAL,
  rlc-Re-establishIndicatorRb2-3or4  BOOLEAN,
  rlc-Re-establishIndicatorRb5orAbove  BOOLEAN,
  -- CN information elements
  cn-InformationInfo            CN-InformationInfo            OPTIONAL,

```

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-- UTRAN mobility IEs
  ura-Identity          URA-Identity          OPTIONAL,
-- Radio bearer IEs
  rb-InformationReleaseList  RB-InformationReleaseList  OPTIONAL,
  rb-InformationReconfigList  RB-InformationReconfigList-r4  OPTIONAL,
  rb-InformationAffectedList  RB-InformationAffectedList  OPTIONAL,
  dl-CounterSynchronisationInfo  DL-CounterSynchronisationInfo  OPTIONAL,
-- Transport channel IEs
  ul-CommonTransChInfo      UL-CommonTransChInfo-r4      OPTIONAL,
  ul-deletedTransChInfoList  UL-DeletedTransChInfoList  OPTIONAL,
  ul-AddReconfTransChInfoList  UL-AddReconfTransChInfoList  OPTIONAL,
  modeSpecificTransChInfo    CHOICE {
    fdd                      SEQUENCE {
      cpch-SetID            CPCH-SetID            OPTIONAL,
      -- dummy is not used in this version of the specification, it should
      -- not be sent and if received it should be ignored.
      addReconfTransChDRAC-Infodummy      DRAC-StaticInformationList  OPTIONAL
    },
    tdd                      NULL
  },
  dl-CommonTransChInfo      DL-CommonTransChInfo-r4      OPTIONAL,
  dl-DeletedTransChInfoList  DL-DeletedTransChInfoList  OPTIONAL,
  dl-AddReconfTransChInfoList  DL-AddReconfTransChInfoList-r4  OPTIONAL,
-- Physical channel IEs
  frequencyInfo            FrequencyInfo            OPTIONAL,
  maxAllowedUL-TX-Power    MaxAllowedUL-TX-Power    OPTIONAL,
  ul-ChannelRequirement    UL-ChannelRequirement-r4    OPTIONAL,
  modeSpecificPhysChInfo    CHOICE {
    fdd                      SEQUENCE {
      dl-PDSCH-Information  DL-PDSCH-Information    OPTIONAL
    },
    tdd                      NULL
  },
  dl-CommonInformation      DL-CommonInformation-r4      OPTIONAL,
  dl-InformationPerRL-List  DL-InformationPerRL-List-r4  OPTIONAL
}

CellUpdateConfirm-r5-IEs ::= SEQUENCE {
-- User equipment IEs
  integrityProtectionModeInfo  IntegrityProtectionModeInfo  OPTIONAL,
  cipheringModeInfo           CipheringModeInfo             OPTIONAL,
  activationTime               ActivationTime                 OPTIONAL,
  new-U-RNTI                   U-RNTI                       OPTIONAL,
  new-C-RNTI                   C-RNTI                       OPTIONAL,
  new-DSCH-RNTI               DSCH-RNTI                   OPTIONAL,
  new-H-RNTI                   H-RNTI                       OPTIONAL,
  rrc-StateIndicator          RRC-StateIndicator,
  utran-DRX-CycleLengthCoeff  UTRAN-DRX-CycleLengthCoefficient  OPTIONAL,
  rlc-Re-establishIndicatorRb2-3or4  BOOLEAN,
  rlc-Re-establishIndicatorRb5orAbove  BOOLEAN,
-- CN information elements
  cn-InformationInfo          CN-InformationInfo          OPTIONAL,
-- UTRAN mobility IEs
  ura-Identity                URA-Identity                OPTIONAL,
-- Radio bearer IEs
  rb-InformationReleaseList    RB-InformationReleaseList    OPTIONAL,
  rb-InformationReconfigList    RB-InformationReconfigList-r5  OPTIONAL,
  rb-InformationAffectedList    RB-InformationAffectedList-r5  OPTIONAL,
  dl-CounterSynchronisationInfo  DL-CounterSynchronisationInfo-r5  OPTIONAL,
-- Transport channel IEs
  ul-CommonTransChInfo        UL-CommonTransChInfo-r4        OPTIONAL,
  ul-deletedTransChInfoList    UL-DeletedTransChInfoList      OPTIONAL,
  ul-AddReconfTransChInfoList  UL-AddReconfTransChInfoList    OPTIONAL,
  modeSpecificTransChInfo      CHOICE {
    fdd                      SEQUENCE {
      cpch-SetID            CPCH-SetID            OPTIONAL,
      -- dummy is not used in this version of the specification, it should
      -- not be sent and if received it should be ignored.
      addReconfTransChDRAC-Infodummy      DRAC-StaticInformationList  OPTIONAL
    },
    tdd                      NULL
  },
  dl-CommonTransChInfo        DL-CommonTransChInfo-r4        OPTIONAL,
  dl-DeletedTransChInfoList    DL-DeletedTransChInfoList-r5  OPTIONAL,
  dl-AddReconfTransChInfoList  DL-AddReconfTransChInfoList-r5  OPTIONAL,
-- Physical channel IEs
  frequencyInfo               FrequencyInfo                 OPTIONAL,
  maxAllowedUL-TX-Power        MaxAllowedUL-TX-Power        OPTIONAL,

```

```

    ul-ChannelRequirement          UL-ChannelRequirement-r5          OPTIONAL,
    modeSpecificPhysChInfo        CHOICE {
        fdd                        SEQUENCE {
            dl-PDSCH-Information    DL-PDSCH-Information    OPTIONAL
        },
        tdd                        NULL
    },
    dl-HSPDSCH-Information        DL-HSPDSCH-Information        OPTIONAL,
    dl-CommonInformation          DL-CommonInformation-r5        OPTIONAL,
    dl-InformationPerRL-List      DL-InformationPerRL-List-r5    OPTIONAL
}

```

```

CellUpdateConfirm-r6-IEs ::= SEQUENCE {
-- User equipment IEs
    integrityProtectionModeInfo    IntegrityProtectionModeInfo    OPTIONAL,
    cipheringModeInfo              CipheringModeInfo              OPTIONAL,
    activationTime                  ActivationTime                  OPTIONAL,
    new-U-RNTI                      U-RNTI                        OPTIONAL,
    new-C-RNTI                      C-RNTI                        OPTIONAL,
    new-DSCH-RNTI                  DSCH-RNTI                     OPTIONAL,
    new-H-RNTI                      H-RNTI                        OPTIONAL,
    new-E-RNTI                      E-RNTI                        OPTIONAL,
    rrc-StateIndicator              RRC-StateIndicator,
    utran-DRX-CycleLengthCoeff      UTRAN-DRX-CycleLengthCoefficient OPTIONAL,
    rlc-Re-establishIndicatorRb2-3or4    BOOLEAN,
    rlc-Re-establishIndicatorRb5orAbove    BOOLEAN,
-- CN information elements
    cn-InformationInfo              CN-InformationInfo            OPTIONAL,
-- UTRAN mobility IEs
    ura-Identity                    URA-Identity                  OPTIONAL,
-- Radio bearer IEs
    rb-InformationReleaseList        RB-InformationReleaseList      OPTIONAL,
    rb-InformationReconfigList       RB-InformationReconfigList-r6  OPTIONAL,
    rb-InformationAffectedList       RB-InformationAffectedList-r6  OPTIONAL,
    dl-CounterSynchronisationInfo    DL-CounterSynchronisationInfo-r5 OPTIONAL,
-- Transport channel IEs
    ul-CommonTransChInfo            UL-CommonTransChInfo-r4       OPTIONAL,
    ul-deletedTransChInfoList        UL-DeletedTransChInfoList-r6   OPTIONAL,
    ul-AddReconfTransChInfoList      UL-AddReconfTransChInfoList-r6 OPTIONAL,
    modeSpecificTransChInfo          CHOICE {
        fdd                        SEQUENCE {
            cpch-SetID              CPCH-SetID                    OPTIONAL,
            addReconfTransChDRAC-Info DRAC-StaticInformationList OPTIONAL
        },
        tdd                        NULL
    },
    dl-CommonTransChInfo            DL-CommonTransChInfo-r4       OPTIONAL,
    dl-DeletedTransChInfoList        DL-DeletedTransChInfoList-r5   OPTIONAL,
    dl-AddReconfTransChInfoList      DL-AddReconfTransChInfoList-r5 OPTIONAL,
-- Physical channel IEs
    frequencyInfo                   FrequencyInfo                   OPTIONAL,
    maxAllowedUL-TX-Power            MaxAllowedUL-TX-Power          OPTIONAL,
    ul-ChannelRequirement            UL-ChannelRequirement-r6       OPTIONAL,
    ul-EDCH-Information              UL-EDCH-Information-r6         OPTIONAL,
    modeSpecificPhysChInfo          CHOICE {
        fdd                        SEQUENCE {
            dl-PDSCH-Information    DL-PDSCH-Information    OPTIONAL
        },
        tdd                        NULL
    },
    dl-HSPDSCH-Information          DL-HSPDSCH-Information        OPTIONAL,
    dl-CommonInformation            DL-CommonInformation-r6        OPTIONAL,
    dl-InformationPerRL-List        DL-InformationPerRL-List-r6    OPTIONAL,
-- MBMS IEs
    mbms-PL-ServiceRestrictInfo      MBMS-PL-ServiceRestrictInfo-r6
}

```

```

CellUpdateConfirm-v6xyext-IEs ::= SEQUENCE {
-- Core network IEs
    primary-plmn-Identity            PLMN-Identity                  OPTIONAL,
-- Physical channel IEs
    harq-Preamble-Mode              HARQ-Preamble-Mode            OPTIONAL,
    beaconPLEst                      BEACON-PL-Est                 OPTIONAL,
-- MBMS IEs
    mbms-PL-ServiceRestrictInfo      MBMS-PL-ServiceRestrictInfo-r6 OPTIONAL
}

