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

RP-050322
agenda item 8.2.1.1

Source: **TSG-RAN WG2.**

Title: **Optimization of channelization code utilization for TDD (agenda item 8.2.1.1)**

The following CRs are in RP-050322:

Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Version-New	Doc-2nd-Level	Workitem
25.302	0154	-	Rel-6	Release 6 HS-DSCH operation without a DL DPCH for 3.84 Mcps TDD	F	6.3.0	6.4.0	R2-051180	RANimp-RABSE-CodeOptTDD
25.331	2556	-	Rel-6	Release 6 HS-DSCH operation without a DL DPCH for 3.84 Mcps TDD – Setting of Dhs-sync	F	6.5.0	6.6.0	R2-051179	RANimp-RABSE-CodeOPTTDD

3GPP TSG-RAN WG2 #46bis
Beijing, China
April 4 – 8, 2005

Tdoc ⌘R2-051180

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.302** **CR** **0154** ⌘ **rev** **-** ⌘ Current version: **6.3.0** ⌘

*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:	⌘	Release 6 HS-DSCH operation without a DL DPCH for 3.84 Mcps TDD
Source:	⌘	RAN WG2
Work item code:	⌘	RANimp-RABSE-CodeOptTDD
Date:	⌘	29/03/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one 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 one 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:	⌘	Changes were agreed to 25.221, 25.224 and 25.331 at RAN#27 to allow for HS-DSCH operation without a DL DPCH for 3.84 Mcps TDD. 25.302 should be aligned to reflect these changes..
Summary of change:	⌘	The downlink model for HS-DSCH is modified for 3.84 Mcps TDD to show the option of HS-DSCH operation without a DL DPCH.
Consequences if not approved:	⌘	25.302 will not be alligned with 23.221, 25.224 and 25.331.

Clauses affected:	⌘	6.2

Other specs affected: ⌘	Y	N		⌘
		X	Other core specifications	
		X	Test specifications	
		X	O&M Specifications	

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.

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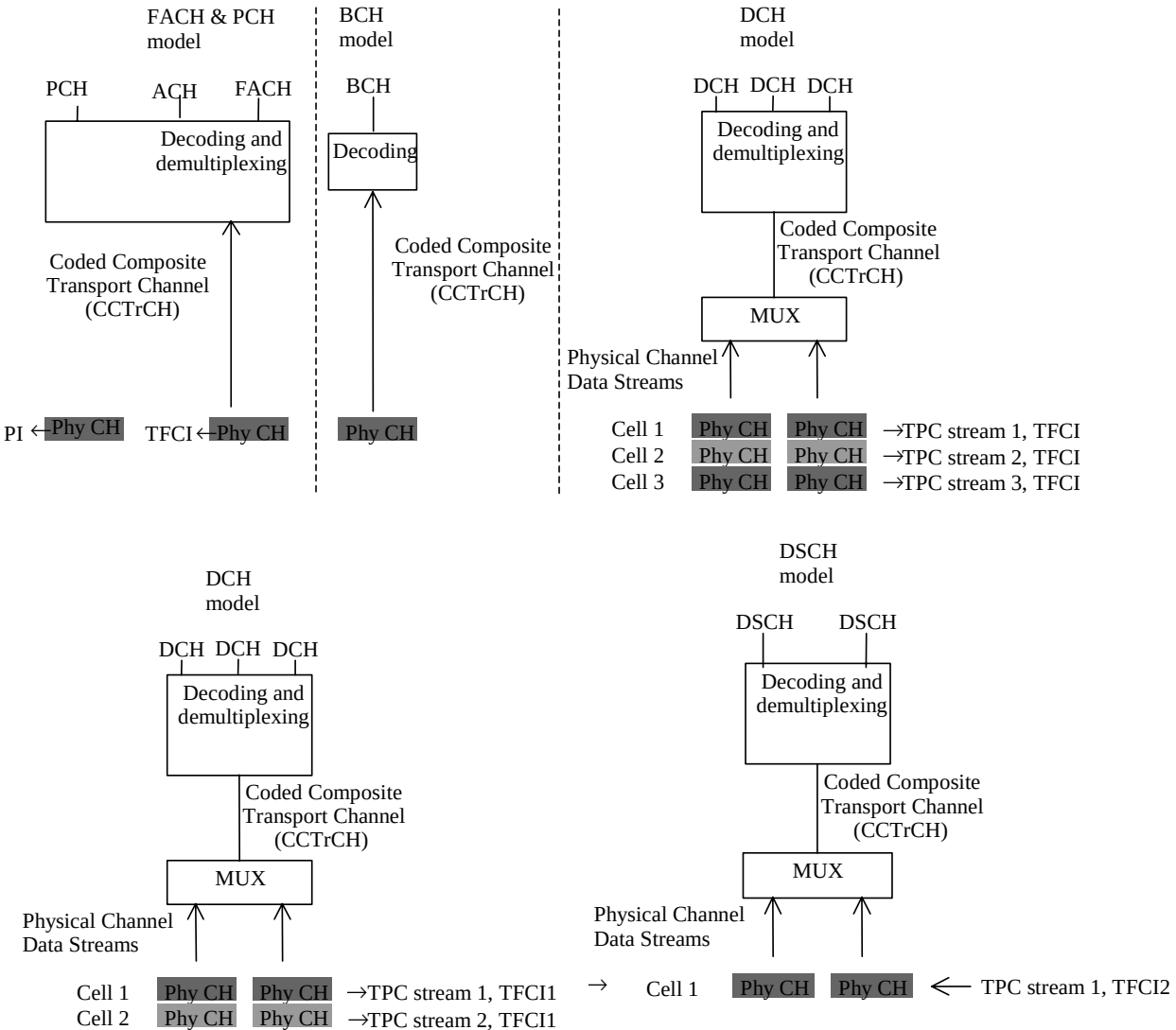
3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

---------- First Change ----------

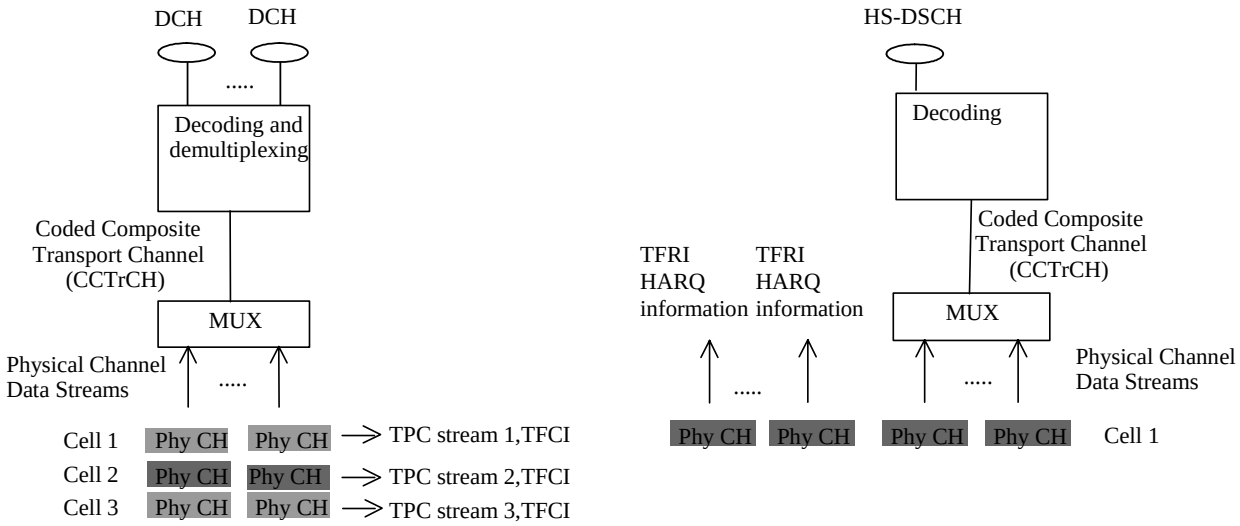
6.2 Downlink models

Figure 3 and figure 4 show the model of the UE's physical layer for the downlink in FDD and TDD mode, respectively. Note that there is a different model for each transport channel type.

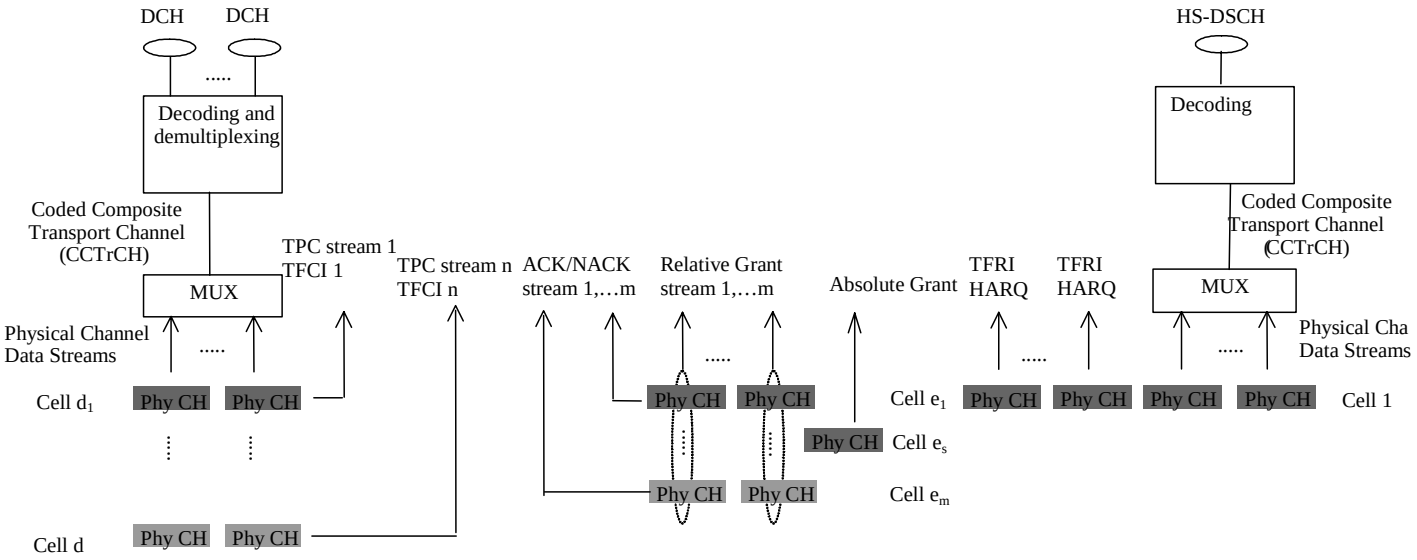


Note (1) – TFCI1 indicates the DCH specific TFC and TFCI2 indicates the DSCH specific TFC and also the PDSCH channelisation code(s)

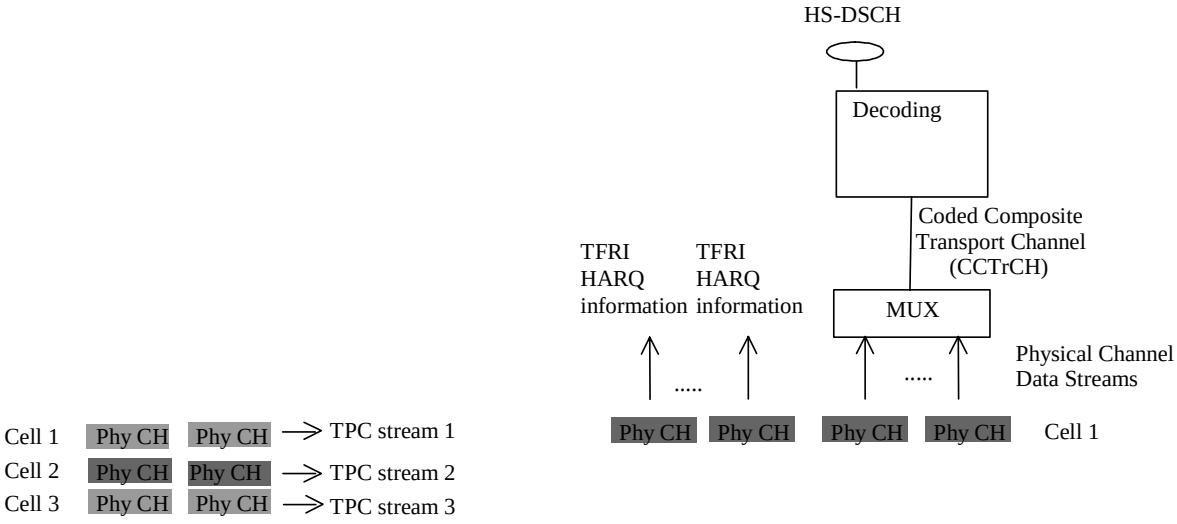
DCH model with HS-DSCH(s)



