

**TSG-RAN Meeting #11
Palm Springs, CA, U.S.A., 13-16 March 2001**

RP-010126

Title: Agreed CRs to TS 25.433

Source: TSG-RAN WG3

Agenda item: 5.3.3

Tdoc_Num	Specification	CR_Num	Revision_Num	CR_Subject	CR_Category	WG_Status	Cur_Ver_Num	New_Ver_Num
R3-011020	25.433	352	2	Measurement range modification	F	agreed	3.4.1	3.5.0
R3-010679	25.433	353		Addition of SIB17	F	agreed	3.4.1	3.5.0
R3-010680	25.433	354		Correction of Frame Handling Priority Presence	F	agreed	3.4.1	3.5.0
R3-010681	25.433	355		SCH Timeslot IE definition	F	agreed	3.4.1	3.5.0
R3-010918	25.433	356	1	DL Timeslot ISCP report correction	F	agreed	3.4.1	3.5.0
R3-010752	25.433	365		DL power clarification	F	agreed	3.4.1	3.5.0
R3-010756	25.433	367		Modification of Context ID Presence in RESET REQUEST	F	agreed	3.4.1	3.5.0
R3-010762	25.433	368		Handling of the Procedures Triggering an Error Indication Procedure	F	agreed	3.4.1	3.5.0
R3-010763	25.433	369		Removal/Modification of notes related to UARFCN	F	agreed	3.4.1	3.5.0
R3-010765	25.433	370		Mapping of TFS and TFI	F	agreed	3.4.1	3.5.0
R3-010766	25.433	371		General clarifications ad corrections	F	agreed	3.4.1	3.5.0
R3-010907	25.433	377	1	NBAP correction in tabular format	F	agreed	3.4.1	3.5.0

R3-010916	25.433	378	1	Correction based on NBAP detailed review	F	agreed	3.4.1	3.5.0
R3-011086	25.433	379	2	Erroneous Criticality Diagnostics IE	F	agreed	3.4.1	3.5.0
R3-010786	25.433	383		Handling of Not Comprehended and Missing IEs Leading to Incapability to Compile a Response Message	F	agreed	3.4.1	3.5.0
R3-011088	25.433	385	2	Node B resource model	F	agreed	3.4.1	3.5.0
R3-010937	25.433	386		Correction of Physical Shared Channel Reconfiguration	F	agreed	3.4.1	3.5.0
R3-011035	25.433	388		Interaction between measurements and reset on lub	F	agreed	3.4.1	3.5.0

CR-Form-v3

CHANGE REQUEST

⌘ **25.433 CR 352** ⌘ re **2** ⌘ Current version: **3.4.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Measurement range modifications		
Source:	⌘ R-WG3		
Work item code:	⌘	Date:	⌘ February 2001
Category:	⌘ F	Release:	⌘ R99
<p><i>Use one of the following categories:</i></p> <p>F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p><i>Use one of the following releases:</i></p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>	

Reason for change:	⌘ RAN WG4 changed the ranges of UL Timeslot ISCP and RSCP measurements. This CR reflects the changes made in 25.123 and incorporates this new definition in 25.433.
Summary of change:	⌘ Reference to WG4 document 25.123 updated to V3.5 Reporting range and thresholds of UL Timeslot ISCP and RSCP measurement are extended. Rev 1: Change of ranges according last WG4 definitions Rev 2: Correction of Increase/Decrease Threshold range
Consequences if not approved:	⌘ Inconsistency between WG3 and WG4 specs. <u>Backward compatibility:</u> Although not Backward compatible it is necessary for consistency

Clauses affected:	⌘ 2, 9.2.1.12, 9.2.1.24, 9.2.1.43, 9.2.1.44, 9.2.3.26A, 9.3.4		
Other specs affected:	⌘ <input checked="" type="checkbox"/> Other core specifications	⌘ 25.123 R4-010273 R4-010452	⌘ 25.423 CR306,
	<input type="checkbox"/> Test specifications		
	<input type="checkbox"/> 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/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