```

```

-- *****
--
-- RADIO BEARER RECONFIGURATION
--
-- *****

RadioBearerReconfiguration ::= CHOICE {
  r3
    SEQUENCE {
      radioBearerReconfiguration-r3 RadioBearerReconfiguration-r3-IEs,
      -- Prefix "v3ao" is used (in one instance) to keep alignment with R99
      v3aoNonCriticalExtensions SEQUENCE {
        radioBearerReconfiguration-v3aoext RadioBearerReconfiguration-v3aoext,
        laterNonCriticalExtensions SEQUENCE {
          -- Container for additional R99 extensions
          radioBearerReconfiguration-r3-add-ext BIT STRING OPTIONAL,
          v4b0NonCriticalExtensions SEQUENCE {
            radioBearerReconfiguration-v4b0ext
              RadioBearerReconfiguration-v4b0ext-IEs,
            v590NonCriticalExtensions SEQUENCE {
              radioBearerReconfiguration-v590ext
                RadioBearerReconfiguration-v590ext-IEs,
              v6xyNonCriticalExtensions SEQUENCE {
                radioBearerReconfiguration-v6xyext
                  RadioBearerReconfiguration-v6xyext-IEs,
                nonCriticalExtensions SEQUENCE {} OPTIONAL
              } OPTIONAL
            } OPTIONAL
          } OPTIONAL
        } OPTIONAL
      } OPTIONAL
    },
  later-than-r3
    SEQUENCE {
      rrc-TransactionIdentifier RRC-TransactionIdentifier,
      criticalExtensions CHOICE {
        r4
          SEQUENCE {
            radioBearerReconfiguration-r4 RadioBearerReconfiguration-r4-IEs,
            v4d0NonCriticalExtensions SEQUENCE {
              -- Container for adding non critical extensions after freezing REL-5
              radioBearerReconfiguration-r4-add-ext BIT STRING OPTIONAL,
              v590NonCriticalExtensions SEQUENCE {
                radioBearerReconfiguration-v590ext
                  RadioBearerReconfiguration-v590ext-IEs,
              v6xyNonCriticalExtensions SEQUENCE {
                radioBearerReconfiguration-v6xyext
                  RadioBearerReconfiguration-v6xyext-IEs,
                nonCriticalExtensions SEQUENCE {} OPTIONAL
              } OPTIONAL
            } OPTIONAL
          } OPTIONAL
        },
        criticalExtensions CHOICE {
          r5
            SEQUENCE {
              radioBearerReconfiguration-r5 RadioBearerReconfiguration-r5-IEs,
              -- Container for adding non critical extensions after freezing REL-6
              radioBearerReconfiguration-r5-add-ext BIT STRING OPTIONAL,
              v6xyNonCriticalExtensions SEQUENCE {
                radioBearerReconfiguration-v6xyext
                  RadioBearerReconfiguration-v6xyext-IEs,
                nonCriticalExtensions SEQUENCE {} OPTIONAL
              } OPTIONAL
            },
            criticalExtensions CHOICE {
              r6
                SEQUENCE {
                  radioBearerReconfiguration-r6 RadioBearerReconfiguration-r6-IEs,
                  -- Container for adding non critical extensions after freezing REL-7
                  radioBearerReconfiguration-r6-add-ext BIT STRING OPTIONAL,
                  nonCriticalExtensions SEQUENCE {} OPTIONAL
                },
                criticalExtensions SEQUENCE {}
            }
          }
        }
      }
    }
  }
}

RadioBearerReconfiguration-r3-IEs ::= SEQUENCE {
  -- User equipment IEs

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rrc-TransactionIdentifier      RRC-TransactionIdentifier,
integrityProtectionModeInfo    IntegrityProtectionModeInfo    OPTIONAL,
cipheringModeInfo              CipheringModeInfo                OPTIONAL,
activationTime                  ActivationTime                    OPTIONAL,
new-U-RNTI                      U-RNTI                          OPTIONAL,
new-C-RNTI                      C-RNTI                          OPTIONAL,
rrc-StateIndicator              RRC-StateIndicator,
utran-DRX-CycleLengthCoeff      UTRAN-DRX-CycleLengthCoefficient  OPTIONAL,
-- Core network IEs
  cn-InformationInfo              CN-InformationInfo                OPTIONAL,
-- UTRAN mobility IEs
  ura-Identity                    URA-Identity                      OPTIONAL,
-- Radio bearer IEs
  rab-InformationReconfigList     RAB-InformationReconfigList      OPTIONAL,
  -- NOTE: IE rb-InformationReconfigList should be optional in later versions
  -- of this message
  rb-InformationReconfigList      RB-InformationReconfigList,
  rb-InformationAffectedList      RB-InformationAffectedList        OPTIONAL,
-- Transport channel IEs
  ul-CommonTransChInfo           UL-CommonTransChInfo             OPTIONAL,
  ul-deletedTransChInfoList      UL-DeletedTransChInfoList        OPTIONAL,
  ul-AddReconfTransChInfoList    UL-AddReconfTransChInfoList      OPTIONAL,
  modeSpecificTransChInfo        CHOICE {
    fdd                            SEQUENCE {
      cpch-SetID                   CPCH-SetID                       OPTIONAL,
      -- dummy is not used in this version of the specification, it should
      -- not be sent and if received it should be ignored.
      addReconfTransChDRAC-InfoDummy DRAC-StaticInformationList  OPTIONAL
    },
    tdd                            NULL
  }
  dl-CommonTransChInfo           DL-CommonTransChInfo             OPTIONAL,
  dl-DeletedTransChInfoList      DL-DeletedTransChInfoList        OPTIONAL,
  dl-AddReconfTransChInfoList    DL-AddReconfTransChInfo2List     OPTIONAL,
-- Physical channel IEs
  frequencyInfo                  FrequencyInfo                      OPTIONAL,
  maxAllowedUL-TX-Power          MaxAllowedUL-TX-Power            OPTIONAL,
  ul-ChannelRequirement          UL-ChannelRequirement            OPTIONAL,
  modeSpecificPhysChInfo        CHOICE {
    fdd                            SEQUENCE {
      dl-PDSCH-Information         DL-PDSCH-Information             OPTIONAL
    },
    tdd                            NULL
  },
  dl-CommonInformation           DL-CommonInformation             OPTIONAL,
  -- NOTE: IE dl-InformationPerRL-List should be optional in later versions
  -- of this message
  dl-InformationPerRL-List       DL-InformationPerRL-List
}

RadioBearerReconfiguration-v3a0ext ::= SEQUENCE {
  new-DSCH-RNTI                  DSCH-RNTI                        OPTIONAL
}

RadioBearerReconfiguration-v4b0ext-IEs ::= SEQUENCE {
  -- Physical channel IEs
  -- ssdt-UL extends SSdT-Information, which is included in
  -- DL-CommonInformation. FDD only.
  ssdt-UL-r4                      SSdT-UL                            OPTIONAL,
  -- The order of the RLs in IE cell-id-PerRL-List is the same as
  -- in IE DL-InformationPerRL-List included in this message
  cell-id-PerRL-List              CellIdentity-PerRL-List           OPTIONAL
}

RadioBearerReconfiguration-v590ext-IEs ::= SEQUENCE {
  -- Physical channel IEs
  dl-TPC-PowerOffsetPerRL-List    DL-TPC-PowerOffsetPerRL-List     OPTIONAL
}

RadioBearerReconfiguration-r4-IEs ::= SEQUENCE {
  -- User equipment IEs
  integrityProtectionModeInfo    IntegrityProtectionModeInfo      OPTIONAL,
  cipheringModeInfo              CipheringModeInfo                 OPTIONAL,
  activationTime                  ActivationTime                     OPTIONAL,
  new-U-RNTI                      U-RNTI                           OPTIONAL,
  new-C-RNTI                      C-RNTI                           OPTIONAL,
  new-DSCH-RNTI                  DSCH-RNTI                        OPTIONAL,
  rrc-StateIndicator              RRC-StateIndicator,

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    utran-DRX-CycleLengthCoeff      UTRAN-DRX-CycleLengthCoefficient  OPTIONAL,
-- Core network IEs
  cn-InformationInfo                CN-InformationInfo                OPTIONAL,
-- UTRAN mobility IEs
  ura-Identity                       URA-Identity                       OPTIONAL,
-- Radio bearer IEs
  rab-InformationReconfigList       RAB-InformationReconfigList       OPTIONAL,
  rb-InformationReconfigList       RB-InformationReconfigList-r4     OPTIONAL,
  rb-InformationAffectedList       RB-InformationAffectedList       OPTIONAL,
-- Transport channel IEs
  ul-CommonTransChInfo             UL-CommonTransChInfo-r4          OPTIONAL,
  ul-deletedTransChInfoList       UL-DeletedTransChInfoList       OPTIONAL,
  ul-AddReconfTransChInfoList     UL-AddReconfTransChInfoList     OPTIONAL,
  modeSpecificTransChInfo         CHOICE {
    fdd                               SEQUENCE {
      cpch-SetID                     CPCH-SetID                       OPTIONAL,
      -- dummy is not used in this version of the specification, it should
      -- not be sent and if received it should be ignored.
      addReconfTransChDRAC-Infodummy DRAC-StaticInformationList  OPTIONAL
    },
    tdd                               NULL
  }
  dl-CommonTransChInfo             DL-CommonTransChInfo-r4          OPTIONAL,
  dl-DeletedTransChInfoList       DL-DeletedTransChInfoList       OPTIONAL,
  dl-AddReconfTransChInfoList     DL-AddReconfTransChInfoList-r4  OPTIONAL,
-- Physical channel IEs
  frequencyInfo                    FrequencyInfo                     OPTIONAL,
  maxAllowedUL-TX-Power           MaxAllowedUL-TX-Power           OPTIONAL,
  ul-ChannelRequirement           UL-ChannelRequirement-r4        OPTIONAL,
  modeSpecificPhysChInfo         CHOICE {
    fdd                               SEQUENCE {
      dl-PDSCH-Information           DL-PDSCH-Information           OPTIONAL
    },
    tdd                               NULL
  },
  dl-CommonInformation            DL-CommonInformation-r4          OPTIONAL,
  dl-InformationPerRL-List        DL-InformationPerRL-List-r4     OPTIONAL
}

RadioBearerReconfiguration-r5-IEs ::= SEQUENCE {
-- User equipment IEs
  integrityProtectionModeInfo     IntegrityProtectionModeInfo     OPTIONAL,
  cipheringModeInfo              CipheringModeInfo               OPTIONAL,
  activationTime                  ActivationTime                   OPTIONAL,
  new-U-RNTI                     U-RNTI                         OPTIONAL,
  new-C-RNTI                     C-RNTI                         OPTIONAL,
  new-DSCH-RNTI                  DSCH-RNTI                      OPTIONAL,
  new-H-RNTI                     H-RNTI                         OPTIONAL,
  rrc-StateIndicator             RRC-StateIndicator,
  utran-DRX-CycleLengthCoeff     UTRAN-DRX-CycleLengthCoefficient  OPTIONAL,
-- Core network IEs
  cn-InformationInfo              CN-InformationInfo              OPTIONAL,
-- UTRAN mobility IEs
  ura-Identity                    URA-Identity                    OPTIONAL,
-- Specification mode information
  specificationMode               CHOICE {
    complete                       SEQUENCE {
      -- Radio bearer IEs
      rab-InformationReconfigList   RAB-InformationReconfigList     OPTIONAL,
      rb-InformationReconfigList   RB-InformationReconfigList-r5   OPTIONAL,
      rb-InformationAffectedList   RB-InformationAffectedList-r5   OPTIONAL,
      rb-PDCPCContextRelocationList RB-PDCPCContextRelocationList  OPTIONAL,
      -- Transport channel IEs
      ul-CommonTransChInfo         UL-CommonTransChInfo-r4        OPTIONAL,
      ul-deletedTransChInfoList   UL-DeletedTransChInfoList      OPTIONAL,
      ul-AddReconfTransChInfoList  UL-AddReconfTransChInfoList    OPTIONAL,
      modeSpecificTransChInfo     CHOICE {
        fdd                         SEQUENCE {
          cpch-SetID               CPCH-SetID                     OPTIONAL,
          -- dummy is not used in this version of the specification, it should
          -- not be sent and if received it should be ignored.
          addReconfTransChDRAC-Infodummy DRAC-StaticInformationList  OPTIONAL
        },
        tdd                         NULL
      }
    }
  },
  dl-CommonTransChInfo           DL-CommonTransChInfo-r4        OPTIONAL,
  dl-DeletedTransChInfoList     DL-DeletedTransChInfoList-r5   OPTIONAL,
  dl-AddReconfTransChInfoList   DL-AddReconfTransChInfoList-r5  OPTIONAL
}

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    },
    preconfiguration SEQUENCE {
-- All IEs that include an FDD/TDD choice are split in two IEs for this message,
-- one for the FDD only elements and one for the TDD only elements, so that one
-- FDD/TDD choice in this level is sufficient.
        preConfigMode CHOICE {
            predefinedConfigIdentity PredefinedConfigIdentity,
            defaultConfig SEQUENCE {
                defaultConfigMode DefaultConfigMode,
                defaultConfigIdentity DefaultConfigIdentity-r5
            }
        }
    },
-- Physical channel IEs
    frequencyInfo FrequencyInfo OPTIONAL,
    maxAllowedUL-TX-Power MaxAllowedUL-TX-Power OPTIONAL,
    ul-ChannelRequirement UL-ChannelRequirement-r5 OPTIONAL,
    modeSpecificPhysChInfo CHOICE {
        fdd SEQUENCE {
            dl-PDSCH-Information DL-PDSCH-Information OPTIONAL
        },
        tdd NULL
    },
    dl-HSPDSCH-Information DL-HSPDSCH-Information OPTIONAL,
    dl-CommonInformation DL-CommonInformation-r5 OPTIONAL,
    dl-InformationPerRL-List DL-InformationPerRL-List-r5 OPTIONAL
}

RadioBearerReconfiguration-r6-IEs ::= SEQUENCE {
-- User equipment IEs
    integrityProtectionModeInfo IntegrityProtectionModeInfo OPTIONAL,
    cipheringModeInfo CipheringModeInfo OPTIONAL,
    activationTime ActivationTime OPTIONAL,
    new-U-RNTI U-RNTI OPTIONAL,
    new-C-RNTI C-RNTI OPTIONAL,
    new-DSCH-RNTI DSCH-RNTI OPTIONAL,
    new-H-RNTI H-RNTI OPTIONAL,
    new-E-RNTI E-RNTI OPTIONAL,
    rrc-StateIndicator RRC-StateIndicator,
    utran-DRX-CycleLengthCoeff UTRAN-DRX-CycleLengthCoefficient OPTIONAL,
-- Core network IEs
    cn-InformationInfo CN-InformationInfo OPTIONAL,
    plmn-Identity PLMN-Identity OPTIONAL,
-- UTRAN mobility IEs
    ura-Identity URA-Identity OPTIONAL,
-- Specification mode information
    specificationMode CHOICE {
        complete SEQUENCE {
-- Radio bearer IEs
            rab-InformationReconfigList RAB-InformationReconfigList OPTIONAL,
            rb-InformationReconfigList RB-InformationReconfigList-r6 OPTIONAL,
            rb-InformationAffectedList RB-InformationAffectedList-r6 OPTIONAL,
            rb-PDCPContextRelocationList RB-PDCPContextRelocationList OPTIONAL,
-- Transport channel IEs
            ul-CommonTransChInfo UL-CommonTransChInfo-r4 OPTIONAL,
            ul-deletedTransChInfoList UL-DeletedTransChInfoList-r6 OPTIONAL,
            ul-AddReconfTransChInfoList UL-AddReconfTransChInfoList-r6 OPTIONAL,
            modeSpecificTransChInfo CHOICE {
                fdd SEQUENCE {
                    cpch-SetID CPCH-SetID OPTIONAL,
                    addReconfTransChDRAC-Info DRAC-StaticInformationList OPTIONAL
                },
                tdd NULL
            }
        },
        dl-CommonTransChInfo DL-CommonTransChInfo-r4 OPTIONAL,
        dl-DeletedTransChInfoList DL-DeletedTransChInfoList-r5 OPTIONAL,
        dl-AddReconfTransChInfoList DL-AddReconfTransChInfoList-r5 OPTIONAL
    },
    preconfiguration SEQUENCE {
-- All IEs that include an FDD/TDD choice are split in two IEs for this message,
-- one for the FDD only elements and one for the TDD only elements, so that one
-- FDD/TDD choice in this level is sufficient.
        preConfigMode CHOICE {
            predefinedConfigIdentity PredefinedConfigIdentity,
            defaultConfig SEQUENCE {
                defaultConfigMode DefaultConfigMode,
                defaultConfigIdentity DefaultConfigIdentity-r5
            }
        }
    }
}

```

```

    }
  }
},
-- Physical channel IEs
frequencyInfo          FrequencyInfo          OPTIONAL,
maxAllowedUL-TX-Power  MaxAllowedUL-TX-Power  OPTIONAL,
ul-ChannelRequirement  UL-ChannelRequirement-r6      OPTIONAL,
ul-EDCH-Information    UL-EDCH-Information-r6      OPTIONAL,
modeSpecificPhysChInfo CHOICE {
  fdd                   SEQUENCE {
    dl-PDSCH-Information DL-PDSCH-Information  OPTIONAL
  },
  tdd                   NULL
},
dl-HSPDSCH-Information DL-HSPDSCH-Information  OPTIONAL,
dl-CommonInformation    DL-CommonInformation-r6  OPTIONAL,
dl-InformationPerRL-List DL-InformationPerRL-List-r6  OPTIONAL,
-- MBMS IEs
mbms-PL-ServiceRestrictInfo MBMS-PL-ServiceRestrictInfo-r6
}

RadioBearerReconfiguration-v6xyext-IEs ::= SEQUENCE {
-- Core network IEs
primary-plmn-Identity      PLMN-Identity      OPTIONAL,
-- Physical channel IEs
harq-Preamble-Mode        HARQ-Preamble-Mode        OPTIONAL,
beaconPLEst               BEACON-PL-Est             OPTIONAL,
-- MBMS IEs
mbms-PL-ServiceRestrictInfo MBMS-PL-ServiceRestrictInfo-r6  OPTIONAL
}

-- *****
--
-- RADIO BEARER RELEASE
--
-- *****

RadioBearerRelease ::= CHOICE {
  r3                   SEQUENCE {
    radioBearerRelease-r3          RadioBearerRelease-r3-IEs,
    v3a0NonCriticalExtensions      SEQUENCE {
      radioBearerRelease-v3a0ext    RadioBearerRelease-v3a0ext,
      laterNonCriticalExtensions    SEQUENCE {
        -- Container for additional R99 extensions
        radioBearerRelease-r3-add-ext BIT STRING      OPTIONAL,
        v4b0NonCriticalExtensions    SEQUENCE {
          radioBearerRelease-v4b0ext RadioBearerRelease-v4b0ext-IEs,
          v590NonCriticalExtensions SEQUENCE {
            radioBearerRelease-v590ext RadioBearerRelease-v590ext-IEs,
            v6xyNonCriticalExtensions SEQUENCE {
              radioBearerRelease-v6xyext    RadioBearerRelease-v6xyext-IEs,
              nonCriticalExtensions        SEQUENCE {} OPTIONAL
            } OPTIONAL
          } OPTIONAL
        } OPTIONAL
      } OPTIONAL
    } OPTIONAL
  } OPTIONAL
},
later-than-r3         SEQUENCE {
  rrc-TransactionIdentifier RRC-TransactionIdentifier,
  criticalExtensions      CHOICE {
    r4                   SEQUENCE {
      radioBearerRelease-r4          RadioBearerRelease-r4-IEs,
      v4d0NonCriticalExtensions      SEQUENCE {
        -- Container for adding non critical extensions after freezing REL-5
        radioBearerRelease-r4-add-ext BIT STRING      OPTIONAL,
        v590NonCriticalExtensions    SEQUENCE {
          radioBearerRelease-v590ext RadioBearerRelease-v590ext-IEs,
          v6xyNonCriticalExtensions SEQUENCE {
            radioBearerRelease-v6xyext    RadioBearerRelease-v6xyext-IEs,
            nonCriticalExtensions        SEQUENCE {} OPTIONAL
          } OPTIONAL
        } OPTIONAL
      } OPTIONAL
    } OPTIONAL
  } OPTIONAL
}

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```

    },
    criticalExtensions
      r5
        CHOICE {
          SEQUENCE {
            radioBearerRelease-r5          RadioBearerRelease-r5-IEs,
            -- Container for adding non critical extensions after freezing REL-6
            radioBearerRelease-r5-add-ext  BIT STRING          OPTIONAL,
            v6xyNonCriticalExtensions      SEQUENCE {
              radioBearerRelease-v6xyext   RadioBearerRelease-v6xyext-IEs,
              nonCriticalExtensions        SEQUENCE {}          OPTIONAL
            } OPTIONAL
          },
          criticalExtensions
            r6
              CHOICE {
                SEQUENCE {
                  radioBearerRelease-r6    RadioBearerRelease-r6-IEs,
                  -- Container for adding non critical extensions after freezing REL-7
                  radioBearerRelease-r6-add-ext BIT STRING    OPTIONAL,
                  nonCriticalExtensions      SEQUENCE {}      OPTIONAL
                },
                criticalExtensions
                  SEQUENCE {}
              }
            }
          }
        }
      }
    }
  }
}