DCH and HS-DSCH model with E-DCH support



HS-DSCH(s) with F-DPCH model



HS-DSCH with F-DPCH model and E-DCH support

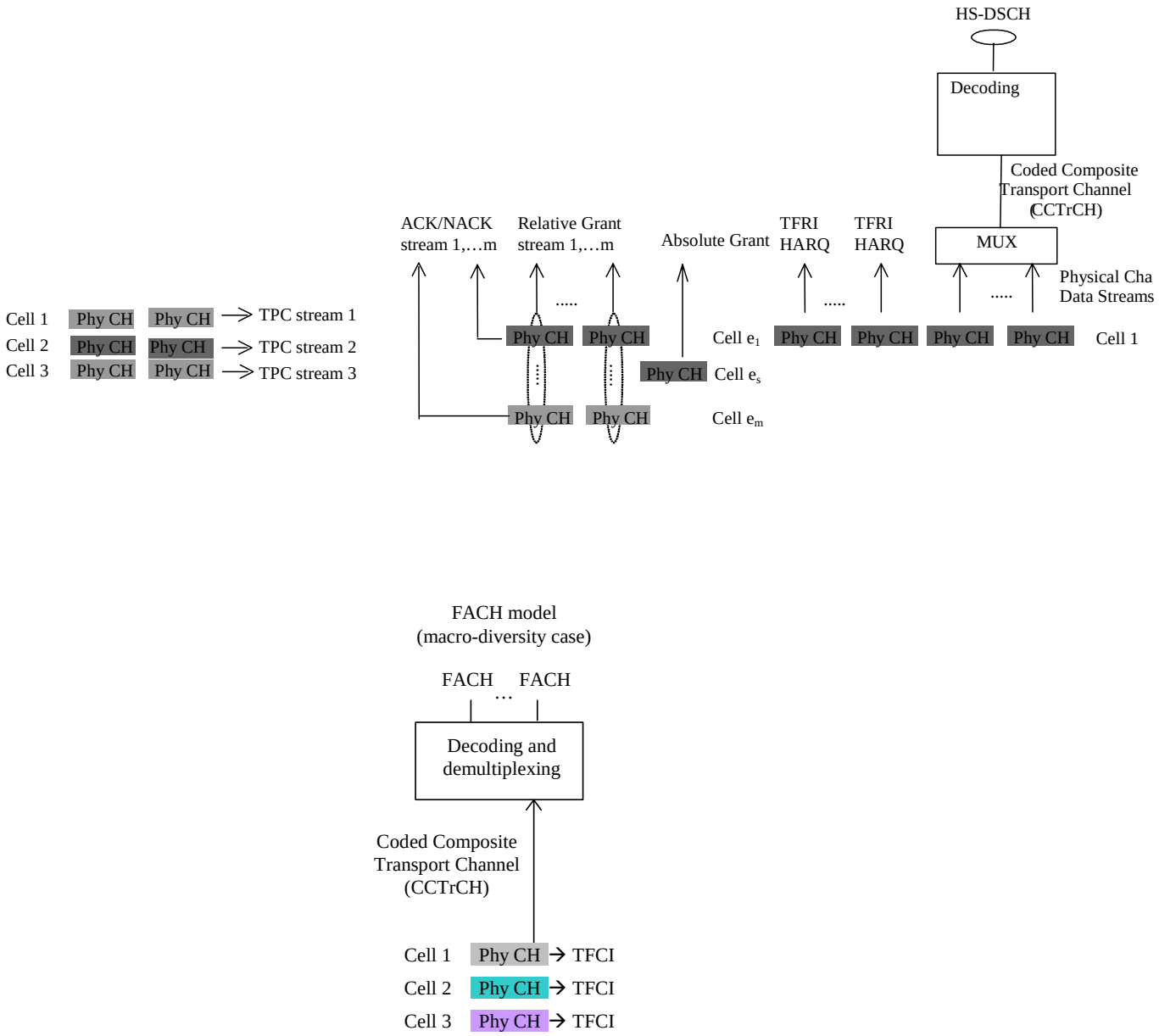
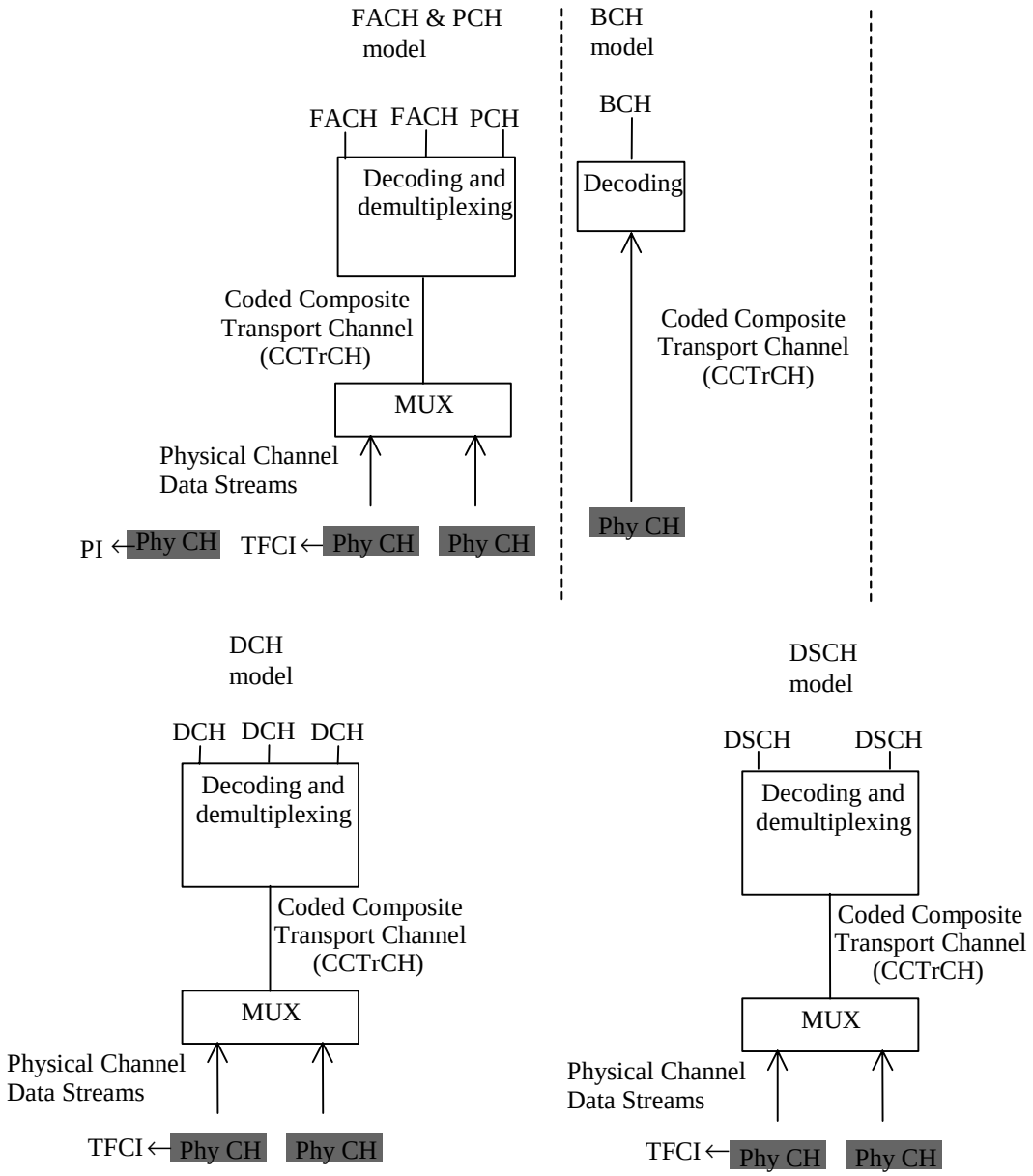
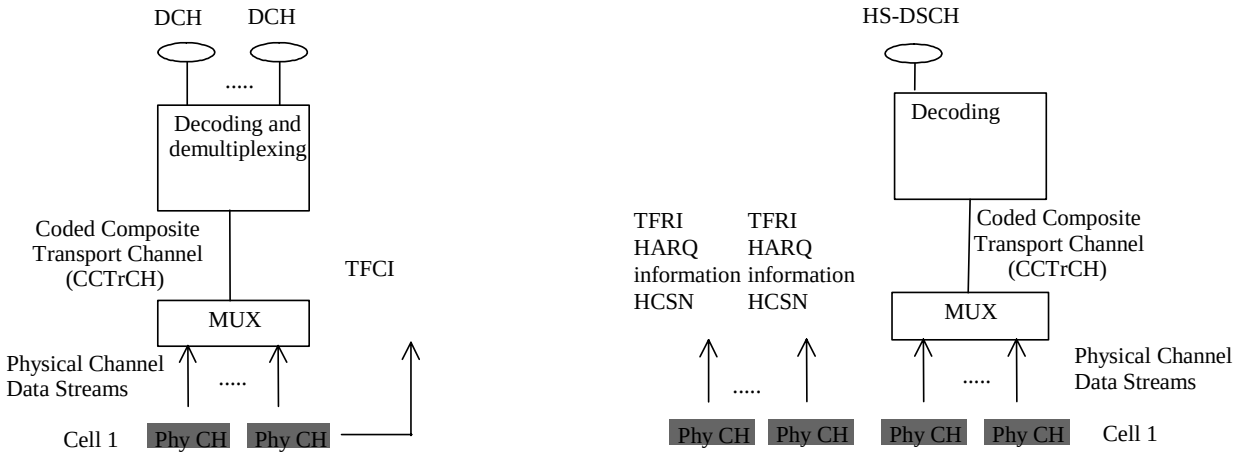


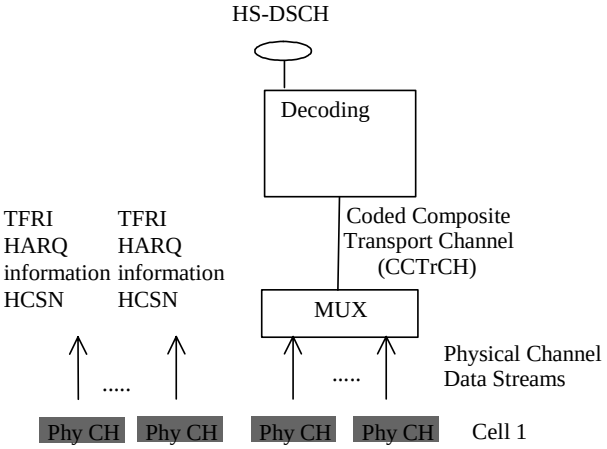
Figure 3: Model of the UE's physical layer - downlink FDD mode