- [1] 3GPP TS 25.401: "UTRAN Overall Description".
- [2] 3GPP TS 25.426: "UTRAN I_{ur} and I_{ub} Interface Data Transport & Transport Signalling for DCH Data Streams".
- [3] CCITT Recommendation X.731 (01/92): "Information Technology – Open Systems Interconnection – Systems Management: State Management function".
- [4] 3GPP TS 25.215: "Physical layer – Measurements (FDD)".
- [5] 3GPP TS 25.225: "Physical layer – Measurements (TDD)".
- [6] 3GPP TS 25.430: "UTRAN Iub General Aspect and Principle".
- [7] 3GPP TS 25.211: "Physical channels and mapping of transport channels onto physical channels (FDD)".
- [8] 3GPP TS 25.212: "Multiplexing and channel coding (FDD)".
- [9] 3GPP TS 25.213: "Spreading and modulation (FDD)".
- [10] 3GPP TS 25.214: "Physical layer procedures (FDD)".
- [11] X.691, (12/97) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)".
- [12] X.680, (12/97) "Information Technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation".
- [13] X.681, (12/97) "Information Technology - Abstract Syntax Notation One (ASN.1): Information object specification"
- [14] 3GPP TS 25.104: "UTRA (BS) FDD; Radio Transmission and Reception".
- [15] 3GPP TS 25.105: "UTRA (BS) TDD; Radio Transmission and Reception".
- [16] 3GPP TS25.427: "UTRAN Iur/Iub Interface User Plane Protocol for DCH Data Stream"
- [17] 3GPP TS25.402: "Synchronisation in UTRAN Stage2"
- [18] 3GPP TS25.331: "RRC Protocol Specification"
- [19] 3GPP TS25.221: "Physical channels and mapping of transport channels onto physical channels[TDD]"
- [20] 3GPP TS25.223: "Spreading and modulation (TDD)"
- [21] 3GPP TS25.224: "Physical Layer Procedures (TDD)"
- [22] 3GPP TS 25.133 (V3.3): "Requirements for support of Radio Resource management (FDD)"
- [23] 3GPP TS 25.123 (V3.35): " Requirements for support of Radio Resource management (TDD)"

- [24] 3GPP TS 25.435: "UTRAN Iub Interface: User Plane Protocols for Common Transport Channel Data Streams".
- [25] 3GPP TS 25.302: "Services Provided by the Physical Layer".
- [26] 3GPP TR 25.921: "Guidelines and Principles for Protocol Description and Error Handling".

9.2.1.12 Common Measurement Value

The Common Measurement Value shall be the most recent value for this measurement, for which the reporting criteria were met.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
>Transmitted Carrier Power Value	C <i>MeasValue</i>		INTEGER(0..100)	According to mapping in [22] and [23]
>Received total wide band power Value	C <i>MeasValue</i>		INTEGER(0..621)	According to mapping in [22] and [23]
>Acknowledged PRACH Preamble Value (FDD only)	C <i>MeasValue</i>		INTEGER(0..240, ...)	According to mapping in [22]
>UL Timeslot ISCP (TDD only)	C <i>MeasValue</i>		INTEGER(0..8127)	According to mapping in [23]
>Acknowledged PCPCH Access Preambles (FDD only)	C <i>MeasValue</i>		INTEGER(0..15,...)	According to mapping in [22]
>Detected PCPCH Access Preambles (FDD only)	C <i>MeasValue</i>		INTEGER(0..240,...)	According to mapping in [22]

Condition	Explanation
<i>MeasValue</i>	Only one measurement value can be present at the same time.