```

```

RadioBearerRelease-r3-IEs ::= SEQUENCE {
  -- User equipment IES
  rrc-TransactionIdentifier      RRC-TransactionIdentifier,
  integrityProtectionModeInfo    IntegrityProtectionModeInfo    OPTIONAL,
  cipheringModeInfo              CipheringModeInfo                  OPTIONAL,
  activationTime                  ActivationTime                      OPTIONAL,
  new-U-RNTI                      U-RNTI                          OPTIONAL,
  new-C-RNTI                      C-RNTI                          OPTIONAL,
  rrc-StateIndicator              RRC-StateIndicator,
  utran-DRX-CycleLengthCoeff      UTRAN-DRX-CycleLengthCoefficient  OPTIONAL,
  -- Core network IES
  cn-InformationInfo              CN-InformationInfo              OPTIONAL,
  signallingConnectionRelIndication CN-DomainIdentity              OPTIONAL,
  -- UTRAN mobility IES
  ura-Identity                    URA-Identity                    OPTIONAL,
  -- Radio bearer IES
  rab-InformationReconfigList     RAB-InformationReconfigList     OPTIONAL,
  rb-InformationReleaseList       RB-InformationReleaseList,
  rb-InformationAffectedList      RB-InformationAffectedList      OPTIONAL,
  dl-CounterSynchronisationInfo   DL-CounterSynchronisationInfo   OPTIONAL,
  -- Transport channel IES
  ul-CommonTransChInfo           UL-CommonTransChInfo           OPTIONAL,
  ul-deletedTransChInfoList      UL-DeletedTransChInfoList      OPTIONAL,
  ul-AddReconfTransChInfoList    UL-AddReconfTransChInfoList    OPTIONAL,
  modeSpecificTransChInfo        CHOICE {
    fdd
      SEQUENCE {
        cpch-SetID                  CPCH-SetID                      OPTIONAL,
        -- dummy is not used in this version of the specification, it should
        -- not be sent and if received it should be ignored.
        addReconfTransChDRAC-Info dummy DRAC-StaticInformationList  OPTIONAL
      }
    tdd
      NULL
  } OPTIONAL,
  dl-CommonTransChInfo           DL-CommonTransChInfo           OPTIONAL,
  dl-DeletedTransChInfoList      DL-DeletedTransChInfoList      OPTIONAL,
  dl-AddReconfTransChInfo2List   DL-AddReconfTransChInfo2List   OPTIONAL,
  -- Physical channel IES
  frequencyInfo                  FrequencyInfo                    OPTIONAL,
  maxAllowedUL-TX-Power          MaxAllowedUL-TX-Power          OPTIONAL,
  ul-ChannelRequirement          UL-ChannelRequirement          OPTIONAL,
  modeSpecificPhysChInfo        CHOICE {
    fdd
      SEQUENCE {
        dl-PDSCH-Information        DL-PDSCH-Information            OPTIONAL
      }
    tdd
      NULL
  },
  dl-CommonInformation           DL-CommonInformation           OPTIONAL,
  dl-InformationPerRL-List       DL-InformationPerRL-List       OPTIONAL
}

RadioBearerRelease-v3a0ext ::= SEQUENCE {
  new-DSCH-RNTI                  DSCH-RNTI                      OPTIONAL
}

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RadioBearerRelease-v4b0ext-IEs ::= SEQUENCE {
  -- Physical channel IEs
  -- IE ssdt-UL extends SSDD-Information, which is included in
  -- DL-CommonInformation. FDD only.
  ssdt-UL-r4          SSDD-UL          OPTIONAL,
  -- The order of the RLS in IE cell-id-PerRL-List is the same as
  -- in IE DL-InformationPerRL-List included in this message
  cell-id-PerRL-List CellIdentity-PerRL-List OPTIONAL
}

RadioBearerRelease-v590ext-IEs ::= SEQUENCE {
  -- Physical channel IEs
  dl-TPC-PowerOffsetPerRL-List DL-TPC-PowerOffsetPerRL-List OPTIONAL
}

RadioBearerRelease-r4-IEs ::= SEQUENCE {
  -- User equipment IEs
  integrityProtectionModeInfo IntegrityProtectionModeInfo OPTIONAL,
  cipheringModeInfo           CipheringModeInfo           OPTIONAL,
  activationTime              ActivationTime              OPTIONAL,
  new-U-RNTI                  U-RNTI                     OPTIONAL,
  new-C-RNTI                  C-RNTI                     OPTIONAL,
  new-DSCH-RNTI              DSCH-RNTI                 OPTIONAL,
  rrc-StateIndicator          RRC-StateIndicator,
  utran-DRX-CycleLengthCoeff UTRAN-DRX-CycleLengthCoefficient OPTIONAL,
  -- Core network IEs
  cn-InformationInfo          CN-InformationInfo           OPTIONAL,
  signallingConnectionRelIndication CN-DomainIdentity     OPTIONAL,
  -- UTRAN mobility IEs
  ura-Identity                URA-Identity               OPTIONAL,
  -- Radio bearer IEs
  rab-InformationReconfigList RAB-InformationReconfigList OPTIONAL,
  rb-InformationReleaseList   RB-InformationReleaseList,
  rb-InformationAffectedList  RB-InformationAffectedList OPTIONAL,
  dl-CounterSynchronisationInfo DL-CounterSynchronisationInfo OPTIONAL,
  -- Transport channel IEs
  ul-CommonTransChInfo       UL-CommonTransChInfo-r4    OPTIONAL,
  ul-deletedTransChInfoList  UL-DeletedTransChInfoList OPTIONAL,
  ul-AddReconfTransChInfoList UL-AddReconfTransChInfoList OPTIONAL,
  modeSpecificTransChInfo    CHOICE {
    fdd          SEQUENCE {
      cpch-SetID CPCH-SetID          OPTIONAL,
      -- dummy is not used in this version of the specification, it should
      -- not be sent and if received it should be ignored.
      addReconfTransChDRAC-Info dummy DRAC-StaticInformationList OPTIONAL
    },
    tdd          NULL
  }
  dl-CommonTransChInfo       DL-CommonTransChInfo-r4    OPTIONAL,
  dl-DeletedTransChInfoList  DL-DeletedTransChInfoList OPTIONAL,
  dl-AddReconfTransChInfoList-r4 DL-AddReconfTransChInfoList-r4 OPTIONAL,
  -- Physical channel IEs
  frequencyInfo              FrequencyInfo              OPTIONAL,
  maxAllowedUL-TX-Power      MaxAllowedUL-TX-Power      OPTIONAL,
  ul-ChannelRequirement      UL-ChannelRequirement-r4    OPTIONAL,
  modeSpecificPhysChInfo     CHOICE {
    fdd          SEQUENCE {
      dl-PDSCH-Information DL-PDSCH-Information OPTIONAL
    },
    tdd          NULL
  },
  dl-CommonInformation       DL-CommonInformation-r4    OPTIONAL,
  dl-InformationPerRL-List   DL-InformationPerRL-List-r4    OPTIONAL
}

RadioBearerRelease-r5-IEs ::= SEQUENCE {
  -- User equipment IEs
  integrityProtectionModeInfo IntegrityProtectionModeInfo OPTIONAL,
  cipheringModeInfo           CipheringModeInfo           OPTIONAL,
  activationTime              ActivationTime              OPTIONAL,
  new-U-RNTI                  U-RNTI                     OPTIONAL,
  new-C-RNTI                  C-RNTI                     OPTIONAL,
  new-DSCH-RNTI              DSCH-RNTI                 OPTIONAL,
  new-H-RNTI                  H-RNTI                     OPTIONAL,
  rrc-StateIndicator          RRC-StateIndicator,
  utran-DRX-CycleLengthCoeff UTRAN-DRX-CycleLengthCoefficient OPTIONAL,
  -- Core network IEs

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        cn-InformationInfo          CN-InformationInfo          OPTIONAL,
        signallingConnectionRelIndication  CN-DomainIdentity    OPTIONAL,
-- UTRAN mobility IEs
    ura-Identity                    URA-Identity          OPTIONAL,
-- Radio bearer IEs
    rab-InformationReconfigList      RAB-InformationReconfigList  OPTIONAL,
    rb-InformationReleaseList        RB-InformationReleaseList,
    rb-InformationAffectedList       RB-InformationAffectedList-r5  OPTIONAL,
    dl-CounterSynchronisationInfo    DL-CounterSynchronisationInfo-r5  OPTIONAL,
-- Transport channel IEs
    ul-CommonTransChInfo            UL-CommonTransChInfo-r4      OPTIONAL,
    ul-deletedTransChInfoList       UL-DeletedTransChInfoList    OPTIONAL,
    ul-AddReconfTransChInfoList     UL-AddReconfTransChInfoList  OPTIONAL,
    modeSpecificTransChInfo         CHOICE {
        fdd                          SEQUENCE {
            cpch-SetID                CPCH-SetID                    OPTIONAL,
            -- dummy is not used in this version of the specification, it should
            -- not be sent and if received it should be ignored.
            addReconfTransChDRAC-Infodummy    DRAC-StaticInformationList  OPTIONAL
        },
        tdd                          NULL
    }
    dl-CommonTransChInfo            DL-CommonTransChInfo-r4      OPTIONAL,
    dl-DeletedTransChInfoList       DL-DeletedTransChInfoList-r5  OPTIONAL,
    dl-AddReconfTransChInfoList     DL-AddReconfTransChInfoList-r5  OPTIONAL,
-- Physical channel IEs
    frequencyInfo                   FrequencyInfo                 OPTIONAL,
    maxAllowedUL-TX-Power            MaxAllowedUL-TX-Power        OPTIONAL,
    ul-ChannelRequirement            UL-ChannelRequirement-r5     OPTIONAL,
    modeSpecificPhysChInfo          CHOICE {
        fdd                          SEQUENCE {
            dl-PDSCH-Information       DL-PDSCH-Information         OPTIONAL
        },
        tdd                          NULL
    },
    dl-HSPDSCH-Information           DL-HSPDSCH-Information       OPTIONAL,
    dl-CommonInformation             DL-CommonInformation-r5      OPTIONAL,
    dl-InformationPerRL-List         DL-InformationPerRL-List-r5  OPTIONAL
}

RadioBearerRelease-v6xyext-IEs ::= SEQUENCE {
-- Core network IEs
    primary-plmn-Identity            PLMN-Identity                OPTIONAL,
-- Physical channel IEs
    harq-Preamble-Mode              HARQ-Preamble-Mode           OPTIONAL,
    beaconPLEst                      BEACON-PL-Est                OPTIONAL,
-- MBMS IEs
    mbms-PL-ServiceRestrictInfo     MBMS-PL-ServiceRestrictInfo-r6  OPTIONAL,
    mbms-RB-ListReleasedToChangeTransferMode
                                    RB-InformationReleaseList    OPTIONAL
}

RadioBearerRelease-r6-IEs ::= SEQUENCE {
-- User equipment IEs
    integrityProtectionModeInfo     IntegrityProtectionModeInfo   OPTIONAL,
    cipheringModeInfo               CipheringModeInfo             OPTIONAL,
    activationTime                   ActivationTime                 OPTIONAL,
    new-U-RNTI                       U-RNTI                       OPTIONAL,
    new-C-RNTI                       C-RNTI                       OPTIONAL,
    new-DSCH-RNTI                   DSCH-RNTI                    OPTIONAL,
    new-H-RNTI                       H-RNTI                       OPTIONAL,
    new-E-RNTI                       E-RNTI                       OPTIONAL,
    rrc-StateIndicator              RRC-StateIndicator,
    utran-DRX-CycleLengthCoeff      UTRAN-DRX-CycleLengthCoefficient  OPTIONAL,
-- Core network IEs
    cn-InformationInfo              CN-InformationInfo           OPTIONAL,
    plmn-Identity                   PLMN-Identity                OPTIONAL,
    signallingConnectionRelIndication  CN-DomainIdentity            OPTIONAL,
-- UTRAN mobility IEs
    ura-Identity                    URA-Identity                OPTIONAL,
-- Radio bearer IEs
    rab-InformationReconfigList      RAB-InformationReconfigList  OPTIONAL,
    rb-InformationReleaseList        RB-InformationReleaseList,
    rb-InformationAffectedList       RB-InformationAffectedList-r6  OPTIONAL,
    dl-CounterSynchronisationInfo    DL-CounterSynchronisationInfo-r5  OPTIONAL,
-- Transport channel IEs
    ul-CommonTransChInfo            UL-CommonTransChInfo-r4      OPTIONAL,
    ul-deletedTransChInfoList       UL-DeletedTransChInfoList-r6  OPTIONAL,

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        ul-AddReconfTransChInfoList      UL-AddReconfTransChInfoList-r6      OPTIONAL,
        modeSpecificTransChInfo          CHOICE {
            fdd                           SEQUENCE {
                cpch-SetID                 CPCH-SetID                          OPTIONAL,
                addReconfTransChDRAC Info DRAC StaticInformationList OPTIONAL
            },
            tdd                            NULL
        }
        dl-CommonTransChInfo              DL-CommonTransChInfo-r4              OPTIONAL,
        dl-DeletedTransChInfoList          DL-DeletedTransChInfoList-r5         OPTIONAL,
        dl-AddReconfTransChInfoList        DL-AddReconfTransChInfoList-r5       OPTIONAL,
-- Physical channel IEs
        frequencyInfo                     FrequencyInfo                          OPTIONAL,
        maxAllowedUL-TX-Power              MaxAllowedUL-TX-Power                 OPTIONAL,
        ul-ChannelRequirement              UL-ChannelRequirement-r6             OPTIONAL,
        ul-EDCH-Information                 UL-EDCH-Information-r6              OPTIONAL,
        modeSpecificPhysChInfo             CHOICE {
            fdd                           SEQUENCE {
                dl-PDSCH-Information        DL-PDSCH-Information                OPTIONAL
            },
            tdd                            NULL
        },
        dl-HSPDSCH-Information              DL-HSPDSCH-Information                OPTIONAL,
        dl-CommonInformation                DL-CommonInformation-r5              OPTIONAL,
        dl-InformationPerRL-List            DL-InformationPerRL-List-r6          OPTIONAL,
-- MBMS IEs
        mbms-PL-ServiceRestrictInfo        MBMS-PL-ServiceRestrictInfo-r6,
        mbms-RB-ListReleasedToChangeTransferMode
                                            RB-InformationReleaseList            OPTIONAL
    }

-- *****
--
-- RADIO BEARER SETUP
--
-- *****

RadioBearerSetup ::= CHOICE {
    r3                               SEQUENCE {
        radioBearerSetup-r3           RadioBearerSetup-r3-IEs,
        v3a0NonCriticalExtensions      SEQUENCE {
            radioBearerSetup-v3a0ext    RadioBearerSetup-v3a0ext,
            laterNonCriticalExtensions   SEQUENCE {
                -- Container for additional R99 extensions
                radioBearerSetup-r3-add-ext BIT STRING OPTIONAL,
                v4b0NonCriticalExtensions SEQUENCE {
                    radioBearerSetup-v4b0ext RadioBearerSetup-v4b0ext-IEs,
                    v590NonCriticalExtensions SEQUENCE {
                        radioBearerSetup-v590ext RadioBearerSetup-v590ext-IEs,
                        v6xyNonCriticalExtensions SEQUENCE {
                            radioBearerSetup-v6xyext RadioBearerSetup-v6xyext-IEs,
                            nonCriticalExtensions SEQUENCE {} OPTIONAL
                        } OPTIONAL
                    } OPTIONAL
                } OPTIONAL
            } OPTIONAL
        } OPTIONAL
    } OPTIONAL
},
    later-than-r3                     SEQUENCE {
        rrc-TransactionIdentifier      RRC-TransactionIdentifier,
        criticalExtensions              CHOICE {
            r4                           SEQUENCE {
                radioBearerSetup-r4           RadioBearerSetup-r4-IEs,
                v4d0NonCriticalExtensions     SEQUENCE {
                    -- Container for adding non critical extensions after freezing REL-5
                    radioBearerSetup-r4-add-ext BIT STRING OPTIONAL,
                    v590NonCriticalExtensions SEQUENCE {
                        radioBearerSetup-v590ext RadioBearerSetup-v590ext-IEs,
                        v6xyNonCriticalExtensions SEQUENCE {
                            radioBearerSetup-v6xyext RadioBearerSetup-v6xyext-IEs,
                            nonCriticalExtensions SEQUENCE {} OPTIONAL
                        } OPTIONAL
                    } OPTIONAL
                } OPTIONAL
            } OPTIONAL
        } OPTIONAL
    }
},

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-- Physical channel IEs
-- ssdt-UL extends SSdT-Information, which is included in
-- DL-CommonInformation. FDD only.
ssdt-UL-r4          SSdT-UL          OPTIONAL,
-- The order of the RLs in IE cell-id-PerRL-List is the same as
-- in IE DL-InformationPerRL-List included in this message
cell-id-PerRL-List CellIdentity-PerRL-List  OPTIONAL
}

RadioBearerSetup-v590ext-IEs ::= SEQUENCE {
-- Physical channel IEs
dl-TPC-PowerOffsetPerRL-List  DL-TPC-PowerOffsetPerRL-List  OPTIONAL
}

RadioBearerSetup-r4-IEs ::= SEQUENCE {
-- User equipment IEs
integrityProtectionModeInfo  IntegrityProtectionModeInfo  OPTIONAL,
cipheringModeInfo            CipheringModeInfo            OPTIONAL,
activationTime                ActivationTime                OPTIONAL,
new-U-RNTI                   U-RNTI                      OPTIONAL,
new-C-RNTI                   C-RNTI                      OPTIONAL,
new-DSCH-RNTI                DSCH-RNTI                  OPTIONAL,
rrc-StateIndicator           RRC-StateIndicator,
utran-DRX-CycleLengthCoeff   UTRAN-DRX-CycleLengthCoefficient  OPTIONAL,
-- UTRAN mobility IEs
ura-Identity                  URA-Identity                OPTIONAL,
-- Core network IEs
cn-InformationInfo            CN-InformationInfo          OPTIONAL,
-- Radio bearer IEs
srb-InformationSetupList     SRB-InformationSetupList    OPTIONAL,
rab-InformationSetupList     RAB-InformationSetupList-r4  OPTIONAL,
rb-InformationAffectedList   RB-InformationAffectedList   OPTIONAL,
dl-CounterSynchronisationInfo DL-CounterSynchronisationInfo  OPTIONAL,
-- Transport channel IEs
ul-CommonTransChInfo         UL-CommonTransChInfo-r4     OPTIONAL,
ul-deletedTransChInfoList    UL-DeletedTransChInfoList   OPTIONAL,
ul-AddReconfTransChInfoList  UL-AddReconfTransChInfoList  OPTIONAL,
modeSpecificTransChInfo      CHOICE {
fdd                           SEQUENCE {
cpch-SetID                   CPCH-SetID                  OPTIONAL,
-- dummy is not used in this version of the specification, it should
-- not be sent and if received it should be ignored.
addReconfTransChDRAC-InfoDummy DRAC-StaticInformationList  OPTIONAL
},
tdd                           NULL
}
},
dl-CommonTransChInfo         DL-CommonTransChInfo-r4     OPTIONAL,
dl-DeletedTransChInfoList    DL-DeletedTransChInfoList   OPTIONAL,
dl-AddReconfTransChInfoList  DL-AddReconfTransChInfoList-r4  OPTIONAL,
-- Physical channel IEs
frequencyInfo                FrequencyInfo                OPTIONAL,
maxAllowedUL-TX-Power        MaxAllowedUL-TX-Power       OPTIONAL,
ul-ChannelRequirement        UL-ChannelRequirement-r4    OPTIONAL,
modeSpecificPhysChInfo      CHOICE {
fdd                           SEQUENCE {
dl-PDSCH-Information         DL-PDSCH-Information        OPTIONAL
},
tdd                           NULL
},
dl-CommonInformation         DL-CommonInformation-r4     OPTIONAL,
dl-InformationPerRL-List     DL-InformationPerRL-List-r4  OPTIONAL
}

RadioBearerSetup-r5-IEs ::= SEQUENCE {
-- User equipment IEs
integrityProtectionModeInfo  IntegrityProtectionModeInfo  OPTIONAL,
cipheringModeInfo            CipheringModeInfo            OPTIONAL,
activationTime                ActivationTime                OPTIONAL,
new-U-RNTI                   U-RNTI                      OPTIONAL,
new-C-RNTI                   C-RNTI                      OPTIONAL,
new-DSCH-RNTI                DSCH-RNTI                  OPTIONAL,
new-H-RNTI                   H-RNTI                      OPTIONAL,
rrc-StateIndicator           RRC-StateIndicator,
utran-DRX-CycleLengthCoeff   UTRAN-DRX-CycleLengthCoefficient  OPTIONAL,
-- UTRAN mobility IEs
ura-Identity                  URA-Identity                OPTIONAL,
-- Core network IEs
cn-InformationInfo            CN-InformationInfo          OPTIONAL,

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-- Radio bearer IEs
  srb-InformationSetupList      SRB-InformationSetupList-r5      OPTIONAL,
  rab-InformationSetupList      RAB-InformationSetupList-r5      OPTIONAL,
  rb-InformationAffectedList    RB-InformationAffectedList-r5    OPTIONAL,
  dl-CounterSynchronisationInfo DL-CounterSynchronisationInfo-r5  OPTIONAL,
-- Transport channel IEs
  ul-CommonTransChInfo         UL-CommonTransChInfo-r4         OPTIONAL,
  ul-deletedTransChInfoList    UL-DeletedTransChInfoList      OPTIONAL,
  ul-AddReconfTransChInfoList  UL-AddReconfTransChInfoList    OPTIONAL,
  modeSpecificTransChInfo      CHOICE {
    fdd                          SEQUENCE {
      cpch-SetID                 CPCH-SetID                 OPTIONAL,
      -- dummy is not used in this version of the specification, it should
      -- not be sent and if received it should be ignored.
      addReconfTransChDRAC-Info dummy      DRAC-StaticInformationList  OPTIONAL
    },
    tdd                          NULL
  }
  dl-CommonTransChInfo         DL-CommonTransChInfo-r4         OPTIONAL,
  dl-DeletedTransChInfoList    DL-DeletedTransChInfoList-r5    OPTIONAL,
  dl-AddReconfTransChInfoList  DL-AddReconfTransChInfoList-r5  OPTIONAL,
-- Physical channel IEs
  frequencyInfo                FrequencyInfo                OPTIONAL,
  maxAllowedUL-TX-Power        MaxAllowedUL-TX-Power        OPTIONAL,
  ul-ChannelRequirement        UL-ChannelRequirement-r5      OPTIONAL,
  modeSpecificPhysChInfo      CHOICE {
    fdd                          SEQUENCE {
      dl-PDSCH-Information      DL-PDSCH-Information      OPTIONAL
    },
    tdd                          NULL
  },
  dl-HSPDSCH-Information      DL-HSPDSCH-Information      OPTIONAL,
  dl-CommonInformation        DL-CommonInformation-r5      OPTIONAL,
  dl-InformationPerRL-List    DL-InformationPerRL-List-r5    OPTIONAL
}

RadioBearerSetup-v6xyext-IEs ::= SEQUENCE {
-- Core network IEs
  primary-plmn-Identity        PLMN-Identity                OPTIONAL,
-- Physical channel IEs
  harq-Preamble-Mode          HARQ-Preamble-Mode            OPTIONAL,
  beaconPLEst                 BEACON-PL-Est                OPTIONAL,
-- Radio bearer IEs
  rab-InformationSetupList     RAB-InformationSetupList-r6-ext  OPTIONAL,
-- MBMS IEs
  mbms-PL-ServiceRestrictInfo MBMS-PL-ServiceRestrictInfo-r6  OPTIONAL
}

RadioBearerSetup-r6-IEs ::= SEQUENCE {
-- User equipment IEs
  integrityProtectionModeInfo  IntegrityProtectionModeInfo    OPTIONAL,
  cipheringModeInfo           CipheringModeInfo              OPTIONAL,
  activationTime              ActivationTime                  OPTIONAL,
  new-U-RNTI                  U-RNTI                        OPTIONAL,
  new-C-RNTI                  C-RNTI                        OPTIONAL,
  new-DSCH-RNTI              DSCH-RNTI                     OPTIONAL,
  new-H-RNTI                  H-RNTI                        OPTIONAL,
  new-E-RNTI                  E-RNTI                        OPTIONAL,
  rrc-StateIndicator          RRC-StateIndicator,
  utran-DRX-CycleLengthCoeff  UTRAN-DRX-CycleLengthCoefficient  OPTIONAL,
-- UTRAN mobility IEs
  ura-Identity                URA-Identity                  OPTIONAL,
-- Core network IEs
  cn-InformationInfo          CN-InformationInfo            OPTIONAL,
  plmn-Identity              PLMN-Identity                OPTIONAL,
-- Radio bearer IEs
  srb-InformationSetupList     SRB-InformationSetupList-r6      OPTIONAL,
  rab-InformationSetupList     RAB-InformationSetupList-r6      OPTIONAL,
  rb-InformationAffectedList   RB-InformationAffectedList-r6    OPTIONAL,
  dl-CounterSynchronisationInfo DL-CounterSynchronisationInfo-r5  OPTIONAL,
-- Transport channel IEs
  ul-CommonTransChInfo         UL-CommonTransChInfo-r4         OPTIONAL,
  ul-deletedTransChInfoList    UL-DeletedTransChInfoList-r6     OPTIONAL,
  ul-AddReconfTransChInfoList  UL-AddReconfTransChInfoList-r6   OPTIONAL,
  modeSpecificTransChInfo      CHOICE {
    fdd                          SEQUENCE {
      cpch-SetID                 CPCH-SetID                 OPTIONAL,
      addReconfTransChDRAC-Info DRAC-StaticInformationList OPTIONAL
    }
  }
}