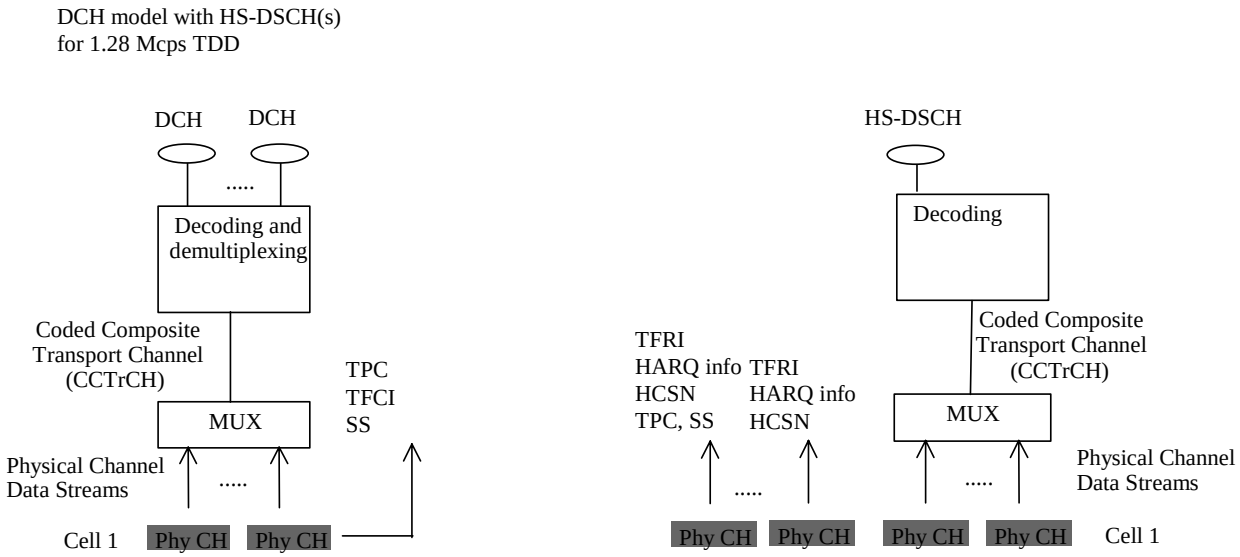

FACH & PCH
model
FACH FACH PCH
Decoding and
demultiplexing
Coded Composite
Transport Channel
(CCTrCH)
MUX
Physical Channel
Data Streams
PI ← Phy CH
TFCI ← Phy CH
Phy CH
BCH
model
BCH
Decoding
Coded Composite
Transport Channel
(CCTrCH)
Phy CH
DCH
model
DCH DCH DCH
Decoding and
demultiplexing
Coded Composite
Transport Channel
(CCTrCH)
MUX
Physical Channel
Data Streams
TFCI ← Phy CH
Phy CH
DSCH
model
DSCH DSCH
Decoding and
demultiplexing
Coded Composite
Transport Channel
(CCTrCH)
MUX
Physical Channel
Data Streams
TFCI ← Phy CH
Phy CH

HS-DSCH(s) for 3.84 Mcps
TDD with DL DPCH



HS-DSCH(s) for 3.84 Mcps
TDD without DL DPCH





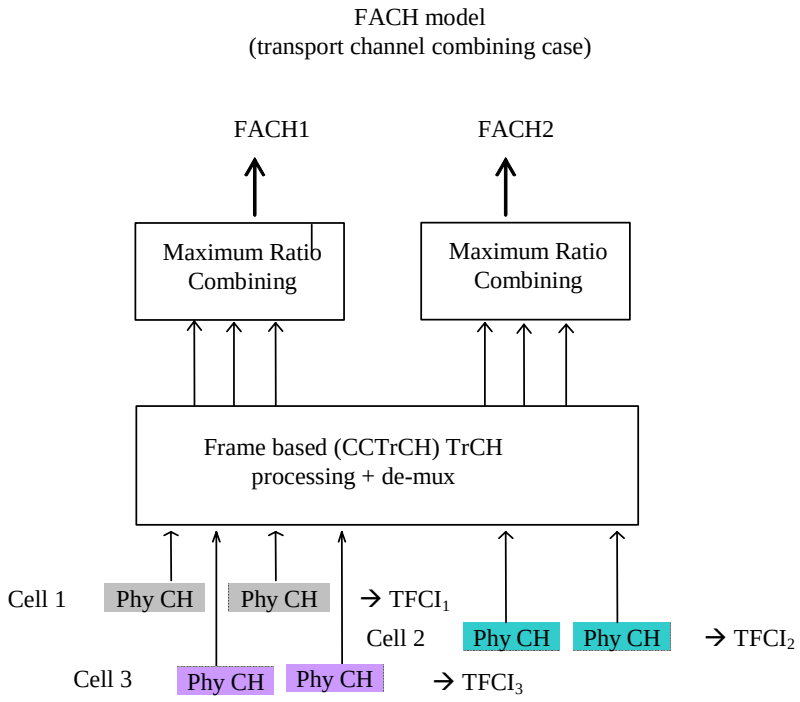


Figure 4: Model of the UE's physical layer – downlink TDD mode

For the DCH case, the mapping between DCHs and physical channel data streams works in the same way as for the uplink. Note however, that the number of DCHs, the coding and multiplexing etc. may be different in uplink and downlink.

In the FDD mode, the differences are mainly due to the soft and softer handover. Further, the pilot, TPC bits and TFCI are time multiplexed onto the same physical channel(s) as the DCHs, in case of HS-DSCH(s) without a DCH in the DL TPC bits are carried onto F-DPCH(s). Further, the definition of physical channel data stream is somewhat different from the uplink. In TDD mode the TFCI is time multiplexed onto the same physical channel(s) as the DCHs. The exact locations and coding of the TFCI are signalled by higher layers.

Note that it is logically one and the same physical data stream in the active set of cells, even though physically there is one stream for each cell. The same processing and multiplexing is done in each cell. The only difference between the cells is the actual codes, and these codes correspond to the same spreading factor.

The physical channels carrying the same physical channel data stream are combined in the UE receiver, excluding the pilot, and in some cases the TPC bits. TPC bits received on certain physical channels may be combined provided that UTRAN has informed the UE that the TPC information on these channels is identical.

A PCH and one or several FACH can be encoded and multiplexed together forming a CCTrCH. Similarly as in the DCH model there is one TFCI for each CCTrCH for indication of the transport formats used on each PCH and FACH. The PCH is associated with a separate physical channel carrying page indicators (PIs) which are used to trigger UE reception of the physical channel that carries PCH. A FACH or a PCH can also be individually mapped onto a separate physical channel. The BCH is always mapped onto one physical channel without any multiplexing with other transport channels, and there can only be one BCH TrCH and no other TrCH in a BCH CCTrCH.

For point-to-multipoint transmission [14], FACH can be distributed on a set of physical layer combinable CCTrCHs, i.e., for macro-diversity combining: soft combining (FDD and TDD) or transport channel combining (TDD only). The physical layer combinable CCTrCHs shall have the same TFC during the TTIs in which soft combining can be used. The physical layer combinable CCTrCHs need not have the same TFC during the TTIs in which transport channel combining can be used. The possibility of performing macro-diversity combining (either soft combining or transport channel combining) shall be signalled to the UE.

In the TDD mode a CCTrCh carrying PCH and one or several FACH can be multiplexed onto one or several physical channel data streams.

For each HS-DSCH TTI, each HS-SCCH carries HS-DSCH-related downlink signalling for one UE. The following information is carried on the HS-SCCH:

- Transport Format and Resource Indicator (TFRI);
- Hybrid-ARQ-related Information (HARQ information);
- UE Identity via a UE specific CRC;
- HS-SCCH Cyclic Sequence Number (HCSN) for TDD.

In addition, for the case of 1.28 Mcps TDD, the HS-SCCH also carries Transmit Power Control and Synchronisation Shift symbols.

In the case of 3.84 Mcps TDD, HS-DSCH operation is supported without an associated DL DPCH.

In FDD mode, the E-DCH active set can be identical or a subset of the DCH active set.

The E-DCH ACK/NACKs are transmitted by each cell of the E-DCH active set on a physical channel called E-HICH. The E-HICHs of the cells belonging to the same RLS (same MAC-e entity i.e. same Node B) shall have the same content and be combined by the UE. The set of cells transmitting identical ACK/NACK information is the same as the set of cells sending identical TPC bits (excluding the cells which are not in the E-DCH active set).

The E-DCH Absolute Grant is transmitted by a single cell, the Serving E-DCH cell (Cell e_s on figure 4) on a physical channel called E-AGCH. The relationship between the Serving E-DCH cell and the HS-DSCH Serving cell is FFS.

The E-DCH Relative Grants are transmitted by each cell of the E-DCH active set on a physical channel called E-RGCH. The E-RGCHs of the cells belonging to the same RLS shall have the same content and be combined by the UE. There is one Serving E-DCH RLS (containing the Serving E-DCH cell) and optionally one or several Non-serving E-DCH RLS.

---------- End of Changes ----------

3GPP TSG-RAN WG2#46bis
Beijing, China
April 4 – 8 2005

Tdoc ⌘R2-051179

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.331** **CR** **2556** ⌘ **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:	⌘	Release 6 HS-DSCH operation without a DL DPCH for 3.84 Mcps TDD – Setting of $D_{hs\text{-}sync}$
Source:	⌘	RAN WG2
Work item code:	⌘	RANimp-RABSE-CodeOPTTDD
Date:	⌘	23/02/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
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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:	⌘	CRs to 25.331, 25.224, 25.221 and 25.302 were agreed at RAN#27 to enable HS-DSCH operation without a DL DPCH (for 3.84 Mcps TDD). However, alignment with the agreed 25.224 CRs requires setting of $D_{hs\text{-}sync}$ by higher layer (i.e. by RRC) if radio link failure is to be correctly detected by the UE. A change to 25.331 is therefore needed to include $D_{hs\text{-}sync}$ in appropriate RRC messages.
Summary of change:	⌘	For 3.84 Mcps TDD, Section 8.5.25 is amended so that HS_DSCH_RECEPTION is only set to "TRUE" if a dedicated physical channel is allocated to the UE in the downlink **or** the UE has stored $D_{hs\text{-}sync}$. HS-SCCH Information is ammended to include $D_{hs\text{-}sync}$ for 3.84 Mcps TDD. All messages which are used to transfer HS-SCCH Information are updated so that they may include $D_{hs\text{-}sync}$
Consequences if not approved:	⌘	HS-DSCH without a DL DPCH cannot be correctly implemented.

Clauses affected:	⌘	8.5.25, 10.3.6.36a, 11.2

Other specs affected: ⌘	Y	N	
		X	Other core specifications
		X	Test specifications
		X	O&M Specifications

⌘

Other comments: ⌘ Impacts TDD 3.84 Mcps only

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---------- First Change ----------

8.5.25 Actions related to HS_DSCH_RECEPTION variable

The variable HS_DSCH_RECEPTION shall be set to "TRUE" only when all the following conditions are met:

1> for FDD and 1.28 Mcps TDD:

2> the UE is in CELL_DCH state.

1> for 3.84 Mcps TDD:

2> a dedicated physical channel is allocated to the UE in the uplink.

1> the variable H_RNTI is set;

1> the UE has a stored IE "HS-SCCH info";

1> the UE has a stored IE "HARQ info";

1> for FDD:

2> one of the radio links in the active set is configured as the serving HS-DSCH radio link;

2> the UE has stored the following IEs:

- IE "Measurement Feedback Info";
- IE "Uplink DPCH Power Control Info" including stored $\Delta_{ACK,}$ Δ_{NACK} and Ack-NACK Repetition factor.

1> for 3.84 Mcps TDD, the UE has stored the ~~following IE:~~

~~-~~IE "HS-PDSCH Timeslot Configuration" and either of the following conditions are met:

2> a dedicated physical channel is allocated to the UE in the downlink;

2> the UE has stored $D_{hs\text{-}sync}$.

1> for 1.28 Mcps TDD, the UE has stored the following IE:

- IE "HS-PDSCH Midamble Configuration".

1> there is at least one RB mapped to HS-DSCH;

1> at least for one of the RB's mapped to HS-DSCH, there is at least one MAC-hs queue (including the IE "MAC-d PDU size Info") configured for the concerning MAC-d flow;

NOTE: To enable or disable HS-DSCH reception, the UTRAN has the possibility to add/remove the concerning HS-DSCH related RB mapping options, add/remove the concerning MAC-d flows or, for FDD, add/remove the serving HS-DSCH radio link or, for TDD add/remove H-RNTI upon hard handover.