9.2.1.24 Dedicated Measurement Value

The Dedicated Measurement Value shall be the most recent value for this measurement, for which the reporting criteria were met.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated measurement Value				
>SIR value	C <i>MeasValue</i>		INTEGER(0..63)	According to mapping in [22] and [23]
>SIR error Value	C <i>MeasValue</i>		INTEGER(0..125)	According to mapping in [22], (FDD only)
>Transmitted Code Power Value	C <i>MeasValue</i>		INTEGER(0..127)	According to mapping in [22] and [23]
>RSCP	C <i>MeasValue</i>		INTEGER(0.. 84 127)	According to mapping in [23], (TDD only)
>Rx Timing Deviation	C <i>MeasValue</i>		INTEGER(0..2047)	According to mapping in [23], (TDD only)
>Round Trip Time	C <i>MeasValue</i>		INTEGER(0..32767)	According to mapping in [22], (FDD only)

Condition	Explanation
<i>MeasValue</i>	Only one measurement value can be present at the same time.

9.2.1.43 Measurement Increase/Decrease Threshold

The Measurement Increase/Decrease Threshold defines the threshold that shall trigger Event C or D.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
Received total wide band power	<i>C – Threshold</i>		INTEGER(0..620)	0: 0 dB 1: 0.1 dB 2: 0.2 dB ... 620: 62dB
Transmitted Carrier Power	<i>C – Threshold</i>		INTEGER(0..100)	According to mapping in [22] and [23]
Acknowledged PRACH Preambles	<i>C – Threshold</i>		INTEGER(0..240,...)	According to mapping in [22], (FDD only)
UL Timeslot ISCP	<i>C – Threshold</i>		INTEGER(0.. 80 126)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 80 : 40126: 63dB, (TDD only)
SIR	<i>C – Threshold</i>		INTEGER(0..62)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 62: 31dB
SIR Error	<i>C – Threshold</i>		INTEGER(0..124)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 124: 62 dB, (FDD only)
Transmitted Code Power	<i>C – Threshold</i>		INTEGER(0..112,...)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 112: 56 dB
RSCP	<i>C – Threshold</i>		INTEGER(0.. 80 126)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 80 : 40126: 63dB, (TDD only)
Round Trip Time	<i>C – Threshold</i>		INTEGER(0..32766)	0: 0 chips 1: 0.0625 chips 2: 0.1250 chips ... 32766: 2047.875 chips, (FDD only)
Acknowledged PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..15,...)	According to mapping in [22] (FDD only)
Detected PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..240,...)	According to mapping in [22] (FDD only)

Condition	Explanation
<i>Threshold</i>	Only one measurement threshold can be present at the same time.

9.2.1.44 Measurement Threshold

The Measurement Threshold defines which threshold that shall trigger Event A, B, E or F.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
Received total wide band power	<i>C – Threshold</i>		INTEGER(0..621)	According to mapping in [22] and [23]
Transmitted Carrier Power	<i>C – Threshold</i>		INTEGER(0..100)	According to mapping in [22] and [23]
Acknowledged PRACH Preambles	<i>C – Threshold</i>		INTEGER(0..240,...)	According to mapping in [22], (FDD only)
UL Timeslot ISCP	<i>C – Threshold</i>		INTEGER(0..84127)	According to mapping in [23] (TDD only)
SIR	<i>C – Threshold</i>		INTEGER(0..63)	According to mapping in [22] and [23]
SIR Error	<i>C – Threshold</i>		INTEGER(0..125)	According to mapping in [22], (FDD only)
Transmitted Code Power	<i>C – Threshold</i>		INTEGER(0..127)	According to mapping in [22] and [23]
RSCP	<i>C – Threshold</i>		INTEGER(0..84127)	According to mapping in [23] (TDD only)
Rx Timing Deviation	<i>C – Threshold</i>		INTEGER(0..2047)	According to mapping in [23] (TDD only)
Round Trip Time	<i>C – Threshold</i>		INTEGER(0..32767)	According to mapping in [22] (FDD only)
Acknowledged PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..15,...)	According to mapping in [22] (FDD only)
Detected PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..240,...)	According to mapping in [22] (FDD only)

Condition	Explanation
<i>Threshold</i>	Only one measurement threshold can be present at the same time.