```

```

    },
    tdd
  }
  dl-CommonTransChInfo          DL-CommonTransChInfo-r4          OPTIONAL,
  dl-DeletedTransChInfoList     DL-DeletedTransChInfoList-r5     OPTIONAL,
  dl-AddReconfTransChInfoList   DL-AddReconfTransChInfoList-r5   OPTIONAL,
-- Physical channel IEs
  frequencyInfo                 FrequencyInfo                   OPTIONAL,
  maxAllowedUL-TX-Power         MaxAllowedUL-TX-Power         OPTIONAL,
  ul-ChannelRequirement         UL-ChannelRequirement-r6   OPTIONAL,
  ul-EDCH-Information           UL-EDCH-Information-r6     OPTIONAL,
  modeSpecificPhysChInfo        CHOICE {
    fdd                          SEQUENCE {
      dl-PDSCH-Information       DL-PDSCH-Information       OPTIONAL
    },
    tdd                          NULL
  },
  dl-HSPDSCH-Information        DL-HSPDSCH-Information     OPTIONAL,
  dl-CommonInformation          DL-CommonInformation-r6   OPTIONAL,
  dl-InformationPerRL-List      DL-InformationPerRL-List-r6 OPTIONAL,
-- MBMS IEs
  mbms-PL-ServiceRestrictInfo   MBMS-PL-ServiceRestrictInfo-r6
}

-- *****
--
-- TRANSPORT CHANNEL RECONFIGURATION
--
-- *****

TransportChannelReconfiguration ::= CHOICE {
  r3                               SEQUENCE {
    transportChannelReconfiguration-r3
      TransportChannelReconfiguration-r3-IEs,
    v3a0NonCriticalExtensions      SEQUENCE {
      transportChannelReconfiguration-v3a0ext
        TransportChannelReconfiguration-v3a0ext,
      laterNonCriticalExtensions  SEQUENCE {
        -- Container for additional R99 extensions
        transportChannelReconfiguration-r3-add-ext  BIT STRING  OPTIONAL,
        v4b0NonCriticalExtensions SEQUENCE {
          transportChannelReconfiguration-v4b0ext
            TransportChannelReconfiguration-v4b0ext-IEs,
          v590NonCriticalExtensions SEQUENCE {
            transportChannelReconfiguration-v590ext
              TransportChannelReconfiguration-v590ext-IEs,
          v6xyNonCriticalExtensions SEQUENCE {
            transportChannelReconfiguration-v6xyext
              TransportChannelReconfiguration-v6xyext-IEs,
          nonCriticalExtensions SEQUENCE {}  OPTIONAL
        }  OPTIONAL
      }  OPTIONAL
    }  OPTIONAL
  }  OPTIONAL
},
  later-than-r3                    SEQUENCE {
    rrc-TransactionIdentifier      RRC-TransactionIdentifier,
    criticalExtensions             CHOICE {
      r4                           SEQUENCE {
        transportChannelReconfiguration-r4
          TransportChannelReconfiguration-r4-IEs,
        v4d0NonCriticalExtensions SEQUENCE {
          -- Container for adding non critical extensions after freezing REL-5
          transportChannelReconfiguration-r4-add-ext  BIT STRING  OPTIONAL,
          v590NonCriticalExtensions SEQUENCE {
            transportChannelReconfiguration-v590ext
              TransportChannelReconfiguration-v590ext-IEs,
          v6xyNonCriticalExtensions SEQUENCE {
            transportChannelReconfiguration-v6xyext
              TransportChannelReconfiguration-v6xyext-IEs,
          nonCriticalExtensions SEQUENCE {}  OPTIONAL
        }  OPTIONAL
      }  OPTIONAL
    }  OPTIONAL
  }  OPTIONAL
},

```



```

-- DL-CommonInformation. FDD only.
ssdt-UL-r4          SSdT-UL          OPTIONAL,
-- The order of the RLs in IE cell-id-PerRL-List is the same as
-- in IE DL-InformationPerRL-List included in this message
cell-id-PerRL-List CellIdentity-PerRL-List  OPTIONAL
}

TransportChannelReconfiguration-v590ext-IEs ::= SEQUENCE {
-- Physical channel IES
dl-TPC-PowerOffsetPerRL-List  DL-TPC-PowerOffsetPerRL-List  OPTIONAL
}

TransportChannelReconfiguration-r4-IEs ::= SEQUENCE {
-- User equipment IES
integrityProtectionModeInfo  IntegrityProtectionModeInfo  OPTIONAL,
cipheringModeInfo            CipheringModeInfo            OPTIONAL,
activationTime                ActivationTime                OPTIONAL,
new-U-RNTI                    U-RNTI                      OPTIONAL,
new-C-RNTI                    C-RNTI                      OPTIONAL,
new-DSCH-RNTI                DSCH-RNTI                  OPTIONAL,
rrc-StateIndicator            RRC-StateIndicator,
utran-DRX-CycleLengthCoeff    UTRAN-DRX-CycleLengthCoefficient  OPTIONAL,
-- Core network IES
cn-InformationInfo            CN-InformationInfo          OPTIONAL,
-- UTRAN mobility IES
ura-Identity                  URA-Identity                OPTIONAL,
-- Radio bearer IES
dl-CounterSynchronisationInfo DL-CounterSynchronisationInfo  OPTIONAL,
-- Transport channel IES
ul-CommonTransChInfo          UL-CommonTransChInfo-r4     OPTIONAL,
ul-AddReconfTransChInfoList   UL-AddReconfTransChInfoList  OPTIONAL,
modeSpecificTransChInfo       CHOICE {
fdd                            SEQUENCE {
cpch-SetID                    CPCH-SetID                  OPTIONAL,
-- dummy is not used in this version of the specification, it should
-- not be sent and if received it should be ignored.
addReconfTransChDRAC-InfoDummy DRAC-StaticInformationList  OPTIONAL
},
tdd                            NULL
}
},
dl-CommonTransChInfo          DL-CommonTransChInfo-r4     OPTIONAL,
dl-AddReconfTransChInfoList   DL-AddReconfTransChInfoList-r4  OPTIONAL,
-- Physical channel IES
frequencyInfo                  FrequencyInfo                OPTIONAL,
maxAllowedUL-TX-Power          MaxAllowedUL-TX-Power        OPTIONAL,
ul-ChannelRequirement          UL-ChannelRequirement-r4     OPTIONAL,
modeSpecificPhysChInfo         CHOICE {
fdd                            SEQUENCE {
dl-PDSCH-Information          DL-PDSCH-Information        OPTIONAL
},
tdd                            NULL
},
},
dl-CommonInformation          DL-CommonInformation-r4     OPTIONAL,
dl-InformationPerRL-List      DL-InformationPerRL-List-r4  OPTIONAL
}

TransportChannelReconfiguration-r5-IEs ::= SEQUENCE {
-- User equipment IES
integrityProtectionModeInfo  IntegrityProtectionModeInfo  OPTIONAL,
cipheringModeInfo            CipheringModeInfo            OPTIONAL,
activationTime                ActivationTime                OPTIONAL,
new-U-RNTI                    U-RNTI                      OPTIONAL,
new-C-RNTI                    C-RNTI                      OPTIONAL,
new-DSCH-RNTI                DSCH-RNTI                  OPTIONAL,
new-H-RNTI                    H-RNTI                      OPTIONAL,
rrc-StateIndicator            RRC-StateIndicator,
utran-DRX-CycleLengthCoeff    UTRAN-DRX-CycleLengthCoefficient  OPTIONAL,
-- Core network IES
cn-InformationInfo            CN-InformationInfo          OPTIONAL,
-- UTRAN mobility IES
ura-Identity                  URA-Identity                OPTIONAL,
-- Radio bearer IES
dl-CounterSynchronisationInfo DL-CounterSynchronisationInfo-r5  OPTIONAL,
-- Transport channel IES
ul-CommonTransChInfo          UL-CommonTransChInfo-r4     OPTIONAL,
ul-AddReconfTransChInfoList   UL-AddReconfTransChInfoList  OPTIONAL,
modeSpecificTransChInfo       CHOICE {
fdd                            SEQUENCE {