If any of the above conditions is not met and the variable HS_DSCH_RECEPTION is set to TRUE, the UE shall:

1> set the variable HS_DSCH_RECEPTION to FALSE;

1> stop any HS_SCCH reception procedures;

1> stop any HS-DSCH reception procedures;

1> clear the variable H_RNTI and remove any stored H-RNTI;

1> act as if the IE "MAC-hs reset indicator" is received and set to TRUE;

1> release all HARQ resources;

1> no long consider any radio link to be the HS-DSCH serving radio link;

1> for 3.84 Mcps TDD, if no downlink DPCH is assigned the UE shall clear the uplink DPCH configuration and initiate the Cell Update procedure according to subclause 8.3.1, cause "radio link failure".

NOTE: If configured for HS-DSCH and not explicitly indicated as being cleared, the UE will have still stored the IEs "HARQ info", "Added or Reconfigured MAC-d flow", "RB mapping Info" and "Downlink HS-PDSCH information".

Whenever the variable HS_DSCH_RECEPTION is set to TRUE, the UE shall:

1> perform HS_SCCH reception procedures according to the stored HS-SCCH configuration as stated in:

2> subclause 8.6.6.33 for the IE "HS-SCCH Info".

1> perform HS-DSCH reception procedures according to the stored HS-PDSCH configuration as stated in:

2> subclause 8.6.3.1b for the IE "H-RNTI";

2> subclause 8.6.5.6b for the IE "HARQ info";

2> subclause 8.6.6.34 for the IE "Measurement Feedback Info".

Whenever the variable HS_DSCH_RECEPTION is set to FALSE, the UE shall:

1> not perform HS_SCCH reception procedures;

1> not perform HS-DSCH reception procedures

---------- 2nd Change ----------

10.3.6.36a HS-SCCH Info

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
CHOICE mode	MP				REL-5
>FDD					REL-5
>>DL Scrambling Code	MD		Secondary scrambling code 10.3.6.74	DL Scrambling code to be applied for HS-DSCH and HS-SCCH. Default is same scrambling code as for the primary CPICH.	REL-5
>>HS-SCCH Channelisation Code Information	MP	1 to <maxHS-SCCHs>			REL-5
>>>HS-SCCH Channelisation Code	MP		Integer (0..127)		REL-5
>TDD					REL-5
>>CHOICE *TDD option*	MP				REL-5
>>>3.84 Mcps					REL-5
>>>> Ack-Nack Power Offset	MP		Integer (-7..8 by step of 1)	dB	REL-5
>>>> HS-SICH Power Control Info	MP		HS-SICH Power Control Info 10.3.6.36b		REL-5
>>>> $D_{hs\text{-}sync}$	OP		Integer (-20..+10)	Value in dB set to indicate the dB difference between the maximum allowed HS-SCCH physical channel transmit power [33] and the beacon reference power (it is one means of controlling the area of HS-DSCH operation within the cell).	
>>>>HS-SCCH Set Configuration	MP	1 to <maxHS-SCCHs>			REL-5
>>>>>Timeslot number	MP		Integer (0..14)		REL-5
>>>>>Channelisation code	MP		Enumerated ((16/1) ..(16/16))		REL-5
>>>>>Midamble Allocation mode	MP		Enumerated (Default midamble, Common midamble, UE specific midamble)	HS-SCCH always uses burst type 1.	REL-5
>>>>>Midamble configuration	MP		Integer (4, 8, 16)		REL-5
>>>>>Midamble Shift	CV-UE		Integer(0..15)		REL-5
>>>>>BLER target	MP		Real (-3.15..0 by step of 0.05)	Signalled value is Log10(HS-SCCH BLER quality target).	REL-5

				The UE shall use the BLER target signalled in the first occurrence of the HS-SCCH Set Configuration.	
>>>>>HS-SICH configuration					REL-5
>>>>>>Timeslot number	MP		Integer (0..14)		REL-5
>>>>>>Channelisation code	MP		Enumerated ((16/1) ..(16/16))		REL-5
>>>>>>Midamble Allocation mode	MP		Enumerated (Default midamble, UE specific midamble)	HS-SICH always uses burst type 1.	REL-5
>>>>>>Midamble configuration	MP		Integer (4, 8, 16)		REL-5
>>>>>>Midamble Shift	CV-*UE*		Integer (0..15)		REL-5
>>>1.28 Mcps					REL-5
>>>>HS-SCCH Set Configuration	MP	1 to <maxHS-SCCHs>			REL-5
>>>>>Timeslot number	MP		Integer (0..6)		REL-5
>>>>>First Channelisation code	MP		Enumerated ((16/1) ..(16/16))		REL-5
>>>>>Second Channelisation code	MP		Enumerated ((16/1) ..(16/16))		REL-5
>>>>>Midamble Allocation mode	MP		Enumerated (Default midamble, Common midamble, UE specific midamble)		REL-5
>>>>> Midamble Shift	CV-UE		Integer (0..15)		REL-5
>>>>>Midamble configuration	MP		Integer (2, 4, 6, 8, 10, 12, 14, 16)		REL-5
>>>>>BLER target	MP		Real (-3.15..0 by step of 0.05)	Signalled value is Log10(HS-SCCH BLER quality target). The UE shall use the BLER target signalled in the first occurrence of the HS-SCCH Set Configuration.	REL-5
>>>>>HS-SICH configuration					REL-5
>>>>>>Timeslot number	MP		Integer (0..6)		REL-5
>>>>>>Channelisation code	MP		Enumerated ((16/1) ..(16/16))		REL-5
>>>>>>Midamble Allocation mode	MP		Enumerated (Default midamble, UE specific midamble)		REL-5

>>>>>>Midamble configuration	MP		Integer (2, 4, 6, 8, 10, 12, 14, 16)		REL-5
>>>>>>Midamble Shift	CV-*UE*		Integer (0..15)		REL-5
>>>>>>Ack-Nack Power Offset	MP		Integer (-7..8 by step of 1)	dB.	REL-5
>>>>>>$PRX_{HS-SICH}$	MP		Integer (-120..-58 by step of 1)	dBm. Desired power level for HS-SICH.	REL-5
>>>>>>TPC step size	MP		Integer (1, 2, 3)	dB.	REL-5

Condition	Explanation
UE	This IE is mandatory present when the value of the IE "Midamble Allocation Mode" is "UE specific midamble" and not needed otherwise.

---------- 3rd Change ----------

```
-- **************************************************
--
-- 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,
                    v590NonCriticalExtenstions      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,
                    v590NonCriticalExtenstions      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,
        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,
                addReconfTransChDRAC-Info       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,
                addReconfTransChDRAC-Info       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,
                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-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                             SEQUENCE {
                dhs-sync                        DHS-Sync                    OPTIONAL
            }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,
        dhs-sync                        DHS-Sync                            OPTIONAL,
    -- MBMS IEs
        mbms-PL-ServiceRestrictInfo     MBMS-PL-ServiceRestrictInfo-r6      OPTIONAL
}
```

---------- 4th Change ----------

```
-- **************************************************
--
-- PHYSICAL CHANNEL RECONFIGURATION
--
-- **************************************************

PhysicalChannelReconfiguration ::= CHOICE {
    r3                              SEQUENCE {
        physicalChannelReconfiguration-r3
                                        PhysicalChannelReconfiguration-r3-IEs,
        v3a0NonCriticalExtensions           SEQUENCE {
            physicalChannelReconfiguration-v3a0ext      PhysicalChannelReconfiguration-v3a0ext,
            laterNonCriticalExtensions      SEQUENCE {
                -- Container for additional R99 extensions
                physicalChannelReconfiguration-r3-add-ext           BIT STRING      OPTIONAL,
                v4b0NonCriticalExtenstions          SEQUENCE {
                    physicalChannelReconfiguration-v4b0ext
                                                PhysicalChannelReconfiguration-v4b0ext-IEs,
                    v590NonCriticalExtenstions          SEQUENCE {
                        physicalChannelReconfiguration-v590ext
                                                    PhysicalChannelReconfiguration-v590ext-IEs,
                        v6xyNonCriticalExtensions       SEQUENCE {
                            physicalChannelReconfiguration-v6xyext
                                                    PhysicalChannelReconfiguration-v6xyext-IEs,
                            nonCriticalExtensions                   SEQUENCE {} OPTIONAL
                        }   OPTIONAL
                    }   OPTIONAL
                }   OPTIONAL
            }   OPTIONAL
        }   OPTIONAL
    },
    later-than-r3                   SEQUENCE {
        rrc-TransactionIdentifier       RRC-TransactionIdentifier,
            criticalExtensions              CHOICE {
            r4                              SEQUENCE {
                physicalChannelReconfiguration-r4
                                                PhysicalChannelReconfiguration-r4-IEs,
                v4d0NonCriticalExtensions           SEQUENCE {
                    -- Container for adding non critical extensions after freezing REL-5
                    physicalChannelReconfiguration-r4-add-ext       BIT STRING      OPTIONAL,
                    v590NonCriticalExtenstions          SEQUENCE {
                        physicalChannelReconfiguration-v590ext
                                                PhysicalChannelReconfiguration-v590ext-IEs,
                        v6xyNonCriticalExtensions       SEQUENCE {
                            physicalChannelReconfiguration-v6xyext
                                                PhysicalChannelReconfiguration-v6xyext-IEs,
                            nonCriticalExtensions           SEQUENCE {}     OPTIONAL
                        }   OPTIONAL
                    }   OPTIONAL
                }   OPTIONAL
            },
            criticalExtensions              CHOICE {
                r5                              SEQUENCE {
                    physicalChannelReconfiguration-r5
                                                PhysicalChannelReconfiguration-r5-IEs,
                    -- Container for adding non critical extensions after freezing REL-6
                    physicalChannelReconfiguration-r5-add-ext       BIT STRING      OPTIONAL,
                    v6xyNonCriticalExtensions       SEQUENCE {
                        physicalChannelReconfiguration-v6xyext
                                                PhysicalChannelReconfiguration-v6xyext-IEs,
                        nonCriticalExtensions           SEQUENCE {}     OPTIONAL
```

```
                }   OPTIONAL
            },
            criticalExtensions              CHOICE {
                r6                              SEQUENCE {
                    physicalChannelReconfiguration-r6
                                                    PhysicalChannelReconfiguration-r6-IEs,
                    -- Container for adding non critical extensions after freezing REL-7
                    physicalChannelReconfiguration-r6-add-ext       BIT STRING      OPTIONAL,
                    nonCriticalExtensions           SEQUENCE {}     OPTIONAL
                },
                criticalExtensions              SEQUENCE {}
            }
        }
    }
}

PhysicalChannelReconfiguration-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
        dl-CounterSynchronisationInfo   DL-CounterSynchronisationInfo       OPTIONAL,
    -- Physical channel IEs
        frequencyInfo                   FrequencyInfo                       OPTIONAL,
        maxAllowedUL-TX-Power           MaxAllowedUL-TX-Power               OPTIONAL,
        -- TABULAR: UL-ChannelRequirementWithCPCH-SetID contains the choice
        -- between UL DPCH info, CPCH SET info and CPCH set ID.
        ul-ChannelRequirement           UL-ChannelRequirementWithCPCH-SetID     OPTIONAL,
        modeSpecificInfo                CHOICE {
            fdd                             SEQUENCE {
                dl-PDSCH-Information            DL-PDSCH-Information        OPTIONAL
            },
            tdd                             NULL
        },
        dl-CommonInformation            DL-CommonInformation                OPTIONAL,
        dl-InformationPerRL-List        DL-InformationPerRL-List            OPTIONAL
}

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

PhysicalChannelReconfiguration-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
}

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

PhysicalChannelReconfiguration-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,
    -- Physical channel IEs
        frequencyInfo                   FrequencyInfo                       OPTIONAL,
        maxAllowedUL-TX-Power           MaxAllowedUL-TX-Power               OPTIONAL,
        -- TABULAR: UL-ChannelRequirementWithCPCH-SetID-r4 contains the choice
        -- between UL DPCH info, CPCH SET info and CPCH set ID.
        ul-ChannelRequirement           UL-ChannelRequirementWithCPCH-SetID-r4  OPTIONAL,
        modeSpecificInfo                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
}

PhysicalChannelReconfiguration-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,
    -- Physical channel IEs
        frequencyInfo                   FrequencyInfo                       OPTIONAL,
        maxAllowedUL-TX-Power           MaxAllowedUL-TX-Power               OPTIONAL,
        -- TABULAR: UL-ChannelRequirementWithCPCH-SetID-r5 contains the choice
        -- between UL DPCH info, CPCH SET info and CPCH set ID.
        ul-ChannelRequirement           UL-ChannelRequirementWithCPCH-SetID-r5  OPTIONAL,
        modeSpecificInfo                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
}

PhysicalChannelReconfiguration-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,
    -- Physical channel IEs
        frequencyInfo                   FrequencyInfo                       OPTIONAL,
        maxAllowedUL-TX-Power           MaxAllowedUL-TX-Power               OPTIONAL,
        -- TABULAR: UL-ChannelRequirementWithCPCH-SetID-r6 contains the choice
        -- between UL DPCH info, CPCH SET info and CPCH set ID.
        ul-ChannelRequirement           UL-ChannelRequirementWithCPCH-SetID-r6  OPTIONAL,
        ul-EDCH-Information              UL-EDCH-Information-r6              OPTIONAL,
```

```
        modeSpecificInfo                CHOICE {
            fdd                             SEQUENCE {
                dl-PDSCH-Information            DL-PDSCH-Information        OPTIONAL
            },
            tdd                             SEQUENCE {
                dhs-sync                        DHS-Sync                    OPTIONAL
            }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
}

PhysicalChannelReconfiguration-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,
        dhs-sync                        DHS-Sync                            OPTIONAL,
    -- MBMS IEs
        mbms-PL-ServiceRestrictInfo     MBMS-PL-ServiceRestrictInfo-r6      OPTIONAL
}
```