```

```

cpch-SetID CPCH-SetID OPTIONAL,
-- dummy is not used in this version of the specification, it should
-- not be sent and if received it should be ignored.
addReconfTransChDRAC-Info dummy DRAC-StaticInformationList OPTIONAL
},
tdd NULL
}
dl-CommonTransChInfo DL-CommonTransChInfo-r4 OPTIONAL,
dl-AddReconfTransChInfoList DL-AddReconfTransChInfoList-r5 OPTIONAL,
-- Physical channel IEs
frequencyInfo FrequencyInfo OPTIONAL,
maxAllowedUL-TX-Power MaxAllowedUL-TX-Power OPTIONAL,
ul-ChannelRequirement UL-ChannelRequirement-r5 OPTIONAL,
modeSpecificPhysChInfo CHOICE {
fdd SEQUENCE {
dl-PDSCH-Information DL-PDSCH-Information OPTIONAL
},
tdd NULL
},
dl-HSPDSCH-Information DL-HSPDSCH-Information OPTIONAL,
dl-CommonInformation DL-CommonInformation-r5 OPTIONAL,
dl-InformationPerRL-List DL-InformationPerRL-List-r5 OPTIONAL
}

TransportChannelReconfiguration-v6xyext-IEs ::= SEQUENCE {
-- Core network IEs
primary-plmn-Identity PLMN-Identity OPTIONAL,
-- Physical channel IEs
harq-Preamble-Mode HARQ-Preamble-Mode OPTIONAL,
beaconPLEst BEACON-PL-Est OPTIONAL,
-- MBMS IEs
mbms-PL-ServiceRestrictInfo MBMS-PL-ServiceRestrictInfo-r6 OPTIONAL
}

TransportChannelReconfiguration-r6-IEs ::= SEQUENCE {
-- User equipment IEs
integrityProtectionModeInfo IntegrityProtectionModeInfo OPTIONAL,
cipheringModeInfo CipheringModeInfo OPTIONAL,
activationTime ActivationTime OPTIONAL,
new-U-RNTI U-RNTI OPTIONAL,
new-C-RNTI C-RNTI OPTIONAL,
new-DSCH-RNTI DSCH-RNTI OPTIONAL,
new-H-RNTI H-RNTI OPTIONAL,
new-E-RNTI E-RNTI OPTIONAL,
rrc-StateIndicator RRC-StateIndicator,
utran-DRX-CycleLengthCoeff UTRAN-DRX-CycleLengthCoefficient OPTIONAL,
-- Core network IEs
cn-InformationInfo CN-InformationInfo OPTIONAL,
plmn-Identity PLMN-Identity OPTIONAL,
-- UTRAN mobility IEs
ura-Identity URA-Identity OPTIONAL,
-- Radio bearer IEs
dl-CounterSynchronisationInfo DL-CounterSynchronisationInfo-r5 OPTIONAL,
-- Transport channel IEs
ul-CommonTransChInfo UL-CommonTransChInfo-r4 OPTIONAL,
ul-AddReconfTransChInfoList UL-AddReconfTransChInfoList-r6 OPTIONAL,
modeSpecificTransChInfo CHOICE {
fdd SEQUENCE {
cpch-SetID CPCH-SetID OPTIONAL,
addReconfTransChDRAC-Info DRAC-StaticInformationList OPTIONAL
},
tdd NULL
}
dl-CommonTransChInfo DL-CommonTransChInfo-r4 OPTIONAL,
dl-AddReconfTransChInfoList DL-AddReconfTransChInfoList-r5 OPTIONAL,
-- Physical channel IEs
frequencyInfo FrequencyInfo OPTIONAL,
maxAllowedUL-TX-Power MaxAllowedUL-TX-Power OPTIONAL,
ul-ChannelRequirement UL-ChannelRequirement-r6 OPTIONAL,
ul-EDCH-Information UL-EDCH-Information-r6 OPTIONAL,
modeSpecificPhysChInfo CHOICE {
fdd SEQUENCE {
dl-PDSCH-Information DL-PDSCH-Information OPTIONAL
},
tdd NULL
},
dl-HSPDSCH-Information DL-HSPDSCH-Information OPTIONAL,
dl-CommonInformation DL-CommonInformation-r6 OPTIONAL,

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```
    dl-InformationPerRL-List      DL-InformationPerRL-List-r6      OPTIONAL,  
-- MBMS IEs  
    mbms-PL-ServiceRestrictInfo  MBMS-PL-ServiceRestrictInfo-r6  
}
```

11.3 Information element definitions

```

DL-PhysChCapabilityFDD ::=                               SEQUENCE {
    maxNoDPCH-PDSCH-Codes                               INTEGER (1..8),
    maxNoPhysChBitsReceived                             MaxNoPhysChBitsReceived,
    supportForSF-512                                    BOOLEAN,
    supportOfPDSCH                                       BOOLEAN,
    simultaneousSCCPCH-DPCH-Receptiondummy         SimultaneousSCCPCH-DPCH-Reception
}

-- PhysicalChannelCapability-hspdsch-r5 describes the HS-PDSCH physical channel capability
PhysicalChannelCapability-hspdsch-r5 ::=                SEQUENCE {
    fdd-hspdsch                                         CHOICE {
        supported                                       SEQUENCE {
            hsdSCH-physical-layer-category              HSDSCH-physical-layer-category,
            supportOfDedicatedPilotsForChannelEstimationOfHSDSCH  BOOLEAN,
            simultaneousSCCPCH-DPCH-HSDSCH-Receptionshall be true only if the
            IE SimultaneousSCCPCH-DPCH-Reception indicates support of simultaneous-
            reception of S-CCPCH and DPCH
            simultaneousSCCPCH-DPCH-HSDSCH-Receptiondummy  BOOLEAN
        },
        unsupported                                     NULL
    },
    tdd384-hspdsch                                       CHOICE {
        supported                                       HSDSCH-physical-layer-category,
        unsupported                                     NULL
    },
    tdd128-hspdsch                                       CHOICE {
        supported                                       HSDSCH-physical-layer-category,
        unsupported                                     NULL
    }
}

DL-InformationPerRL ::=                                 SEQUENCE {
    modeSpecificInfo                                     CHOICE {
        fdd                                              SEQUENCE {
            primaryCPICH-Info                             PrimaryCPICH-Info,
            pdsch-SHO-DCH-Info                             PDSCH-SHO-DCH-Info          OPTIONAL,
            pdsch-CodeMapping                             PDSCH-CodeMapping          OPTIONAL
        },
        tdd                                              PrimaryCCPCH-Info
    },
    dl-DPCH-InfoPerRL                                   DL-DPCH-InfoPerRL          OPTIONAL,
    seePCH-InfoForFACHdummy                         SCCPCH-InfoForFACH          OPTIONAL
}

DL-InformationPerRL-r4 ::=                             SEQUENCE {
    modeSpecificInfo                                     CHOICE {
        fdd                                              SEQUENCE {
            primaryCPICH-Info                             PrimaryCPICH-Info,
            pdsch-SHO-DCH-Info                             PDSCH-SHO-DCH-Info          OPTIONAL,
            pdsch-CodeMapping                             PDSCH-CodeMapping          OPTIONAL
        },
        tdd                                              PrimaryCCPCH-Info-r4
    },
    dl-DPCH-InfoPerRL                                   DL-DPCH-InfoPerRL-r4      OPTIONAL,
    seePCH-InfoForFACHdummy                         SCCPCH-InfoForFACH-r4      OPTIONAL,
    cell-id                                             CellIdentity                OPTIONAL
}

DL-InformationPerRL-r5 ::=                             SEQUENCE {
    modeSpecificInfo                                     CHOICE {
        fdd                                              SEQUENCE {
            primaryCPICH-Info                             PrimaryCPICH-Info,
            pdsch-SHO-DCH-Info                             PDSCH-SHO-DCH-Info          OPTIONAL,

```

```

        pdsch-CodeMapping          PDSCH-CodeMapping          OPTIONAL,
        servingHSDSCH-RL-indicator  BOOLEAN
    },
    tdd                             PrimaryCCPCH-Info-r4
},
dl-DPCH-InfoPerRL                 DL-DPCH-InfoPerRL-r5          OPTIONAL,
-- dummy is not used in this version of the specification, it should
-- not be sent and if received it should be ignored.
seepch-InfoForFACHdummy      SCCPCH-InfoForFACH-r4          OPTIONAL,
cell-id                           CellIdentity                OPTIONAL
}

DL-InformationPerRL-r5bis ::=      SEQUENCE {
    modeSpecificInfo              CHOICE {
        fdd                       SEQUENCE {
            primaryCPICH-Info      PrimaryCPICH-Info,
            pdsch-SHO-DCH-Info     PDSCH-SHO-DCH-Info          OPTIONAL,
            pdsch-CodeMapping      PDSCH-CodeMapping          OPTIONAL
        },
        tdd                       PrimaryCCPCH-Info-r4
    },
    dl-DPCH-InfoPerRL             DL-DPCH-InfoPerRL-r5          OPTIONAL,
-- dummy is not used in this version of the specification, it should
-- not be sent and if received it should be ignored.
seepch-InfoForFACHdummy      SCCPCH-InfoForFACH-r4          OPTIONAL,
cell-id                           CellIdentity                OPTIONAL
}

DL-InformationPerRL-r6 ::=      SEQUENCE {
    modeSpecificInfo              CHOICE {
        fdd                       SEQUENCE {
            primaryCPICH-Info      PrimaryCPICH-Info,
            pdsch-SHO-DCH-Info     PDSCH-SHO-DCH-Info          OPTIONAL,
            pdsch-CodeMapping      PDSCH-CodeMapping          OPTIONAL,
            servingHSDSCH-RL-indicator  BOOLEAN,
            servingEDCH-RL-indicator  BOOLEAN
        },
        tdd                       PrimaryCCPCH-Info-r4
    },
    dl-dpchsInfo                  CHOICE {
        dl-DPCH-InfoPerRL         DL-DPCH-InfoPerRL-r5,
        dl-FDPCH-InfoPerRL        DL-FDPCH-InfoPerRL-r6
    }
seepch-InfoForFACH          SCCPCH-InfoForFACH-r4          OPTIONAL,
e-AGCH-Information              E-AGCH-Information          OPTIONAL,
e-HICH-Information              E-HICH-Information          OPTIONAL,
e-RGCH-Information              E-RGCH-Information          OPTIONAL,
cell-id                           CellIdentity                OPTIONAL
}

SysInfoType10 ::=              SEQUENCE {
    -- User equipment IEs
-- dummy is not used in this version of the specification, it should
-- not be sent and if received it should be ignored.
drac-SysInfoListdummy      DRAC-SysInfoList,
    -- Extension mechanism for non- release99 information
    nonCriticalExtensions          SEQUENCE {}          OPTIONAL
}

```

11.5 RRC information between network nodes

```

SRNC-RelocationInfo-r3-IEs ::=          SEQUENCE {
  -- Non-RRC IEs
  stateOfRRC                          StateOfRRC,
  stateOfRRC-Procedure                 StateOfRRC-Procedure,
  -- Ciphering related information IEs
  -- If the extension v380 is included use the extension for the ciphering status per CN domain
  cipheringStatus                      CipheringStatus,
  calculationTimeForCiphering          CalculationTimeForCiphering          OPTIONAL,
  -- The order of occurrence in the IE cipheringInfoPerRB-List is the
  -- same as the RBs in SRB-InformationSetupList in RAB-InformationSetupList.
  -- The signalling RBs are supposed to be listed
  -- first. Only UM and AM RBs that are ciphered are listed here
  cipheringInfoPerRB-List              CipheringInfoPerRB-List              OPTIONAL,
  count-C-List                         COUNT-C-List                      OPTIONAL,
  integrityProtectionStatus           IntegrityProtectionStatus,
  -- In the IE srb-SpecificIntegrityProtInfo, the first information listed corresponds to
  -- signalling radio bearer RBO and after the order of occurrence is the same as the SRBs in
  -- SRB-InformationSetupList
  -- The target RNC may ignore the IE srb-SpecificIntegrityProtInfo if the
  -- IE integrityProtectionStatus has the value "not started".
  srb-SpecificIntegrityProtInfo       SRB-SpecificIntegrityProtInfoList,
  implementationSpecificParams        ImplementationSpecificParams        OPTIONAL,
  -- User equipment IEs
  u-RNTI                               U-RNTI,
  c-RNTI                               C-RNTI                          OPTIONAL,
  ue-RadioAccessCapability            UE-RadioAccessCapability,
  ue-Positioning-LastKnownPos        UE-Positioning-LastKnownPos        OPTIONAL,
  -- Other IEs
  ue-RATSpecificCapability            InterRAT-UE-RadioAccessCapabilityList  OPTIONAL,
  -- UTRAN mobility IEs
  ura-Identity                        URA-Identity                      OPTIONAL,
  -- Core network IEs
  cn-CommonGSM-MAP-NAS-SysInfo       NAS-SystemInformationGSM-MAP,
  cn-DomainInformationList           CN-DomainInformationList           OPTIONAL,
  -- Measurement IEs
  ongoingMeasRepList                 OngoingMeasRepList                OPTIONAL,
  -- Radio bearer IEs
  predefinedConfigStatusList          PredefinedConfigStatusList,
  srb-InformationList                 SRB-InformationSetupList,
  rab-InformationList                 RAB-InformationSetupList           OPTIONAL,
  -- Transport channel IEs
  ul-CommonTransChInfo                UL-CommonTransChInfo              OPTIONAL,
  ul-TransChInfoList                 UL-AddReconfTransChInfoList       OPTIONAL,
  modeSpecificInfo                    CHOICE {
    fdd                                SEQUENCE {
      cpch-SetID                       CPCH-SetID                        OPTIONAL,
      -- dummy is not used in this version of the specification, it should
      -- not be sent and if received it should be ignored.
      transChDRAC-Info dummy         DRAC-StaticInformationList        OPTIONAL
    },
    tdd                                NULL
  },
  dl-CommonTransChInfo                DL-CommonTransChInfo              OPTIONAL,
  dl-TransChInfoList                 DL-AddReconfTransChInfoList       OPTIONAL,
  -- Measurement report
  measurementReport                   MeasurementReport                  OPTIONAL
}

```

```

SRNC-RelocationInfo-r4-IEs ::=          SEQUENCE {
  -- Non-RRC IEs
  -- IE rb-IdentityForHOMessage includes the identity of the RB used by the source SRNC
  -- to send the message contained in the IE "TargetRNC-ToSourceRNC-Container".
  -- Only included if type is "UE involved"
  rb-IdentityForHOMessage             RB-Identity                        OPTIONAL,
  stateOfRRC                          StateOfRRC,
  stateOfRRC-Procedure                 StateOfRRC-Procedure,
  -- Ciphering related information IEs
  cipheringStatusList                 CipheringStatusList-r4,
  latestConfiguredCN-Domain           CN-DomainIdentity,
  calculationTimeForCiphering          CalculationTimeForCiphering        OPTIONAL,
  count-C-List                         COUNT-C-List                      OPTIONAL,
  cipheringInfoPerRB-List             CipheringInfoPerRB-List-r4        OPTIONAL,
}

```

```

-- Integrity protection related information IEs
  integrityProtectionStatus      IntegrityProtectionStatus,
  -- The target RNC may ignore the IE srb-SpecificIntegrityProtInfo if the
  -- IE integrityProtectionStatus has the value "not started".
  srb-SpecificIntegrityProtInfo  SRB-SpecificIntegrityProtInfoList,
  implementationSpecificParams  ImplementationSpecificParams      OPTIONAL,
-- User equipment IEs
  u-RNTI                          U-RNTI,
  c-RNTI                          C-RNTI                          OPTIONAL,
  ue-RadioAccessCapability        UE-RadioAccessCapability-r4,
  ue-RadioAccessCapability-ext    UE-RadioAccessCapabBandFDDList  OPTIONAL,
  ue-Positioning-LastKnownPos    UE-Positioning-LastKnownPos    OPTIONAL,
  uESpecificBehaviourInformationIdle UESpecificBehaviourInformationIdle  OPTIONAL,
  uESpecificBehaviourInformationInterRAT UESpecificBehaviourInformationInterRAT
OPTIONAL,
-- Other IEs
  ue-RATSpecificCapability        InterRAT-UE-RadioAccessCapabilityList  OPTIONAL,
-- UTRAN mobility IEs
  ura-Identity                    URA-Identity                    OPTIONAL,
-- Core network IEs
  cn-CommonGSM-MAP-NAS-SysInfo   NAS-SystemInformationGSM-MAP,
  cn-DomainInformationList       CN-DomainInformationListFull  OPTIONAL,
-- Measurement IEs
  ongoingMeasRepList             OngoingMeasRepList-r4        OPTIONAL,
-- Radio bearer IEs
  predefinedConfigStatusList     PredefinedConfigStatusList,
  srb-InformationList            SRB-InformationSetupList,
  rab-InformationList            RAB-InformationSetupList-r4  OPTIONAL,
-- Transport channel IEs
  ul-CommonTransChInfo          UL-CommonTransChInfo-r4      OPTIONAL,
  ul-TransChInfoList            UL-AddReconfTransChInfoList  OPTIONAL,
  modeSpecificInfo              CHOICE {
    fdd                          SEQUENCE {
      cpch-SetID                 CPCH-SetID                 OPTIONAL,
      -- dummy is not used in this version of the specification, it should
      -- not be sent and if received it should be ignored.
      transChDRAC-Infodummy  DRAC-StaticInformationList  OPTIONAL
    },
    tdd                          NULL
  }
  dl-CommonTransChInfo          DL-CommonTransChInfo-r4      OPTIONAL,
  dl-TransChInfoList            DL-AddReconfTransChInfoList-r4  OPTIONAL,
-- Measurement report
  measurementReport              MeasurementReport              OPTIONAL,
  failureCause                   FailureCauseWithProtErr       OPTIONAL
}

SRNC-RelocationInfo-r5-IEs ::= SEQUENCE {
  -- Non-RRC IEs
  -- IE rb-IdentityForHOMessage includes the identity of the RB used by the source SRNC
  -- to send the message contained in the IE "TargetRNC-ToSourceRNC-Container".
  -- Only included if type is "UE involved"
  rb-IdentityForHOMessage        RB-Identity                    OPTIONAL,
  stateOfRRC                    StateOfRRC,
  stateOfRRC-Procedure           StateOfRRC-Procedure,
-- Ciphering related information IEs
  cipheringStatusList           CipheringStatusList-r4,
  latestConfiguredCN-Domain     CN-DomainIdentity,
  calculationTimeForCiphering    CalculationTimeForCiphering    OPTIONAL,
  count-C-List                   COUNT-C-List                   OPTIONAL,
  cipheringInfoPerRB-List       CipheringInfoPerRB-List-r4    OPTIONAL,
-- Integrity protection related information IEs
  integrityProtectionStatus      IntegrityProtectionStatus,
  srb-SpecificIntegrityProtInfo  SRB-SpecificIntegrityProtInfoList  OPTIONAL,
  implementationSpecificParams  ImplementationSpecificParams    OPTIONAL,
-- User equipment IEs
  u-RNTI                          U-RNTI,
  c-RNTI                          C-RNTI                          OPTIONAL,
  ue-RadioAccessCapability        UE-RadioAccessCapability-r5,
  ue-RadioAccessCapability-ext    UE-RadioAccessCapabBandFDDList  OPTIONAL,
  ue-Positioning-LastKnownPos    UE-Positioning-LastKnownPos    OPTIONAL,
  uESpecificBehaviourInformationIdle UESpecificBehaviourInformationIdle  OPTIONAL,
  uESpecificBehaviourInformationInterRAT UESpecificBehaviourInformationInterRAT  OPTIONAL,
-- Other IEs
  ue-RATSpecificCapability        InterRAT-UE-RadioAccessCapabilityList-r5  OPTIONAL,
-- UTRAN mobility IEs

```

```

ura-Identity                URA-Identity                OPTIONAL,
-- Core network IEs
cn-CommonGSM-MAP-NAS-SysInfo  NAS-SystemInformationGSM-MAP,
cn-DomainInformationList      CN-DomainInformationListFull    OPTIONAL,
-- Measurement IEs
ongoingMeasRepList            OngoingMeasRepList-r5          OPTIONAL,
-- Radio bearer IEs
predefinedConfigStatusList    PredefinedConfigStatusList,
srb-InformationList            SRB-InformationSetupList-r5,
rab-InformationList            RAB-InformationSetupList-r5    OPTIONAL,
-- Transport channel IEs
ul-CommonTransChInfo          UL-CommonTransChInfo-r4        OPTIONAL,
ul-TransChInfoList            UL-AddReconfTransChInfoList    OPTIONAL,
modeSpecificInfo              CHOICE {
    fdd                        SEQUENCE {
        cpch-SetID            CPCH-SetID                    OPTIONAL,
        -- dummy is not used in this version of the specification, it should
        -- not be sent and if received it should be ignored.
        transChDRAC-Infodummy DRAC-StaticInformationList  OPTIONAL
    },
    tdd                        NULL
}
dl-CommonTransChInfo          DL-CommonTransChInfo-r4        OPTIONAL,
dl-TransChInfoList            DL-AddReconfTransChInfoList-r5  OPTIONAL,
-- PhyCH IEs
tpc-CombinationInfoList        TPC-CombinationInfoList        OPTIONAL,
-- Measurement report
measurementReport              MeasurementReport                OPTIONAL,
-- Other IEs
failureCause                    FailureCauseWithProtErr          OPTIONAL
}

SRNC-RelocationInfo-v6xyext-IEs ::= SEQUENCE {
-- Radio bearer IEs
rab-InformationSetupList        RAB-InformationSetupList-r6-ext  OPTIONAL,
-- MBMS IEs
mbms-JoinedInformation          MBMS-JoinedInformation-r6        OPTIONAL
}

SRNC-RelocationInfo-r6-IEs ::= SEQUENCE {
-- Non-RRC IEs
-- IE rb-IdentityForHOMessage includes the identity of the RB used by the source SRNC
-- to send the message contained in the IE "TargetRNC-ToSourceRNC-Container".
-- Only included if type is "UE involved"
rb-IdentityForHOMessage          RB-Identity                      OPTIONAL,
stateOfRRC                      StateOfRRC,
stateOfRRC-Procedure            StateOfRRC-Procedure,
-- Ciphering related information IEs
cipheringStatusList             CipheringStatusList-r4,
latestConfiguredCN-Domain        CN-DomainIdentity,
calculationTimeForCiphering      CalculationTimeForCiphering      OPTIONAL,
count-C-List                     COUNT-C-List                      OPTIONAL,
cipheringInfoPerRB-List          CipheringInfoPerRB-List-r4        OPTIONAL,
-- Integrity protection related information IEs
integrityProtectionStatus        IntegrityProtectionStatus,
srb-SpecificIntegrityProtInfoList SRB-SpecificIntegrityProtInfoList OPTIONAL,
implementationSpecificParams      ImplementationSpecificParams      OPTIONAL,
-- User equipment IEs
u-RNTI                           U-RNTI,
c-RNTI                           C-RNTI                            OPTIONAL,
ue-RadioAccessCapability          UE-RadioAccessCapability-r5,
ue-RadioAccessCapability-ext       UE-RadioAccessCapabBandFDDList    OPTIONAL,
ue-Positioning-LastKnownPos        UE-Positioning-LastKnownPos        OPTIONAL,
uESpecificBehaviourInformationIdle UESpecificBehaviourInformationIdle OPTIONAL,
uESpecificBehaviourInformationInterRAT UESpecificBehaviourInformationInterRAT OPTIONAL,
-- Other IEs
ue-RATSpecificCapability          InterRAT-UE-RadioAccessCapabilityList-r5  OPTIONAL,
-- UTRAN mobility IEs
ura-Identity                      URA-Identity                      OPTIONAL,
-- Core network IEs
cn-CommonGSM-MAP-NAS-SysInfo      NAS-SystemInformationGSM-MAP,
cn-DomainInformationList          CN-DomainInformationListFull      OPTIONAL,
-- Measurement IEs
ongoingMeasRepList              OngoingMeasRepList-r5            OPTIONAL,
interRATCellInfoIndicator          InterRATCellInfoIndicator          OPTIONAL,
-- Radio bearer IEs

```

```

predefinedConfigStatusList      PredefinedConfigStatusList,
srb-InformationList              SRB-InformationSetupList-r6,
rab-InformationList              RAB-InformationSetupList-r6      OPTIONAL,
-- Transport channel IEs
ul-CommonTransChInfo            UL-CommonTransChInfo-r4      OPTIONAL,
ul-TransChInfoList              UL-AddReconfTransChInfoList-r6  OPTIONAL,
modeSpecificInfo                CHOICE {
    fdd                          SEQUENCE {
        cpch-SetID              CPCH-SetID              OPTIONAL,
        transChDRAC-Info      DRAC-StaticInformationList OPTIONAL
    },
    tdd                          NULL
}
dl-CommonTransChInfo            DL-CommonTransChInfo-r4      OPTIONAL,
dl-TransChInfoList              DL-AddReconfTransChInfoList-r5  OPTIONAL,
-- PhyCH IEs
tpc-CombinationInfoList         TPC-CombinationInfoList     OPTIONAL,
storedCompressedModeInfo        StoredCompressedModeInfo     OPTIONAL,
-- Measurement report
measurementReport               MeasurementReport            OPTIONAL,
-- Other IEs
failureCause                     FailureCauseWithProtErr     OPTIONAL,
-- MBMS IEs
mbms-JoinedInformation          MBMS-JoinedInformation-r6    OPTIONAL
}

-- IE definitions

DL-PhysChCapabilityFDD-r4 ::=    SEQUENCE {
    maxNoDPCH-PDSCH-Codes        INTEGER (1..8),
    maxNoPhysChBitsReceived      MaxNoPhysChBitsReceived,
    supportForSF-512             BOOLEAN,
    supportOfPDSCH               BOOLEAN,
    simultaneousSCCPCH-DPCH-Reception dummy SimultaneousSCCPCH-DPCH-Reception,
    supportOfDedicatedPilotsForChEstimation SupportOfDedicatedPilotsForChEstimation OPTIONAL
}

DL-PhysChCapabilityFDD-r5 ::=    SEQUENCE {
    maxNoDPCH-PDSCH-Codes        INTEGER (1..8),
    maxNoPhysChBitsReceived      MaxNoPhysChBitsReceived,
    supportForSF-512             BOOLEAN,
    supportOfPDSCH               BOOLEAN,
    simultaneousSCCPCH-DPCH-Reception SimultaneousSCCPCH-DPCH-Reception,
    supportOfDedicatedPilotsForChEstimation SupportOfDedicatedPilotsForChEstimation OPTIONAL,
    fdd-hspdsch                 CHOICE {
        supported                SEQUENCE {
            hsdSCH-physical-layer-category HSDSCH-physical-layer-category,
            supportOfDedicatedPilotsForChannelEstimationOfHSDSCH BOOLEAN,
            simultaneousSCCPCH-DPCH-HSDSCH-Reception shall be true only if the
            IE SimultaneousSCCPCH-DPCH-Reception indicates support of simultaneous-
            reception of S-CCPCH and DPCH
            dummy is not used in this version of the specification and
            it should be ignored by the receiver.
            simultaneousSCCPCH-DPCH-HSDSCH-Reception dummy BOOLEAN
        },
        unsupported              NULL
    }
}

```

13.5.2 RRC procedure performance values

NOTE: Times indicated in the table do not include cell reselection.

Procedure title:	UTRAN -> UE	UE -> UTRAN	N1	N2	Notes
RRC Connection Management Procedures					
Broadcast of system information	SYSTEM INFORMATION				N2 is not applicable for any system information messages, because there is no response message from the UE.
Master Information Block	SYSTEM INFORMATION		5	NA	No system information data shall be lost due to processing of a MIB received with no detectable errors. This means that the UE shall buffer all system information data received after the MIB until the data can be processed according to the information in the MIB, unless the MIB was received erroneously.
System Information Block type 1	SYSTEM INFORMATION		10	NA	
System Information Block type 2	SYSTEM INFORMATION		10	NA	
System Information Block type 3	SYSTEM INFORMATION		10	NA	
System Information Block type 4	SYSTEM INFORMATION		10	NA	
System Information Block type 5	SYSTEM INFORMATION		10	NA	
System Information Block type 6	SYSTEM INFORMATION		10	NA	
System Information Block type 7	SYSTEM INFORMATION		5	NA	
System Information Block type 8	SYSTEM INFORMATION		10	NA	
System Information Block type 9	SYSTEM INFORMATION		5	NA	
System Information Block type 10	SYSTEM INFORMATION		5	NA	
System Information Block type 11	SYSTEM INFORMATION		10	NA	
System Information Block type 12	SYSTEM INFORMATION		10	NA	
System Information Block type 13	SYSTEM INFORMATION		10	NA	
System Information Block type 14	SYSTEM INFORMATION		10	NA	
System Information Block type 15	SYSTEM INFORMATION		10	NA	
System Information Block type 16	SYSTEM INFORMATION		10	NA	
System Information Block type 18	SYSTEM INFORMATION		10	NA	

Procedure title:	UTRAN -> UE	UE -> UTRAN	N1	N2	Notes
RRC connection establishment <i>Target state CELL_DCH</i>	RRC CONNECTION SETUP	RRC CONNECTION SETUP COMPLETE	10	NA	N1 measures time to the start of tx / rx on DPCH. N2 cannot be specified, because RRC CONNECTION SETUP COMPLETE message is transmitted only after physical layer synchronisation, which also depends on the Node B. The performance of the physical layer synchronisation procedure is specified in [19] and [20]
RRC connection establishment <i>Target state CELL_FACH</i>	RRC CONNECTION SETUP	RRC CONNECTION SETUP COMPLETE	10	11	N1 and N2 applicable as defined (N2 can be tested from the initiation of the power ramp on RACH).
RRC connection release <i>From CELL_DCH state</i>	RRC CONNECTION RELEASE	RRC CONNECTION RELEASE COMPLETE	5	8	N1 sets the requirement for the time from the completion of the last repetition of the RRC CONNECTION RELEASE COMPLETE message to the release of the physical channel. N2 sets the requirement from the end of successful reception of the RRC CONNECTION RELEASE message to the start of the first transmission of the RRC CONNECTION RELEASE COMPLETE message.
RRC connection release <i>From CELL_FACH state</i>	RRC CONNECTION RELEASE	RRC CONNECTION RELEASE COMPLETE	NA	11	N1 represents UE internal configuration that cannot be externally observed.
Paging	PAGING TYPE 1	CELL UPDATE	10	11+ T	T is the repetition period of SIB7 (applicable for FDD) and SIB14 (applicable for TDD)
UE capability enquiry	UE CAPABILITY ENQUIRY	UE CAPABILITY INFORMATION	NA	8	N1 is not applicable because the UE configuration does not change.
Security mode control	SECURITY MODE COMMAND	SECURITY MODE COMPLETE	5	8	
Signalling connection release procedure	SIGNALLING CONNECTION RELEASE		5	NA	N2 is not applicable because there is no response message.
Counter check	COUNTER CHECK	COUNTER CHECK RESPONSE	NA	8	N1 is not applicable because the UE configuration does not change.
Radio Bearer control procedures					
Radio bearer establishment <i>Target state CELL_DCH</i>	RADIO BEARER SETUP	RADIO BEARER SETUP COMPLETE / FAILURE	10	NA	N2 cannot be specified, because the RADIO BEARER SETUP COMPLETE / FAILURE message is transmitted only after physical layer synchronisation, which depends also on Node B.
Radio bearer establishment <i>From state CELL_FACH to state CELL_FACH</i>	RADIO BEARER SETUP	RADIO BEARER SETUP COMPLETE / FAILURE	10	11	

Procedure title:	UTRAN -> UE	UE -> UTRAN	N1	N2	Notes
Radio bearer establishment <i>From CELL_DCH to CELL_FACH</i>	RADIO BEARER SETUP	RADIO BEARER SETUP COMPLETE	NA	NA	N1 and N2 cannot be specified, because UE need to read SIBs on BCH before sending RADIO BEARER SETUP COMPLETE
Radio bearer reconfiguration <i>Target state CELL_DCH</i>	RADIO BEARER RECONFIGURATION	RADIO BEARER RECONFIGURATION COMPLETE / FAILURE	10	NA	N2 cannot be specified, because the RADIO BEARER RECONFIGURATION COMPLETE / FAILURE message is transmitted only after physical layer synchronisation, which depends also on Node B.
Radio bearer reconfiguration <i>From state CELL_FACH to state CELL_FACH</i>	RADIO BEARER RECONFIGURATION	RADIO BEARER RECONFIGURATION COMPLETE / FAILURE	10	11	
Radio bearer reconfiguration <i>From state CELL_DCH to state CELL_FACH</i>	RADIO BEARER RECONFIGURATION	RADIO BEARER RECONFIGURATION COMPLETE	NA	NA	N1 and N2 cannot be specified, because UE need to read SIBs on BCH before sending RADIO BEARER RECONFIGURATION COMPLETE
Radio bearer release <i>Target state CELL_DCH</i>	RADIO BEARER RELEASE	RADIO BEARER RELEASE COMPLETE / FAILURE	10	11	
Radio bearer release <i>From state CELL_FACH to state CELL_FACH</i>	RADIO BEARER RELEASE	RADIO BEARER RELEASE COMPLETE / FAILURE	10	11	
Radio bearer release <i>From state CELL_DCH to state CELL_FACH</i>	RADIO BEARER RELEASE	RADIO BEARER RELEASE COMPLETE	NA	NA	N1 and N2 cannot be specified, because UE need to read SIBs on BCH before sending RADIO BEARER RECONFIGURATION COMPLETE
Transport channel reconfiguration <i>Target state CELL_DCH</i>	TRANSPORT CHANNEL RECONFIGURATION	TRANSPORT CHANNEL RECONFIGURATION COMPLETE / FAILURE	10	NA	N2 cannot be specified, because the TRANSPORT CHANNEL RECONFIGURATION COMPLETE / FAILURE message is transmitted only after physical layer synchronisation, which depends also on Node B.
Transport channel reconfiguration <i>From state CELL_FACH to state CELL_FACH</i>	TRANSPORT CHANNEL RECONFIGURATION	TRANSPORT CHANNEL RECONFIGURATION COMPLETE / FAILURE	10	11	
Transport channel reconfiguration <i>From state CELL_DCH to state CELL_FACH</i>	TRANSPORT CHANNEL RECONFIGURATION	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	NA	NA	N1 and N2 cannot be specified, because UE need to read SIBs on BCH before sending TRANSPORT CHANNEL RECONFIGURATION COMPLETE
Transport format combination control <i>AM or UM RLC mode</i>	TRANSPORT FORMAT COMBINATION CONTROL	TRANSPORT FORMAT COMBINATION CONTROL FAILURE	5	8	
Transport format combination control <i>Transparent mode</i>	TRANSPORT FORMAT COMBINATION CONTROL		5	NA	N2 is not applicable because no response message is defined.