---------- 5th Change ----------

```
-- **************************************************
--
-- 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-v3a0ext  RadioBearerReconfiguration-v3a0ext,
            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
        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,
                addReconfTransChDRAC-Info       DRAC-StaticInformationList  OPTIONAL
            },
            tdd                             NULL
        }                                                                   OPTIONAL,
        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,
                addReconfTransChDRAC-Info       DRAC-StaticInformationList  OPTIONAL
            },
            tdd                             NULL
        }                                                                   OPTIONAL,
        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-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,
                    addReconfTransChDRAC-Info       DRAC-StaticInformationList  OPTIONAL
                },
                tdd                             NULL
            }                                                                   OPTIONAL,
            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,
        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
```

```
                }                                                                   OPTIONAL,
                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                             NULLSEQUENCE {
            dhs-sync                            DHS-Sync                    OPTIONAL
            }
        },
        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,
        dhs-sync                        DHS-Sync                            OPTIONAL,
    -- MBMS IEs
        mbms-PL-ServiceRestrictInfo     MBMS-PL-ServiceRestrictInfo-r6      OPTIONAL
}
```

---------- 6th Change ----------

```
-- **************************************************
--
-- 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
    },
    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
            },
            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,
                    v6xyNonCriticalExtensions       SEQUENCE {
                        radioBearerRelease-v6xyext      RadioBearerRelease-v6xyext-IEs,
                        nonCriticalExtensions           SEQUENCE {}     OPTIONAL
                    }   OPTIONAL
                },
                criticalExtensions              CHOICE {
                    r6                              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,
                addReconfTransChDRAC-Info       DRAC-StaticInformationList  OPTIONAL
            },
            tdd                             NULL
        }                                                                   OPTIONAL,
        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,
        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,
                addReconfTransChDRAC-Info       DRAC-StaticInformationList  OPTIONAL
            },
            tdd                             NULL
        }                                                                   OPTIONAL,
        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,
                addReconfTransChDRAC-Info       DRAC-StaticInformationList      OPTIONAL
            },
            tdd                             NULL
        }                                                                       OPTIONAL,
        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,
        dhs-sync                        DHS-Sync                                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,
        ul-AddReconfTransChInfoList     UL-AddReconfTransChInfoList-r6      OPTIONAL,
        modeSpecificTransChInfo         CHOICE {
            fdd                             SEQUENCE {
                cpch-SetID                      CPCH-SetID                  OPTIONAL,
                addReconfTransChDRAC-Info       DRAC-StaticInformationList  OPTIONAL
            },
            tdd                             NULL
        }                                                                   OPTIONAL,
        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                             SEQUENCE {
                dhs-sync                        DHS-Sync                    OPTIONAL
            }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
}
```

---------- 7th Change ----------

```
-- **************************************************
--
-- 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
    },
    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
        },
        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,
                v6xyNonCriticalExtensions       SEQUENCE {
                    radioBearerSetup-v6xyext        RadioBearerSetup-v6xyext-IEs,
                    nonCriticalExtensions           SEQUENCE {}     OPTIONAL
                }   OPTIONAL
            },
            criticalExtensions              CHOICE {
                r6                              SEQUENCE {
                    radioBearerSetup-r6             RadioBearerSetup-r6-IEs,
                    -- Container for adding non critical extensions after freezing REL-7
                    radioBearerSetup-r6-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,
                addReconfTransChDRAC-Info       DRAC-StaticInformationList  OPTIONAL
            },
            tdd                             NULL
        }                                                                   OPTIONAL,
        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
}

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,
                addReconfTransChDRAC-Info       DRAC-StaticInformationList  OPTIONAL
            },
            tdd                             NULL
        }                                                                   OPTIONAL,
        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,
    -- 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,
                addReconfTransChDRAC-Info       DRAC-StaticInformationList  OPTIONAL
            },
            tdd                             NULL
        }                                                                   OPTIONAL,
        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,
        dhs-sync                        DHS-Sync                            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                             NULL
        }                                                                   OPTIONAL,
        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                             NULLSEQUENCE {
                dhs-sync                        DHS-Sync                    OPTIONAL
            }
        },
        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
}
```

---------- 8th Change ----------

```
-- **************************************************
--
-- 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
        }       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
            },
            criticalExtensions              CHOICE {
                r5                              SEQUENCE {
                    transportChannelReconfiguration-r5
                                                    TransportChannelReconfiguration-r5-IEs,
                    -- Container for adding non critical extensions after freezing REL-6
                    transportChannelReconfiguration-r5-add-ext      BIT STRING      OPTIONAL,
                    v6xyNonCriticalExtensions       SEQUENCE {
                        transportChannelReconfiguration-v6xyext
                                                        TransportChannelReconfiguration-v6xyext-IEs,
```

```
                        nonCriticalExtensions           SEQUENCE {}     OPTIONAL
                    }   OPTIONAL
                },
                criticalExtensions              CHOICE {
                    r6                              SEQUENCE {
                        transportChannelReconfiguration-r6
                                                        TransportChannelReconfiguration-r6-IEs,
                        -- Container for adding non critical extensions after freezing REL-7
                        transportChannelReconfiguration-r6-add-ext      BIT STRING      OPTIONAL,
                        nonCriticalExtensions           SEQUENCE {}     OPTIONAL
                    },
                    criticalExtensions              SEQUENCE {}
                }
            }
        }
    }
}

TransportChannelReconfiguration-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
        dl-CounterSynchronisationInfo   DL-CounterSynchronisationInfo       OPTIONAL,
    -- Transport channel IEs
        ul-CommonTransChInfo            UL-CommonTransChInfo                OPTIONAL,
        ul-AddReconfTransChInfoList     UL-AddReconfTransChInfoList         OPTIONAL,
        modeSpecificTransChInfo         CHOICE {
            fdd                             SEQUENCE {
                cpch-SetID                      CPCH-SetID                  OPTIONAL,
                addReconfTransChDRAC-Info       DRAC-StaticInformationList  OPTIONAL
            },
            tdd                             NULL
        }                                                                   OPTIONAL,
        dl-CommonTransChInfo            DL-CommonTransChInfo                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
}

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,
                addReconfTransChDRAC-Info       DRAC-StaticInformationList  OPTIONAL
            },
            tdd                             NULL
        }                                                                   OPTIONAL,
        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,
                addReconfTransChDRAC-Info       DRAC-StaticInformationList  OPTIONAL
            },
            tdd                             NULL
        }                                                                   OPTIONAL,
        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,
        dhs-sync                        DHS-Sync                            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
        }                                                                   OPTIONAL,
        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                             SEQUENCE {
                dhs-sync                        DHS-Sync                    OPTIONAL
            }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
}
```