Procedure title:	UTRAN -> UE	UE -> UTRAN	N1	N2	Notes
Physical channel reconfiguration <i>Target state CELL_DCH</i>	PHYSICAL CHANNEL RECONFIGURATION	PHYSICAL CHANNEL RECONFIGURATION COMPLETE / FAILURE	8	NA	N2 cannot be specified, because the PHYSICAL CHANNEL RECONFIGURATION COMPLETE / FAILURE message is transmitted only after physical layer synchronisation, which depends also on Node B.
Physical channel reconfiguration <i>From state CELL_FACH to state CELL_FACH</i>	PHYSICAL CHANNEL RECONFIGURATION	PHYSICAL CHANNEL RECONFIGURATION COMPLETE / FAILURE	8	9	
Physical channel reconfiguration <i>From state CELL_DCH to state CELL_FACH</i>	PHYSICAL CHANNEL RECONFIGURATION	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	NA	NA	N1 and N2 cannot be specified, because UE need to read SIBs on BCH before sending PHYSICAL CHANNEL RECONFIGURATION COMPLETE
Physical Shared Channel Allocation [TDD only]	PHYSICAL SHARED CHANNEL ALLOCATION		5	NA	N2 is not applicable because no response message is defined.
Uplink Physical Channel Control [TDD only]	UPLINK PHYSICAL CHANNEL CONTROL		8	NA	Requirements for outer loop and timing advance adjustments are defined in [22] and [20]. N2 is not applicable because there is no response message.
RRC connection mobility procedures					
Cell update	CELL UPDATE CONFIRM	UTRAN MOBILITY INFORMATION CONFIRM	5	8	
		PHYSICAL CHANNEL RECONFIGURATION COMPLETE <i>Target state CELL_FACH</i>	8	9	
		PHYSICAL CHANNEL RECONFIGURATION COMPLETE <i>Target state CELL_DCH</i>	8	NA	N2 cannot be specified, because the PHYSICAL CHANNEL RECONFIGURATION COMPLETE / FAILURE message is transmitted only after physical layer synchronisation, which depends also on Node B.
		TRANSPORT CHANNEL RECONFIGURATION COMPLETE <i>Target state CELL_FACH</i>	10	11	

Procedure title:	UTRAN -> UE	UE -> UTRAN	N1	N2	Notes
		TRANSPORT CHANNEL RECONFIGURATION COMPLETE <i>Target state</i> CELL_DCH	10	NA	N2 cannot be specified, because the PHYSICAL CHANNEL RECONFIGURATION COMPLETE / FAILURE message is transmitted only after physical layer synchronisation, which depends also on Node B.
		RADIO BEARER RECONFIGURATION COMPLETE <i>Target state</i> CELL_FACH	10	11	
		RADIO BEARER RECONFIGURATION COMPLETE <i>Target state</i> CELL_DCH	10	NA	N2 cannot be specified, because the PHYSICAL CHANNEL RECONFIGURATION COMPLETE / FAILURE message is transmitted only after physical layer synchronisation, which depends also on Node B.
		RADIO BEARER RELEASE COMPLETE <i>Target state</i> CELL_DCH	10	11	
URA update	URA UPDATE CONFIRM	UTRAN MOBILITY INFORMATION CONFIRM	5	8	
UTRAN mobility information	UTRAN MOBILITY INFORMATION	UTRAN MOBILITY INFORMATION CONFIRM / FAILURE	5	8	
Active set update	ACTIVE SET UPDATE	ACTIVE SET UPDATE COMPLETE / FAILURE	NA	8	The requirements on UE combining and power control performance for both UL and DL are specified by RAN WG4 in [21] and [19]. Also in case of branch addition the COMPLETE / FAILURE message is transmitted without waiting for the new branch to stabilise, therefore N2 is specified.
Inter-RAT handover to UTRAN	HANDOVER TO UTRAN COMMAND (other system)	HANDOVER TO UTRAN COMPLETE	NA	NA	The performance of this procedure is specified in 05.10.
Inter-RAT handover from UTRAN	HANDOVER FROM UTRAN COMMAND	HANDOVER FROM UTRAN FAILURE	NA	NA	The performance of this procedure is specified in [19] and [20].
Measurement procedures					
Measurement control	MEASUREMENT CONTROL	MEASUREMENT CONTROL FAILURE	5	8	Response to measurement inquiry depends on physical layer measurement. Response time is defined in [19] and [20]. N1 and N2 only define the processing of the message.

14.8 ~~Dynamic Resource Allocation Control of Uplink DCH (FDD-only)~~ Void

~~The network uses this procedure to dynamically control the allocation of resources on an uplink DCH.~~

~~This procedure shall be activated in the UE when it has been allocated an uplink DCH with DRAC static information elements. Such uplink DCHs can be established through RB establishment procedure, RB reconfiguration procedure, RB release procedure or Transport Channel Reconfiguration procedure by setting the DRAC static information elements to indicate that the DCH is controlled by the DRAC procedure.~~

~~The UE shall periodically listen to the System Information Block 10 of each cell in its Active Set. The scheduling information of System Information Block 10 and the SCCPCH info on which the System Information Block 10 is transmitted are provided to the UE when the DCH is set up and when a cell is added in its active set. In case several System Information Block 10 messages from different cells are scheduled at the same time, the UE shall only listen to the System Information Block 10 broadcast in the cell of its Active Set having the best CPICH measurements.~~

~~Upon reception of a SYSTEM INFORMATION message comprising a System Information Block 10, the UE shall:~~

- ~~1. Determine and store the most stringent DRAC parameters from the last received values from each cell of its active set (i.e. select the lowest product $p_{if} \cdot \text{maximum bit rate}$ corresponding to its DRAC class identity)~~
- ~~2. Determine the allowed subset of TFCS according to the selected maximum bit rate value, and store it for later usage.
The allowed subset of TFCS are the ones of the TFCS for which the sum of bit rates of the DCH controlled by DRAC is lower than Maximum Bit Rate IE, i.e.~~

$$\sum TBSsize_i / TTI_i < \text{MaximumBitRate}$$

~~DCH_i controlled by DRAC~~

~~After the first System Information Block 10 has been received, the UE shall start the following process:~~

- ~~1. At the start of the next TTI, the UE shall randomly select $p \in [0,1]$.~~
- ~~2. If $p < p_{tr}$, the UE shall transmit on the DCH controlled by DRAC during T_{validity} frames using the last stored allowed subset of TFCS and comes back to step 1, otherwise the UE shall stop transmission on these DCH during T_{retry} frames and then comes back to step 1.~~

~~Transmission time validity (T_{validity}) and Time duration before retry (T_{retry}) are indicated to the UE at the establishment of a DCH controlled by this procedure and may be changed through RB or transport channel reconfiguration. The UE shall always use the latest received DRAC static parameters.~~

~~A UE that supports the simultaneous reception of one SCCPCH and one DPCH shall support the DRAC procedure.~~

14.12.4.2 SRNS RELOCATION INFO

This RRC message is sent between network nodes when preparing for an SRNS relocation or a handover/cell reselection from GERAN *Iu mode*.

With the presence or absence of the IE "RB identity for Hard Handover message" the source RNC indicates to the target SRNC whether the source RNC expects to receive the choice "DL DCCH message" in the IE "RRC information, target RNC to source RNC" in case the SRNS relocation is of type "UE involved". Furthermore the target RNC uses this information for the calculation of the MAC-I.

Direction: source RNC/RAT→target RNC

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
Non RRC IEs					
>RB identity for Handover message	OP		RB identity 10.3.4.16	Gives the id of the radio bearer on which the source RNC will transmit the RRC message in the case the relocation is of type "UE involved". In handover from GERAN <i>Iu mode</i> this IE is always set to 2.	
>State of RRC	MP		RRC state indicator, 10.3.3.35a		
>State of RRC procedure	MP		Enumerated (await no RRC message, await RB Release Complete, await RB Setup Complete, await RB Reconfiguration Complete, await Transport CH Reconfiguration Complete, await Physical CH Reconfiguration Complete, await Active Set Update Complete, await Handover Complete, send Cell Update Confirm, send URA Update Confirm, , others)		
Ciphering related information					
>Ciphering status for each CN domain	MP	<1 to maxCNDomains>			

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>>CN domain identity	MP		CN domain identity 10.3.1.1		
>>Ciphering status	MP		Enumerated(Not started, Started)		
>>START	MP		START 10.3.3.38	START value to be used in this CN domain.	
>Latest configured CN domain	MP		CN domain identity 10.3.1.1	Value contained in the variable of the same name. In case this variable is empty, the source RNC can set any CN domain identity. In that case, the Ciphering status and the Integrity protection status should be Not started and the target RNC should not initialise the variable Latest configured CN domain.	
>Calculation time for ciphering related information	CV- <i>Ciphering</i>			Time when the ciphering information of the message were calculated, relative to a cell of the target RNC. In handover and cell reselection from GERAN <i>lu mode</i> this field is not present.	
>>Cell Identity	MP		Cell Identity 10.3.2.2	Identity of one of the cells under the target RNC and included in the active set of the current call	
>>SFN	MP		Integer(0..4095)		
>COUNT-C list	OP	1 to <maxCNdo mains>		COUNT-C values for radio bearers using transparent mode RLC	
>>CN domain identity	MP		CN domain identity 10.3.1.1		
>>COUNT-C	MP		Bit string(32)		
>Ciphering info per radio bearer	OP	1 to <maxRB>		For signalling radio bearers this IE is mandatory.	
>>RB identity	MP		RB identity 10.3.4.16		
>>Downlink HFN	MP		Bit string(20..25)	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)	
>>Downlink SN	CV- <i>SRB1</i>		Bit String(7)	VT(US) of RLC UM	
>>Uplink HFN	MP		Bit string(20..25)	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)	
Integrity protection related information					
>Integrity protection status	MP		Enumerated(Not started, Started)		
>Signalling radio bearer specific integrity protection information	CV- <i>IP</i>	4 to <maxSRBs etup>			
>>Uplink RRC HFN	MP		Bit string (28)	For each SRB, in the case activation times for the next IP configuration to be applied on this SRB have already been reached this IE corresponds to the last value used. Else this value corresponds to the value	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
				<p>the source would have initialized the HFN to at the activation time. Increment of HFN due to RRC SN roll over is taken care of by target based on value sent by the source.</p> <p>NOTE: In order to have the possibility of sending downlink messages after the construction of the IE "SRNS RELOCATION INFO", the source may choose a value ahead of the last value used.</p>	
>>Downlink RRC HFN	MP		Bit string (28)	<p>For each SRB, in the case activation times for the next IP configuration to be applied on this SRB have already been reached this IE corresponds to the last value used. Else this value corresponds to the value the source would have initialized the HFN to at the activation time. Increment of HFN due to RRC SN roll over is taken care of by target based on value sent by the source. In particular, for SRB2, this IE should not take into account the RRC message that will trigger the relocation.</p> <p>NOTE: In order to have the possibility of sending downlink messages after the construction of the IE "SRNS RELOCATION INFO", the source may choose a value ahead of the last value used.</p>	
>>Uplink RRC Message sequence number	MP		Integer (0..15)	<p>For each SRB, this IE corresponds to the last value received or in the case activation time was not reached for a configuration the value equals (activation time - 1).</p>	
>>Downlink RRC Message sequence number	MP		Integer (0..15)	<p>For each SRB, this IE corresponds to the last value used or in the case activation time was not reached for a configuration the value equals (activation time -1). In particular, for SRB2, this IE should not take into account the RRC message that will trigger the relocation.</p> <p>NOTE: In order to have the possibility of sending downlink messages after the construction of the IE "SRNS RELOCATION INFO", the source may choose a value ahead of the last value used.</p>	
>Implementation specific parameters	OP		Bit string (1..512)		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
RRC IEs					
UE Information elements					
>U-RNTI	MP		U-RNTI 10.3.3.47	G-RNTI is placed in this field when performing handover or cell reselection from GERAN <i>lu mode</i> .	
>C-RNTI	OP		C-RNTI 10.3.3.8		
>UE radio access Capability	MP		UE radio access capability 10.3.3.42		
>UE radio access capability extension	OP		UE radio access capability extension 10.3.3.42a		
>Last known UE position	OP				
>>SFN	MP		Integer (0..4095)	Time when position was estimated	
>>Cell ID	MP		Cell identity; 10.3.2.2	Indicates the cell, the SFN is valid for.	
>>CHOICE <i>Position estimate</i>	MP				
>>>Ellipsoid Point			Ellipsoid Point; 10.3.8.4a		
>>>Ellipsoid point with uncertainty circle			Ellipsoid point with uncertainty circle 10.3.8.4d		
>>>Ellipsoid point with uncertainty ellipse			Ellipsoid point with uncertainty ellipse 10.3.8.4e		
>>>Ellipsoid point with altitude			Ellipsoid point with altitude 10.3.8.4b		
>>>Ellipsoid point with altitude and uncertainty ellipsoid			Ellipsoid point with altitude and uncertainty ellipsoid 10.3.8.4c		
>UE Specific Behaviour Information 1 idle	OP		UE Specific Behaviour Information 1 10.3.3.51	This IE should be included if received via the "INTER RAT HANDOVER INFO", the "RRC CONNECTION REQUEST", the IE "SRNS RELOCATION INFO" or the "Inter RAT Handover Info with Inter RAT Capabilities"	
>UE Specific Behaviour Information 1 interRAT	OP		UE Specific Behaviour Information 1 interRAT 10.3.3.52	This IE should be included if received via the "INTER RAT HANDOVER INFO", the "RRC CONNECTION REQUEST", the IE "SRNS RELOCATION INFO" or the "Inter RAT Handover Info with Inter RAT Capabilities"	
Other Information elements					
>UE system specific capability	OP	1 to <maxSystemCapabilit			