---------- 9th Change ----------

```
-- **************************************************
--
--     PHYSICAL CHANNEL INFORMATION ELEMENTS (10.3.6)
--
-- **************************************************

ACK-NACK-repetitionFactor ::=       INTEGER(1..4)

AC-To-ASC-Mapping ::=               INTEGER (0..7)
```

```
AC-To-ASC-MappingTable ::=          SEQUENCE (SIZE (maxASCmap)) OF
                                        AC-To-ASC-Mapping

AccessServiceClass-FDD ::=          SEQUENCE {
    availableSignatureStartIndex        INTEGER (0..15),
    availableSignatureEndIndex          INTEGER (0..15),

    assignedSubChannelNumber            BIT STRING {
                                            b3(0),
                                            b2(1),
                                            b1(2),
                                            b0(3)
                                            }    (SIZE(4))
}

AccessServiceClass-TDD ::=          SEQUENCE {
    channelisationCodeIndices           BIT STRING  {
                                            chCodeIndex7(0),
                                            chCodeIndex6(1),
                                            chCodeIndex5(2),
                                            chCodeIndex4(3),
                                            chCodeIndex3(4),
                                            chCodeIndex2(5),
                                            chCodeIndex1(6),
                                            chCodeIndex0(7)
                                            } (SIZE(8))             OPTIONAL,
    subchannelSize                      CHOICE {
        size1                               NULL,
        size2                               SEQUENCE {
            -- subch0 means bitstring '01' in the tabular, subch1 means bitsring '10'
            subchannels                         ENUMERATED  { subch0, subch1 }  OPTIONAL
        },
        size4                               SEQUENCE {
            subchannels                         BIT STRING  {
                                                    subCh3(0),
                                                    subCh2(1),
                                                    subCh1(2),
                                                    subCh0(3)
                                                    } (SIZE(4))     OPTIONAL
        },
        size8                               SEQUENCE {
            subchannels                         BIT STRING  {
                                                    subCh7(0),
                                                    subCh6(1),
                                                    subCh5(2),
                                                    subCh4(3),
                                                    subCh3(4),
                                                    subCh2(5),
                                                    subCh1(6),
                                                    subCh0(7)
                                                    } (SIZE(8))     OPTIONAL
        }
    }
}

AccessServiceClass-TDD-LCR-r4 ::=   SEQUENCE {
    availableSYNC-UlCodesIndics         BIT STRING {
                                            sulCodeIndex7(0),
                                            sulCodeIndex6(1),
                                            sulCodeIndex5(2),
                                            sulCodeIndex4(3),
                                            sulCodeIndex3(4),
                                            sulCodeIndex2(5),
                                            sulCodeIndex1(6),
                                            sulCodeIndex0(7)
                                            } (SIZE(8))               OPTIONAL,
    subchannelSize                      CHOICE {
        size1                               NULL,
        size2                               SEQUENCE {
            -- subch0 means bitstring '01' in the tabular, subch1 means bitsring '10'.
            subchannels                         ENUMERATED  { subch0, subch1 }  OPTIONAL
        },
        size4                               SEQUENCE {
            subchannels                         BIT STRING  {
                                                    subCh3(0),
                                                    subCh2(1),
                                                    subCh1(2),
                                                    subCh0(3)
                                                    } (SIZE(4))         OPTIONAL
```

```
        },
        size8                               SEQUENCE {
            subchannels                         BIT STRING  {
                                                    subCh7(0),
                                                    subCh6(1),
                                                    subCh5(2),
                                                    subCh4(3),
                                                    subCh3(4),
                                                    subCh2(5),
                                                    subCh1(6),
                                                    subCh0(7)
                                                    } (SIZE(8))         OPTIONAL
        }
    }

}

AICH-Info ::=                       SEQUENCE {
    channelisationCode256               ChannelisationCode256,
    sttd-Indicator                      BOOLEAN,
    aich-TransmissionTiming             AICH-TransmissionTiming
}

AICH-PowerOffset ::=                INTEGER (-22..5)

AICH-TransmissionTiming ::=         ENUMERATED {
                                        e0, e1 }

AllocationPeriodInfo ::=            SEQUENCE {
    allocationActivationTime            INTEGER (0..255),
    allocationDuration                  INTEGER (1..256)
}

-- Actual value Alpha = IE value * 0.125
Alpha ::=                           INTEGER (0..8)

AP-AICH-ChannelisationCode ::=      INTEGER (0..255)

AP-PreambleScramblingCode ::=       INTEGER (0..79)

AP-Signature ::=                    INTEGER (0..15)

AP-Signature-VCAM ::=               SEQUENCE {
    ap-Signature                        AP-Signature,
    availableAP-SubchannelList          AvailableAP-SubchannelList OPTIONAL
}

AP-Subchannel ::=                   INTEGER (0..11)

ASCSetting-FDD ::=                      SEQUENCE {
    -- TABULAR: accessServiceClass-FDD is MD in tabular description
    -- Default value is previous ASC
    -- If this is the first ASC, the default value is all available signature and sub-channels
    accessServiceClass-FDD                  AccessServiceClass-FDD  OPTIONAL
}

ASCSetting-TDD ::=                      SEQUENCE {
    -- TABULAR: accessServiceClass-TDD is MD in tabular description
    -- Default value is previous ASC
    -- If this is the first ASC, the default value is all available channelisation codes and
    -- all available sub-channels with subchannelSize=size1.
    accessServiceClass-TDD                  AccessServiceClass-TDD  OPTIONAL
}

ASCSetting-TDD-LCR-r4 ::=                       SEQUENCE {
    -- TABULAR: accessServiceClass-TDD-LCR is MD in tabular description
    -- Default value is previous ASC
    -- If this is the first ASC, the default value is all available SYNC_UL codes and
    -- all available sub-channels with subchannelSize=size1.
    accessServiceClass-TDD-LCR                  AccessServiceClass-TDD-LCR-r4   OPTIONAL
}

AvailableAP-Signature-VCAMList ::=  SEQUENCE (SIZE (1..maxPCPCH-APsig)) OF
                                        AP-Signature-VCAM

AvailableAP-SignatureList ::=       SEQUENCE (SIZE (1..maxPCPCH-APsig)) OF
                                        AP-Signature

AvailableAP-SubchannelList ::=      SEQUENCE (SIZE (1..maxPCPCH-APsubCh)) OF
                                        AP-Subchannel
```

```
AvailableMinimumSF-ListVCAM ::=     SEQUENCE (SIZE (1..maxPCPCH-SF)) OF
                                        AvailableMinimumSF-VCAM

AvailableMinimumSF-VCAM ::=         SEQUENCE {
    minimumSpreadingFactor              MinimumSpreadingFactor,
    nf-Max                              NF-Max,
    maxAvailablePCPCH-Number            MaxAvailablePCPCH-Number,
    availableAP-Signature-VCAMList      AvailableAP-Signature-VCAMList
}

AvailableSignatures ::=         BIT STRING {
                                    signature15(0),
                                    signature14(1),
                                    signature13(2),
                                    signature12(3),
                                    signature11(4),
                                    signature10(5),
                                    signature9(6),
                                    signature8(7),
                                    signature7(8),
                                    signature6(9),
                                    signature5(10),
                                    signature4(11),
                                    signature3(12),
                                    signature2(13),
                                    signature1(14),
                                    signature0(15)
                                    }    (SIZE(16))

AvailableSubChannelNumbers ::=      BIT STRING {
                                        subCh11(0),
                                        subCh10(1),
                                        subCh9(2),
                                        subCh8(3),
                                        subCh7(4),
                                        subCh6(5),
                                        subCh5(6),
                                        subCh4(7),
                                        subCh3(8),
                                        subCh2(9),
                                        subCh1(10),
                                        subCh0(11)
                                        }    (SIZE(12))

BEACON-PL-Est ::=                   ENUMERATED { true }

BurstType ::=                       ENUMERATED {
                                        type1, type2 }

-- Actual value Bler-Target = IE value * 0.05
Bler-Target ::=                     INTEGER (-63..0)

CCTrCH-PowerControlInfo ::=         SEQUENCE {
    tfcs-Identity                       TFCS-Identity                       OPTIONAL,
    ul-DPCH-PowerControlInfo            UL-DPCH-PowerControlInfo
}

CCTrCH-PowerControlInfo-r4 ::=      SEQUENCE {
    tfcs-Identity                       TFCS-Identity                       OPTIONAL,
    ul-DPCH-PowerControlInfo            UL-DPCH-PowerControlInfo-r4
}

CCTrCH-PowerControlInfo-r5 ::=      SEQUENCE {
    tfcs-Identity                       TFCS-Identity                       OPTIONAL,
    ul-DPCH-PowerControlInfo            UL-DPCH-PowerControlInfo-r5
}

CD-AccessSlotSubchannel ::=         INTEGER (0..11)

CD-AccessSlotSubchannelList ::=     SEQUENCE (SIZE (1..maxPCPCH-CDsubCh)) OF
                                        CD-AccessSlotSubchannel

CD-CA-ICH-ChannelisationCode ::=    INTEGER (0..255)

CD-PreambleScramblingCode ::=       INTEGER (0..79)

CD-SignatureCode ::=                INTEGER (0..15)

CD-SignatureCodeList ::=            SEQUENCE (SIZE (1..maxPCPCH-CDsig)) OF
```

```
                                        CD-SignatureCode

CellAndChannelIdentity ::=          SEQUENCE {
    -- burstType may be set to either value and should be ignored by the receiver for 1.28 Mcps TDD.
    burstType                           BurstType,
    midambleShift                       MidambleShiftLong,
    timeslot                            TimeslotNumber,
    cellParametersID                    CellParametersID
    }

CellParametersID ::=                INTEGER (0..127)

Cfntargetsfnframeoffset ::=             INTEGER(0..255)

ChannelAssignmentActive ::=         CHOICE {
    notActive                           NULL,
    isActive                            AvailableMinimumSF-ListVCAM
}

ChannelisationCode256 ::=           INTEGER (0..255)

ChannelReqParamsForUCSM ::=         SEQUENCE {
    availableAP-SignatureList           AvailableAP-SignatureList,
    availableAP-SubchannelList          AvailableAP-SubchannelList          OPTIONAL
}

ClosedLoopTimingAdjMode ::=         ENUMERATED {
                                        slot1, slot2 }

CodeNumberDSCH ::=                  INTEGER (0..255)

CodeRange ::=                       SEQUENCE {
    pdsch-CodeMapList                   PDSCH-CodeMapList
}

CodeWordSet ::=                     ENUMERATED {
                                        longCWS,
                                        mediumCWS,
                                        shortCWS,
                                        ssdtOff }

CommonTimeslotInfo ::=              SEQUENCE {
    -- TABULAR: secondInterleavingMode is MD, but since it can be encoded in a single
    -- bit it is not defined as OPTIONAL.
    secondInterleavingMode              SecondInterleavingMode,
    tfci-Coding                         TFCI-Coding                         OPTIONAL,
    puncturingLimit                     PuncturingLimit,
    repetitionPeriodAndLength           RepetitionPeriodAndLength           OPTIONAL
}

CommonTimeslotInfoSCCPCH ::=        SEQUENCE {
    -- TABULAR: secondInterleavingMode is MD, but since it can be encoded in a single
    -- bit it is not defined as OPTIONAL.
    secondInterleavingMode              SecondInterleavingMode,
    tfci-Coding                         TFCI-Coding                         OPTIONAL,
    puncturingLimit                     PuncturingLimit,
    repetitionPeriodLengthAndOffset     RepetitionPeriodLengthAndOffset     OPTIONAL
}

ConstantValue ::=                   INTEGER (-35..-10)

ConstantValueTdd ::=                INTEGER (-35..10)

CPCH-PersistenceLevels ::=          SEQUENCE {
    cpch-SetID                          CPCH-SetID,
    dynamicPersistenceLevelTF-List      DynamicPersistenceLevelTF-List
}

CPCH-PersistenceLevelsList ::=      SEQUENCE (SIZE (1..maxCPCHsets)) OF
                                        CPCH-PersistenceLevels

CPCH-SetInfo ::=                    SEQUENCE {
    cpch-SetID                          CPCH-SetID,
    transportFormatSet                  TransportFormatSet,
    tfcs                                TFCS,
    ap-PreambleScramblingCode           AP-PreambleScramblingCode,
    ap-AICH-ChannelisationCode          AP-AICH-ChannelisationCode,
    cd-PreambleScramblingCode           CD-PreambleScramblingCode,
    cd-CA-ICH-ChannelisationCode        CD-CA-ICH-ChannelisationCode,
    cd-AccessSlotSubchannelList         CD-AccessSlotSubchannelList         OPTIONAL,
```

```
    cd-SignatureCodeList                CD-SignatureCodeList                OPTIONAL,
    deltaPp-m                           DeltaPp-m,
    ul-DPCCH-SlotFormat                 UL-DPCCH-SlotFormat,
    n-StartMessage                      N-StartMessage,
    n-EOT                               N-EOT,
    -- TABULAR: VCAM info has been nested inside ChannelAssignmentActive,
    -- which in turn is mandatory since it's only a binary choice.
    channelAssignmentActive             ChannelAssignmentActive,
    cpch-StatusIndicationMode           CPCH-StatusIndicationMode,
    pcpch-ChannelInfoList               PCPCH-ChannelInfoList
}

CPCH-SetInfoList ::=                SEQUENCE (SIZE (1..maxCPCHsets)) OF
                                        CPCH-SetInfo

CPCH-StatusIndicationMode ::=       ENUMERATED {
                                        pa-mode,
                                        pamsf-mode }

CQI-RepetitionFactor ::=            INTEGER(1..4)

CSICH-PowerOffset ::=               INTEGER (-10..5)

-- DefaultDPCH-OffsetValueFDD and DefaultDPCH-OffsetValueTDD corresponds to
-- IE "Default DPCH Offset Value" depending on the mode.
-- Actual value DefaultDPCH-OffsetValueFDD = IE value * 512
DefaultDPCH-OffsetValueFDD ::=      INTEGER (0..599)

DefaultDPCH-OffsetValueTDD ::=      INTEGER (0..7)

DeltaPp-m ::=                       INTEGER (-10..10)

DeltaCQI ::=                        INTEGER (0..8)

DeltaNACK ::=                       INTEGER (0..8)

DeltaACK ::=                        INTEGER (0..8)

-- Actual value DeltaSIR = IE value * 0.1
DeltaSIR ::=                        INTEGER (0..30)

DHS-Sync ::=                        INTEGER (-20..10)

DL-CCTrCh ::=                       SEQUENCE {
    tfcs-ID                             TFCS-IdentityPlain                  DEFAULT 1,
    timeInfo                            TimeInfo,
    commonTimeslotInfo                  CommonTimeslotInfo                  OPTIONAL,
    dl-CCTrCH-TimeslotsCodes            DownlinkTimeslotsCodes              OPTIONAL,
    ul-CCTrChTPCList                    UL-CCTrChTPCList                    OPTIONAL
}

DL-CCTrCh-r4 ::=                    SEQUENCE {
    tfcs-ID                             TFCS-IdentityPlain                  DEFAULT 1,
    timeInfo                            TimeInfo,
    commonTimeslotInfo                  CommonTimeslotInfo                  OPTIONAL,
    tddOption                           CHOICE {
        tdd384                              SEQUENCE {
            dl-CCTrCH-TimeslotsCodes            DownlinkTimeslotsCodes  OPTIONAL
        },
        tdd128                              SEQUENCE {
            dl-CCTrCH-TimeslotsCodes            DownlinkTimeslotsCodes-LCR-r4   OPTIONAL
        }
    },
    ul-CCTrChTPCList                    UL-CCTrChTPCList        OPTIONAL
}

DL-CCTrChList ::=                   SEQUENCE (SIZE (1..maxCCTrCH)) OF
                                        DL-CCTrCh

DL-CCTrChList-r4 ::=                SEQUENCE (SIZE (1..maxCCTrCH)) OF
                                        DL-CCTrCh-r4

DL-CCTrChListToRemove ::=           SEQUENCE (SIZE (1..maxCCTrCH)) OF
                                        TFCS-IdentityPlain

DL-CCTrChTPCList ::=                SEQUENCE (SIZE (0..maxCCTrCH)) OF
                                            TFCS-Identity

DL-ChannelisationCode ::=           SEQUENCE {
    secondaryScramblingCode             SecondaryScramblingCode             OPTIONAL,
```

```
    sf-AndCodeNumber                    SF512-AndCodeNumber,
    scramblingCodeChange                ScramblingCodeChange                OPTIONAL
}

DL-ChannelisationCodeList ::=       SEQUENCE (SIZE (1..maxDPCH-DLchan)) OF
                                        DL-ChannelisationCode

DL-CommonInformation ::=            SEQUENCE {
    dl-DPCH-InfoCommon                  DL-DPCH-InfoCommon          OPTIONAL,
    modeSpecificInfo                    CHOICE {
        fdd                                 SEQUENCE {
            defaultDPCH-OffsetValue             DefaultDPCH-OffsetValueFDD  OPTIONAL,
            dpch-CompressedModeInfo             DPCH-CompressedModeInfo     OPTIONAL,
            tx-DiversityMode                    TX-DiversityMode            OPTIONAL,
            ssdt-Information                    SSDT-Information            OPTIONAL
        },
        tdd                                 SEQUENCE {
            defaultDPCH-OffsetValue             DefaultDPCH-OffsetValueTDD  OPTIONAL
        }
    }
}

DL-CommonInformation-r4 ::=         SEQUENCE {
    dl-DPCH-InfoCommon                  DL-DPCH-InfoCommon-r4       OPTIONAL,
    modeSpecificInfo                    CHOICE {
        fdd                                 SEQUENCE {
            defaultDPCH-OffsetValue             DefaultDPCH-OffsetValueFDD  OPTIONAL,
            dpch-CompressedModeInfo             DPCH-CompressedModeInfo     OPTIONAL,
            tx-DiversityMode                    TX-DiversityMode            OPTIONAL,
            ssdt-Information                    SSDT-Information-r4         OPTIONAL
        },
        tdd                                 SEQUENCE {
            tddOption                           CHOICE {
                tdd384                              NULL,
                tdd128                              SEQUENCE {
                    tstd-Indicator                      BOOLEAN
                }
            },
            defaultDPCH-OffsetValue             DefaultDPCH-OffsetValueTDD  OPTIONAL
        }
    }
}


DL-CommonInformation-r5 ::=         SEQUENCE {
    dl-DPCH-InfoCommon                  DL-DPCH-InfoCommon-r4           OPTIONAL,
    modeSpecificInfo                    CHOICE {
        fdd                                 SEQUENCE {
            defaultDPCH-OffsetValue             DefaultDPCH-OffsetValueFDD  OPTIONAL,
            dpch-CompressedModeInfo             DPCH-CompressedModeInfo     OPTIONAL,
            tx-DiversityMode                    TX-DiversityMode            OPTIONAL,
            ssdt-Information                    SSDT-Information-r4         OPTIONAL
        },
        tdd                                 SEQUENCE {
            tddOption                           CHOICE {
                tdd384                              NULL,
                tdd128                              SEQUENCE {
                    tstd-Indicator                      BOOLEAN
                }
            },
            defaultDPCH-OffsetValue             DefaultDPCH-OffsetValueTDD  OPTIONAL
        }
    },
    mac-hsResetIndicator                ENUMERATED { true }         OPTIONAL
}

DL-CommonInformation-r6 ::=         SEQUENCE {
    dl-dpchInfoCommon                   CHOICE {
        dl-DPCH-InfoCommon                  DL-DPCH-InfoCommon-r4,
        dl-FDPCH-InfoCommon                 DL-FDPCH-InfoCommon-r6
    }                                                                       OPTIONAL,
    modeSpecificInfo                    CHOICE {
        fdd                                 SEQUENCE {
            defaultDPCH-OffsetValue             DefaultDPCH-OffsetValueFDD  OPTIONAL,
            dpch-CompressedModeInfo             DPCH-CompressedModeInfo     OPTIONAL,
            tx-DiversityMode                    TX-DiversityMode            OPTIONAL,
            ssdt-Information                    SSDT-Information-r4         OPTIONAL
        },
        tdd                                 SEQUENCE {
            tddOption                           CHOICE {
```

```
                tdd384                              NULL,
                tdd128                              SEQUENCE {
                    tstd-Indicator                      BOOLEAN
                }
            },
            defaultDPCH-OffsetValue             DefaultDPCH-OffsetValueTDD  OPTIONAL
        }
    },
    mac-hsResetIndicator                ENUMERATED { true }         OPTIONAL
}

DL-CommonInformationPost ::=        SEQUENCE {
    dl-DPCH-InfoCommon                  DL-DPCH-InfoCommonPost
}

DL-CommonInformationPredef ::=      SEQUENCE {
    dl-DPCH-InfoCommon                  DL-DPCH-InfoCommonPredef    OPTIONAL
}

DL-CompressedModeMethod ::=         ENUMERATED {
                                        puncturing, sf-2,
                                        higherLayerScheduling }

DL-DPCH-InfoCommon ::=              SEQUENCE {
    cfnHandling                         CHOICE {
        maintain                            NULL,
        initialise                          SEQUENCE {
            cfntargetsfnframeoffset             Cfntargetsfnframeoffset             OPTIONAL
        }
    },
    modeSpecificInfo                    CHOICE {
        fdd                                 SEQUENCE {
            dl-DPCH-PowerControlInfo            DL-DPCH-PowerControlInfo            OPTIONAL,
            powerOffsetPilot-pdpdch             PowerOffsetPilot-pdpdch,
            dl-rate-matching-restriction        Dl-rate-matching-restriction        OPTIONAL,
            -- TABULAR: The number of pilot bits is nested inside the spreading factor.
            spreadingFactorAndPilot             SF512-AndPilot,
            positionFixedOrFlexible             PositionFixedOrFlexible,
            tfci-Existence                      BOOLEAN
        },
        tdd                                 SEQUENCE {
            dl-DPCH-PowerControlInfo            DL-DPCH-PowerControlInfo            OPTIONAL
        }
    }
}

DL-DPCH-InfoCommon-r4 ::=           SEQUENCE {
    cfnHandling                         CHOICE {
        maintain                            NULL,
        initialise                          SEQUENCE {
            cfntargetsfnframeoffset             Cfntargetsfnframeoffset             OPTIONAL
        }
    },
    modeSpecificInfo                    CHOICE {
        fdd                                 SEQUENCE {
            dl-DPCH-PowerControlInfo            DL-DPCH-PowerControlInfo            OPTIONAL,
            powerOffsetPilot-pdpdch             PowerOffsetPilot-pdpdch,
            dl-rate-matching-restriction        Dl-rate-matching-restriction        OPTIONAL,
            -- TABULAR: The number of pilot bits is nested inside the spreading factor.
            spreadingFactorAndPilot             SF512-AndPilot,
            positionFixedOrFlexible             PositionFixedOrFlexible,
            tfci-Existence                      BOOLEAN
        },
        tdd                                 SEQUENCE {
            dl-DPCH-PowerControlInfo            DL-DPCH-PowerControlInfo            OPTIONAL
        }
    },
-- The IE mac-d-HFN-initial-value should be absent in the RRCConnectionSetup-r4-IEs or
-- RRCConnectionSetup-r5-IEs or HandoverToUTRANCommand-r4-IEs or HandoverToUTRANCommand-r5-IEs and
-- if the IE is included, the general error handling for conditional IEs applies.
    mac-d-HFN-initial-value             MAC-d-HFN-initial-value             OPTIONAL

}


DL-DPCH-InfoCommonPost ::=          SEQUENCE {
    dl-DPCH-PowerControlInfo            DL-DPCH-PowerControlInfo                OPTIONAL
}

DL-DPCH-InfoCommonPredef ::=        SEQUENCE {
```

```
    modeSpecificInfo                    CHOICE {
        fdd                                 SEQUENCE {
            -- TABULAR: The number of pilot bits is nested inside the spreading factor.
            spreadingFactorAndPilot             SF512-AndPilot,
            positionFixedOrFlexible             PositionFixedOrFlexible,
            tfci-Existence                      BOOLEAN
        },
        tdd                                 SEQUENCE {
            commonTimeslotInfo                  CommonTimeslotInfo
        }
    }
}

DL-DPCH-InfoPerRL ::=               CHOICE {
    fdd                                 SEQUENCE {
        pCPICH-UsageForChannelEst           PCPICH-UsageForChannelEst,
        dpch-FrameOffset                    DPCH-FrameOffset,
        secondaryCPICH-Info                 SecondaryCPICH-Info             OPTIONAL,
        dl-ChannelisationCodeList           DL-ChannelisationCodeList,
        tpc-CombinationIndex                TPC-CombinationIndex,
        ssdt-CellIdentity                   SSDT-CellIdentity               OPTIONAL,
        closedLoopTimingAdjMode             ClosedLoopTimingAdjMode         OPTIONAL
    },
    tdd                                 SEQUENCE {
        dl-CCTrChListToEstablish            DL-CCTrChList                   OPTIONAL,
        dl-CCTrChListToRemove               DL-CCTrChListToRemove           OPTIONAL
    }
}

DL-DPCH-InfoPerRL-r4 ::=            CHOICE {
    fdd                                 SEQUENCE {