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>>Inter-RAT UE radio access capability	MP	y>	Inter-RAT UE radio access capability 10.3.8.7		
UTRAN Mobility Information elements					
>URA Identifier	OP		URA identity 10.3.2.6		
CN Information Elements					
>CN common GSM-MAP NAS system information	MP		NAS system information (GSM-MAP) 10.3.1.9		
>CN domain related information	OP	1 to <MaxCNdo mains>		CN related information to be provided for each CN domain	
>>CN domain identity	MP				
>>CN domain specific GSM-MAP NAS system info	MP		NAS system information (GSM-MAP) 10.3.1.9		
>>CN domain specific DRX cycle length coefficient	MP		CN domain specific DRX cycle length coefficient, 10.3.3.6		
Measurement Related Information elements					
>For each ongoing measurement reporting	OP	1 to <MaxNoOf Meas>			
>>Measurement Identity	MP		Measurement identity 10.3.7.48		
>>Measurement Command	MP		Measurement command 10.3.7.46		
>>Measurement Type	CV-Setup		Measurement type 10.3.7.50		
>>Measurement Reporting Mode	OP		Measurement reporting mode 10.3.7.49		
>>Additional Measurements list	OP		Additional measurements list 10.3.7.1		
>>CHOICE <i>Measurement</i>	OP				
>>>Intra-frequency					
>>>>Intra-frequency cell info	OP		Intra-frequency cell info list 10.3.7.33		
>>>>Intra-frequency measurement quantity	OP		Intra-frequency measurement quantity 10.3.7.38		
>>>>Intra-frequency reporting quantity	OP		Intra-frequency reporting quantity		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
			10.3.7.41		
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61		
>>>>Measurement validity	OP		Measurement validity 10.3.7.51		
>>>>CHOICE <i>report criteria</i>	OP				
>>>>>Intra-frequency measurement reporting criteria			Intra-frequency measurement reporting criteria 10.3.7.39		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>Inter-frequency					
>>>>Inter-frequency cell info	OP		Inter-frequency cell info list 10.3.7.13		
>>>>Inter-frequency measurement quantity	OP		Inter-frequency measurement quantity 10.3.7.18		
>>>>Inter-frequency reporting quantity	OP		Inter-frequency reporting quantity 10.3.7.21		
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61		
>>>>Measurement validity	OP		Measurement validity 10.3.7.51		
>>>>Inter-frequency set update	OP		Inter-frequency set update 10.3.7.22		
>>>>CHOICE <i>report criteria</i>	OP				
>>>>>Intra-frequency measurement reporting criteria			Intra-frequency measurement reporting criteria 10.3.7.39		
>>>>>Inter-frequency measurement reporting criteria			Inter-frequency measurement reporting criteria 10.3.7.19		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>Inter-RAT					
>>>>Inter-RAT cell info	OP		Inter-RAT cell info list		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
			10.3.7.23		
>>>>Inter-RAT measurement quantity	OP		Inter-RAT measurement quantity 10.3.7.29		
>>>>Inter-RAT reporting quantity	OP		Inter-RAT reporting quantity 10.3.7.32		
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61		
>>>>Measurement validity	OP		Measurement validity 10.3.7.51		
>>>>CHOICE <i>report criteria</i>	OP				
>>>>>Inter-RAT measurement reporting criteria			Inter-RAT measurement reporting criteria 10.3.7.30		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>>Traffic Volume					
>>>>Traffic volume measurement Object	OP		Traffic volume measurement object 10.3.7.70		
>>>>Traffic volume measurement quantity	OP		Traffic volume measurement quantity 10.3.7.71		
>>>>Traffic volume reporting quantity	OP		Traffic volume reporting quantity 10.3.7.74		
>>>>Measurement validity	OP		Measurement validity 10.3.7.51		
>>>>CHOICE <i>report criteria</i>	OP				
>>>>>Traffic volume measurement reporting criteria			Traffic volume measurement reporting criteria 10.3.7.72		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>>Quality					
>>>>Quality measurement quantity	OP		Quality measurement quantity 10.3.7.59		
>>>>CHOICE <i>report criteria</i>	OP				
>>>>>Quality measurement reporting criteria			Quality measurement		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
			t reporting criteria 10.3.7.58		
>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>No reporting			NULL		
>>>UE internal					
>>>>UE internal measurement quantity	OP		UE internal measurement quantity 10.3.7.79		
>>>>UE internal reporting quantity	OP		UE internal reporting quantity 10.3.7.82		
>>>>CHOICE <i>report criteria</i>	OP				
>>>>>UE internal measurement reporting criteria			UE internal measurement reporting criteria 10.3.7.80		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>UE positioning					
>>>>LCS reporting quantity	OP		LCS reporting quantity 10.3.7.111		
>>>>CHOICE <i>report criteria</i>	OP				
>>>>>LCS reporting criteria			LCS reporting criteria 10.3.7.110		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting					
Radio Bearer Information Elements					
>Predefined configuration status information	OP		Predefined configuration status information 10.3.4.5a		
>Signalling RB information list	MP	1 to <maxSRBs etup>		For each signalling radio bearer	
>>Signalling RB information	MP		Signalling RB information to setup 10.3.4.24		
>RAB information list	OP	1 to <maxRABs etup>		Information for each RAB	
>>RAB information	MP		RAB information to setup 10.3.4.10		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
Transport Channel Information Elements					
Uplink transport channels					
>UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24		
>UL transport channel information list	OP	1 to <MaxTrCH >			
>>UL transport channel information	MP		Added or reconfigured UL TrCH information 10.3.5.2		
>CHOICE mode	OP				
>>FDD					
>>>CPCH set ID	OP		CPCH set ID 10.3.5.3		
>>>>Transport channel information for DRAC list	OP	1 to <MaxTrCH >			
>>>>DRAC static information	MP		DRAC static information 10.3.5.7		
>>TDD				(no data)	
Downlink transport channels					
>DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6		
>DL transport channel information list	OP	1 to <MaxTrCH >			
>>DL transport channel information	MP		Added or reconfigured DL TrCH information 10.3.5.1		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
PhyCH information elements					
>TPC Combination Info list	OP	1 to <maxRL>			
>>Primary CPICH info	MP		Primary CPICH info 10.3.6.60		
>>TPC combination index	MP		TPC combination index 10.3.6.85		
>Transmission gap pattern sequence	OP	1 to <maxTGP S>			REL-5
>>TGPSI	MP		TGPSI 10.3.6.82		REL-5
>> Current TGPS Status Flag	MP		Enumerated(active, inactive)	This flag indicates the current status of the Transmission Gap Pattern Sequence, whether it is active or inactive	REL-5
>>TGCFN	CV-Active		Integer (0..255)	Connection Frame Number of the latest past frame of the first pattern within the Transmission Gap Pattern Sequence.	REL-5
>>Transmission gap pattern sequence configuration parameters	OP				REL-5
>>>TGMP	MP		Enumerated(TDD measurement, FDD measurement, GSM carrier RSSI measurement, GSM Initial BSIC identification, GSM BSIC re-confirmation, Multi-carrier measurement)	Transmission Gap pattern sequence Measurement Purpose.	REL-5
>>>TGPRC	MP		Integer (1..511, Infinity)	The number of remaining transmission gap patterns within the Transmission Gap Pattern Sequence.	REL-5
>>>TGSN	MP		Integer (0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.	REL-5
>>>TGL1	MP		Integer(1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots	REL-5
>>>TGL2	MD		Integer (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1. The value of TGL2 shall be ignored if TGD is set to "undefined"	REL-5
>>>TGD	MP		Integer(15..269,	Transmission gap distance indicates the number of slots	REL-5

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
			undefined)	between starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to undefined.	
>>>TGPL1	MP		Integer (1..144)	The duration of transmission gap pattern 1.	REL-5
>>>RPP	MP		Enumerated (mode 0, mode 1).	Recovery Period Power control mode during the frame after the transmission gap within the compressed frame. Indicates whether normal PC mode or compressed PC mode is applied	REL-5
>>>ITP	MP		Enumerated (mode 0, mode 1).	Initial Transmit Power is the uplink power control method to be used to compute the initial transmit power after the compressed mode gap.	REL-5
>>>CHOICE <i>UL/DL mode</i>	MP				REL-5
>>>>DL only				Compressed mode used in DL only	REL-5
>>>>>Downlink compressed mode method	MP		Enumerated (puncturing, SF/2, higher layer scheduling)	Method for generating downlink compressed mode gap	REL-5
>>>>UL only				Compressed mode used in UL only	REL-5
>>>>>Uplink compressed mode method	MP		Enumerated (SF/2, higher layer scheduling)	Method for generating uplink compressed mode gap	REL-5
>>>>UL and DL				Compressed mode used in UL and DL	REL-5
>>>>>Downlink compressed mode method	MP		Enumerated (puncturing, SF/2, higher layer scheduling)	Method for generating downlink compressed mode gap	REL-5
>>>>>Uplink compressed mode method	MP		Enumerated (SF/2, higher layer scheduling)	Method for generating uplink compressed mode gap	REL-5
>>>Downlink frame type	MP		Enumerated (A, B)		REL-5
>>>DeltaSIR1	MP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)	REL-5
>>>DeltaSIRafter1	MP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE one frame after the frame containing the start of the first transmission gap in the transmission gap pattern.	REL-5
>>>DeltaSIR2	OP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE during the frame containing the start of	REL-5

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
				the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1.	
>>>DeltaSIRafter2	OP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1.	REL-5
>>>N Identify abort	CV-Initial BSIC		Integer(1..128)	Indicates the maximum number of repeats of patterns that the UE shall use to attempt to decode the unknown BSIC of the GSM cell in the initial BSIC identification procedure	REL-5
>>>T Reconfirm abort	CV-Re-confirm BSIC		Real(0.5..10.0 by step of 0.5)	Indicates the maximum time allowed for the re-confirmation of the BSIC of one GSM cell in the BSIC re-confirmation procedure. The time is given in steps of 0.5 seconds.	REL-5
>Scrambling Code Change List	CH-SF/2	1 to <maxRL>			REL-5
>>Primary CPICH info	MP		Primary CPICH info 10.3.6.60		REL-5
>>Scrambling code change	MP		Enumerated (code change, no code change)	Indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'.	REL-5
Other Information elements					
>Measurement report	OP		MEASUREMENT REPORT 10.2.1.9		
>Failure cause	OP		Failure cause 10.3.3.13	Diagnostics information related to an earlier SRNC Relocation request (see NOTE 2 in 14.12.0a)	
>Protocol error information	CV-ProtErr		Protocol error information 10.3.8.12		
MBMS joined information	OP			Included if the UE has joined one or more MBMS services	REL-6
>P-TMSI	OP		P-TMSI (GSM-MAP) 10.3.1.13	In case the UE is in PMM- Idle	REL-6

Multi Bound	Explanation
MaxNoOfMeas	Maximum number of active measurements, upper limit 16

Condition	Explanation
<i>Setup</i>	The IE is mandatory present when the IE Measurement command has the value "Setup", otherwise the IE is not needed.
<i>Ciphering</i>	The IE is mandatory present when the IE Ciphering Status has the value "started" and the ciphering counters need not be reinitialised, otherwise the IE is not needed.
<i>IP</i>	The IE is mandatory present when the IE Integrity protection status has the value "started" and the integrity protection counters need not be reinitialised, otherwise the IE is not needed.
<i>ProtErr</i>	This IE is mandatory present if the IE "Protocol error indicator" is included and has the value "TRUE". Otherwise it is not needed.
<i>SRB1</i>	The IE is mandatory present for RB1. Otherwise it is not needed.
<i>Active</i>	This IE is mandatory present when the value of the IE "Current TGPS Status Flag" is "Active" and not needed otherwise.
<i>Initial BSIC</i>	This IE is mandatory present when the value of the IE "TGMP" is set to "GSM Initial BSIC identification" and not needed otherwise.
<i>Re-confirm BSIC</i>	This IE is mandatory present when the value of the IE "TGMP" is set to "GSM BSIC re-confirmation" and not needed otherwise.
<i>SF/2</i>	The IE is mandatory present if the IE "Transmission Gap Pattern Sequence" is included and has the value "SF/2" as the compressed mode method, and already sent the UE the IE "Scrambling Code Change" for each RL in the active set. Otherwise the IE is not needed.

14.12.4.3 Void

14.12.4.4 RFC 3095 CONTEXT INFO

This RRC message is sent between network nodes in SRNS relocation. It is used to transfer the compressor and decompressor context information of the RFC 3095 protocol.

Direction: source RNC →target RNC

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
RFC 3095 context	MP	1 to <maxRBall RABs>			REL-5
>RB identity	MP		RB identity 10.3.4.16		REL-5
>RFC 3095 context list	MP	1 to <maxRFC3095-CID>			REL-5
>>Downlink RFC 3095 context	OP				REL-5
>>>Downlink RFC 3095 context identity	MP		Integer (0..16383)		REL-5
>>>DL_MODE	MP		Enumerated (u, o, r)	RFC 3095 mode in downlink before SRNS relocation.	REL-5
>>>REF_IR	MP		Octet string (1..3000)	The RTP IR header (see section 5.7.7 of RFC3095 for detailed format) corresponding to the oldest header in the compressor sliding window.	REL-5
>>>REF_TIME	OP		Integer (0..4294967295)	Arrival time (at the compressor) of REF_IR in milliseconds. See sections 4.5.4 and 6.5.1 of RFC3095.	REL-5
>>>CURR_TIME	OP		Integer (0..4294967295)	Current time in milliseconds. See section 6.5.1 of RFC3095.	REL-5
>>>SYN_OFFSET_ID	OP		Integer (0..65535)	Last synchronized offset of IP-ID. See section 4.5.5 and 6.5.1 of RFC3095 (termed "Offset_I"). It is related to the compression and decompression of IP-ID and is the synchronized offset between the IP-ID value and the SN value (in the same header) during the last SO state before the relocation procedure.	REL-5
>>>SYN_SLOPE_TS	OP		Integer (0..4294967295)	Last synchronized slope of TS. See sections 5.5.1.2 and 5.7 of RFC3095. In SO state, $TS(n) = TS(m) + (n-m) * SYN_SLOPE_TS$, where n and m are, the RTP SN of the current and	REL-5

				the reference packet, respectively. The unit of SYN_SLOPE_TS depends on whether TS is scaled before compression or not.	
>>>DYN_CHANGED	MP		Boolean	Information whether dynamic fields other than RTP SN, RTP TS and IP-ID have changed in the headers that are stored in the sliding window. Set to TRUE if changed and FALSE if not changed.	REL-5
>>Uplink RFC 3095 context	OP				REL-5
>>>Uplink RFC 3095 context identity	MP		Integer (0..16383)		REL-5
>>>UL_MODE	MP		Enumerated (u, o, r)	RFC 3095 mode in uplink	REL-5
>>>REF_IR	MP		Octet string (1..3000)	The RTP IR header (see section 5.7.7 of IETF RFC3095 for detailed format) corresponding to the last correctly decompressed header.	REL-5
>>>REF_TIME	OP		Integer (0..4294967295)	Arrival time (at the decompressor) of REF_IR in milliseconds. See sections 4.5.4 and 6.5.1 of RFC3095.	REL-5
>>>CURR_TIME	OP		Integer (0..4294967295)	Current time in milliseconds. See section 6.5.1 of RFC3095.	REL-5
>>>SYN_OFFSET_ID	OP		Integer (0..65535)	Last synchronized offset of IP-ID. See sections 4.5.5 and 6.5.1 of RFC3095 (termed"Offset_I") It is related to the compression and decompression of IP-ID and is the synchronized offset between the IP-ID value and the SN value (in the same header) during the last SO state before the relocation	REL-5

<p>>>>SYN_SLOPE_TS</p>	<p>OP</p>		<p>Integer (0..4294967 295)</p>	<p>procedure. Last synchronized slope of TS. See sections 5.5.1.2 and 5.7 of RFC3095. In SO state, $TS(n) = TS(m) + (n-m) * SYN_SLOPE_TS$, where n and m are, the RTP SN of the current and the reference packet, respectively. The unit of SYN_SLOPE_TS depends on whether TS is scaled before compression or not.</p>	<p>REL-5</p>
<p>>>>REF_SN_1</p>	<p>OP</p>		<p>Integer (0..65535)</p>	<p>Corresponds to the RTP Sequence Number of the predecessor of the latest RTP packet. This could be used to perform local repair of context by decompressor in U or O mode (see "ref - 1" in section 5.3.2.2.5 in IETF RFC3095 for further explanation).</p>	<p>REL-5</p>