        pCPICH-UsageForChannelEst           PCPICH-UsageForChannelEst,
        dpch-FrameOffset                    DPCH-FrameOffset,
        secondaryCPICH-Info                 SecondaryCPICH-Info             OPTIONAL,
        dl-ChannelisationCodeList           DL-ChannelisationCodeList,
        tpc-CombinationIndex                TPC-CombinationIndex,
        ssdt-CellIdentity                   SSDT-CellIdentity               OPTIONAL,
        closedLoopTimingAdjMode             ClosedLoopTimingAdjMode         OPTIONAL
    },
    tdd                                 SEQUENCE {
        dl-CCTrChListToEstablish            DL-CCTrChList-r4                OPTIONAL,
        dl-CCTrChListToRemove               DL-CCTrChListToRemove           OPTIONAL
    }
}

DL-DPCH-InfoPerRL-r5 ::=            CHOICE {
    fdd                                 SEQUENCE {
        pCPICH-UsageForChannelEst           PCPICH-UsageForChannelEst,
        dpch-FrameOffset                    DPCH-FrameOffset,
        secondaryCPICH-Info                 SecondaryCPICH-Info             OPTIONAL,
        dl-ChannelisationCodeList           DL-ChannelisationCodeList,
        tpc-CombinationIndex                TPC-CombinationIndex,
        powerOffsetTPC-pdpdch               PowerOffsetTPC-pdpdch           OPTIONAL,
        ssdt-CellIdentity                   SSDT-CellIdentity               OPTIONAL,
        closedLoopTimingAdjMode             ClosedLoopTimingAdjMode         OPTIONAL
    },
    tdd                                 SEQUENCE {
        dl-CCTrChListToEstablish            DL-CCTrChList-r4                OPTIONAL,
        dl-CCTrChListToRemove               DL-CCTrChListToRemove           OPTIONAL
    }
}

DL-FDPCH-InfoPerRL-r6 ::=           SEQUENCE {
    pCPICH-UsageForChannelEst           PCPICH-UsageForChannelEst,
    fdpch-FrameOffset                   DPCH-FrameOffset,
    secondaryCPICH-Info                 SecondaryCPICH-Info             OPTIONAL,
    secondaryScramblingCode             SecondaryScramblingCode         OPTIONAL,
    dl-ChannelisationCode               INTEGER (0..255),
    tpc-CombinationIndex                TPC-CombinationIndex
}

DL-DPCH-InfoPerRL-PostFDD ::=                               SEQUENCE {
        pCPICH-UsageForChannelEst               PCPICH-UsageForChannelEst,
        dl-ChannelisationCode                   DL-ChannelisationCode,
        tpc-CombinationIndex                    TPC-CombinationIndex
}

DL-DPCH-InfoPerRL-PostTDD ::=               SEQUENCE {
    dl-DPCH-TimeslotsCodes                      DownlinkTimeslotsCodes
}
```

```
DL-DPCH-InfoPerRL-PostTDD-LCR-r4 ::=        SEQUENCE {
    dl-CCTrCH-TimeslotsCodes                    DownlinkTimeslotsCodes-LCR-r4
}

DL-DPCH-PowerControlInfo ::=            SEQUENCE {
    modeSpecificInfo                        CHOICE {
        fdd                                     SEQUENCE {
            dpc-Mode                                DPC-Mode
        },
        tdd                                     SEQUENCE {
            tpc-StepSizeTDD                         TPC-StepSizeTDD         OPTIONAL
        }
    }
}

DL-FDPCH-InfoCommon-r6 ::=          SEQUENCE {
    cfnHandling                             CHOICE {
        maintain                                NULL,
        initialise                              SEQUENCE {
            cfntargetsfnframeoffset                 Cfntargetsfnframeoffset             OPTIONAL
        }
    },
    dl-FDPCH-PowerControlInfo           DL-DPCH-PowerControlInfo            OPTIONAL,
-- Actual value dl-FDPCH-TPCcommandErrorRate = IE value * 0.005
-- dl-FDPCH-TPCcommandErrorRate values 21..32 are spare and shall not be used in this version of
-- the protocol
    dl-FDPCH-TPCcommandErrorRate        INTEGER (1..32)     OPTIONAL
}

DL-FrameType ::=                    ENUMERATED {
                                        dl-FrameTypeA, dl-FrameTypeB }

DL-HSPDSCH-Information ::=          SEQUENCE {
    hs-scch-Info                    HS-SCCH-Info    OPTIONAL,
    measurement-feedback-Info       Measurement-Feedback-Info   OPTIONAL,
    modeSpecificInfo                CHOICE {
    tdd                             CHOICE{
            tdd384                          SEQUENCE {
                dl-HSPDSCH-TS-Configuration DL-HSPDSCH-TS-Configuration     OPTIONAL
            },
            tdd128                          SEQUENCE {
                hs-PDSCH-Midamble-Configuration-TDD128
                        HS-PDSCH-Midamble-Configuration-TDD128              OPTIONAL
            }
        },
        fdd                         NULL
    }
}

-- The IE 'DL-HSPDSCH-TS-Configuration' applies to tdd-384 REL-5 onward
DL-HSPDSCH-TS-Configuration ::=     SEQUENCE (SIZE (1..maxTS-1)) OF
                                        SEQUENCE {
    timeslot                            TimeslotNumber,
    midambleShiftAndBurstType           MidambleShiftAndBurstType-DL
}

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,
    sccpch-InfoforFACH                  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,
```

```
    sccpch-InfoforFACH                  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,
    sccpch-InfoforFACH                  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,
    sccpch-InfoforFACH                  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-dpchInfo                         CHOICE {
        dl-DPCH-InfoPerRL                   DL-DPCH-InfoPerRL-r5,
        dl-FDPCH-InfoPerRL                  DL-FDPCH-InfoPerRL-r6
    }                                                                       OPTIONAL,
    sccpch-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
}

DL-InformationPerRL-List ::=        SEQUENCE (SIZE (1..maxRL)) OF
                                        DL-InformationPerRL

DL-InformationPerRL-List-r4 ::=     SEQUENCE (SIZE (1..maxRL)) OF
                                        DL-InformationPerRL-r4

DL-InformationPerRL-List-r5 ::=     SEQUENCE (SIZE (1..maxRL)) OF
                                        DL-InformationPerRL-r5

DL-InformationPerRL-List-r6 ::=     SEQUENCE (SIZE (1..maxRL)) OF
                                        DL-InformationPerRL-r6

DL-InformationPerRL-List-r5bis ::=      SEQUENCE (SIZE (1..maxRL)) OF
                                            DL-InformationPerRL-r5bis

DL-InformationPerRL-ListPostFDD ::= SEQUENCE (SIZE (1..maxRL)) OF
                                        DL-InformationPerRL-PostFDD

DL-InformationPerRL-PostFDD ::=     SEQUENCE {
            primaryCPICH-Info               PrimaryCPICH-Info,
    dl-DPCH-InfoPerRL                   DL-DPCH-InfoPerRL-PostFDD
}

DL-InformationPerRL-PostTDD ::=     SEQUENCE {
    primaryCCPCH-Info                   PrimaryCCPCH-InfoPost,
```

```
    dl-DPCH-InfoPerRL                   DL-DPCH-InfoPerRL-PostTDD
}

DL-InformationPerRL-PostTDD-LCR-r4 ::=  SEQUENCE {
    primaryCCPCH-Info                   PrimaryCCPCH-InfoPostTDD-LCR-r4,
    dl-DPCH-InfoPerRL                   DL-DPCH-InfoPerRL-PostTDD-LCR-r4
}

DL-PDSCH-Information ::=            SEQUENCE {
    pdsch-SHO-DCH-Info                  PDSCH-SHO-DCH-Info                  OPTIONAL,
    pdsch-CodeMapping                   PDSCH-CodeMapping                   OPTIONAL
}

Dl-rate-matching-restriction ::=    SEQUENCE {
    restrictedTrCH-InfoList             RestrictedTrCH-InfoList             OPTIONAL
}

DL-TPC-PowerOffsetPerRL ::=     SEQUENCE {
        powerOffsetTPC-pdpdch               PowerOffsetTPC-pdpdch           OPTIONAL
}

-- NOTE: The radio links in the following list have a one-to-one mapping with the
-- radio links in the message.
DL-TPC-PowerOffsetPerRL-List ::=    SEQUENCE (SIZE (1..maxRL)) OF
                                        DL-TPC-PowerOffsetPerRL

DL-TS-ChannelisationCode ::=        ENUMERATED {
                                        cc16-1, cc16-2, cc16-3, cc16-4,
                                        cc16-5, cc16-6, cc16-7, cc16-8,
                                        cc16-9, cc16-10, cc16-11, cc16-12,
                                        cc16-13, cc16-14, cc16-15, cc16-16 }

DL-TS-ChannelisationCodesShort ::=  SEQUENCE {
    codesRepresentation                 CHOICE {
        consecutive                         SEQUENCE {
            firstChannelisationCode             DL-TS-ChannelisationCode,
            lastChannelisationCode              DL-TS-ChannelisationCode
        },
        bitmap                              BIT STRING {
                                                chCode16-SF16(0),
                                                chCode15-SF16(1),
                                                chCode14-SF16(2),
                                                chCode13-SF16(3),
                                                chCode12-SF16(4),
                                                chCode11-SF16(5),
                                                chCode10-SF16(6),
                                                chCode9-SF16(7),
                                                chCode8-SF16(8),
                                                chCode7-SF16(9),
                                                chCode6-SF16(10),
                                                chCode5-SF16(11),
                                                chCode4-SF16(12),
                                                chCode3-SF16(13),
                                                chCode2-SF16(14),
                                                chCode1-SF16(15)
                                                }   (SIZE (16))
    }
}

DownlinkAdditionalTimeslots ::=     SEQUENCE {
    parameters                          CHOICE {
        sameAsLast                          SEQUENCE {
            timeslotNumber                      TimeslotNumber
        },
        newParameters                       SEQUENCE {
            individualTimeslotInfo              IndividualTimeslotInfo,
            dl-TS-ChannelisationCodesShort      DL-TS-ChannelisationCodesShort
        }
    }
}

DownlinkAdditionalTimeslots-LCR-r4 ::=  SEQUENCE {
    parameters                          CHOICE {
        sameAsLast                          SEQUENCE {
            timeslotNumber                      TimeslotNumber-LCR-r4
        },
        newParameters                       SEQUENCE {
            individualTimeslotInfo              IndividualTimeslotInfo-LCR-r4,
            dl-TS-ChannelisationCodesShort      DL-TS-ChannelisationCodesShort
        }
```

```
    }
}

DownlinkTimeslotsCodes ::=      SEQUENCE {
    firstIndividualTimeslotInfo         IndividualTimeslotInfo,
    dl-TS-ChannelisationCodesShort      DL-TS-ChannelisationCodesShort,
    moreTimeslots                       CHOICE {
        noMore                              NULL,
        additionalTimeslots                 CHOICE {
            consecutive                         INTEGER (1..maxTS-1),
            timeslotList                        SEQUENCE (SIZE (1..maxTS-1)) OF
                                                    DownlinkAdditionalTimeslots
        }
    }
}

DownlinkTimeslotsCodes-LCR-r4 ::=   SEQUENCE {
    firstIndividualTimeslotInfo         IndividualTimeslotInfo-LCR-r4,
    dl-TS-ChannelisationCodesShort      DL-TS-ChannelisationCodesShort,
    moreTimeslots                       CHOICE {
        noMore                              NULL,
        additionalTimeslots                 CHOICE {
            consecutive                         INTEGER (1..maxTS-LCR-1),
            timeslotList                        SEQUENCE (SIZE (1..maxTS-LCR-1)) OF
                                                    DownlinkAdditionalTimeslots-LCR-r4
        }
    }
}

DPC-Mode ::=                        ENUMERATED {
                                        singleTPC,
                                        tpcTripletInSoft }

-- Actual value DPCCH-PowerOffset = IE value * 2
DPCCH-PowerOffset ::=               INTEGER (-82..-3)

-- Actual value DPCCH-PowerOffset2 = 2 + (IE value * 4)
DPCCH-PowerOffset2 ::=              INTEGER (-28..-13)

DPCH-CompressedModeInfo ::=         SEQUENCE {
    tgp-SequenceList                    TGP-SequenceList
}

DPCH-CompressedModeStatusInfo ::=   SEQUENCE {
    tgps-Reconfiguration-CFN            TGPS-Reconfiguration-CFN,
    tgp-SequenceShortList                   SEQUENCE (SIZE (1..maxTGPS)) OF
                                            TGP-SequenceShort
}

-- Actual value DPCH-FrameOffset = IE value * 256
DPCH-FrameOffset::=                 INTEGER (0..149)

DSCH-Mapping ::=                    SEQUENCE {
    maxTFCI-Field2Value                 MaxTFCI-Field2Value,
    spreadingFactor                     SF-PDSCH,
    codeNumber                          CodeNumberDSCH,
    multiCodeInfo                       MultiCodeInfo
}

DSCH-MappingList ::=                SEQUENCE (SIZE (1..maxPDSCH-TFCIgroups)) OF
                                        DSCH-Mapping

DSCH-RadioLinkIdentifier ::=        INTEGER (0..511)

DSCH-TransportChannelsInfo ::=      SEQUENCE (SIZE (1..maxTrCH)) OF
                                        SEQUENCE {
    dsch-transport-channel-identity         TransportChannelIdentity,
    dsch-TFS                                TransportFormatSet
}
DurationTimeInfo ::=                INTEGER (1..4096)

DynamicPersistenceLevel ::=         INTEGER (1..8)

DynamicPersistenceLevelList ::=     SEQUENCE (SIZE (1..maxPRACH)) OF
                                        DynamicPersistenceLevel

DynamicPersistenceLevelTF-List ::= SEQUENCE (SIZE (1..maxTF-CPCH)) OF
                                        DynamicPersistenceLevel
```

---------- End of Changes ----------