9.2.3.26A UL Timeslot ISCP

UL Timeslot ISCP is the measured interference in a uplink timeslot at the Node B, see ref. [5].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL Timeslot ISCP			INTEGER (0..84127)	According to mapping in [23].

9.3.4 Information Elements Definitions

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--*****
--
-- Information Element Definitions
--
--*****
-- =====
-- R
-- =====

RACH-SlotFormat ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    ...
}

RACH-SubChannelNumbers ::= BIT STRING (SIZE (12))
-- Bit 0=Sub Channel Number 0, Bit 1=Sub Channel Number 1, ..., Bit 11=Sub Channel Number 11

RepetitionLength ::= INTEGER (1..63)

RepetitionPeriod ::= ENUMERATED {
    v1,
    v2,
    v4,
    v8,
    v16,
    v32,
    v64,
    ...
}

RepetitionNumber ::= INTEGER (1..256)

RefTFCNumber ::= INTEGER (0..3)

ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          ReportCharacteristicsType-ReportPeriodicity,
    event-a           ReportCharacteristicsType-EventA,
    event-b           ReportCharacteristicsType-EventB,
    event-c           ReportCharacteristicsType-EventC,
    event-d           ReportCharacteristicsType-EventD,
    event-e           ReportCharacteristicsType-EventE,
    event-f           ReportCharacteristicsType-EventF,
    ...
}

ReportCharacteristicsType-EventA ::= SEQUENCE {
    measurementThreshold          ReportCharacteristicsType-MeasurementThreshold,
    measurementHysteresisTime    ReportCharacteristicsType-ScaledMeasurementHysteresisTime
    OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { ReportCharacteristicsType-EventA-
ExtIEs} } OPTIONAL,
    ...
}

ReportCharacteristicsType-EventA-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventB ::= SEQUENCE {
    measurementThreshold          ReportCharacteristicsType-MeasurementThreshold,
    measurementHysteresisTime    ReportCharacteristicsType-ScaledMeasurementHysteresisTime
    OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { ReportCharacteristicsType-EventB-
ExtIEs} } OPTIONAL,
    ...
}

ReportCharacteristicsType-EventB-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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ReportCharacteristicsType-EventC ::= SEQUENCE {
    measurementIncreaseThreshold    ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime          ReportCharacteristicsType-ScaledMeasurementChangeTime,
    iE-Extensions                  ProtocolExtensionContainer { { ReportCharacteristicsType-EventC-
ExtIEs} } OPTIONAL,
    ...
}

ReportCharacteristicsType-EventC-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventD ::= SEQUENCE {
    measurementDecreaseThreshold    ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime          ReportCharacteristicsType-ScaledMeasurementChangeTime,
    iE-Extensions                  ProtocolExtensionContainer { { ReportCharacteristicsType-EventD-
ExtIEs} } OPTIONAL,
    ...
}

ReportCharacteristicsType-EventD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventE ::= SEQUENCE {
    measurementThreshold1          ReportCharacteristicsType-MeasurementThreshold,
    measurementThreshold2          ReportCharacteristicsType-MeasurementThreshold
    OPTIONAL,
    measurementHysteresisTime      ReportCharacteristicsType-ScaledMeasurementHysteresisTime
    OPTIONAL,
    reportPeriodicity              ReportCharacteristicsType-ReportPeriodicity
    OPTIONAL,
    iE-Extensions                  ProtocolExtensionContainer { { ReportCharacteristicsType-EventE-
ExtIEs} } OPTIONAL,
    ...
}

ReportCharacteristicsType-EventE-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventF ::= SEQUENCE {
    measurementThreshold1          ReportCharacteristicsType-MeasurementThreshold,
    measurementThreshold2          ReportCharacteristicsType-MeasurementThreshold
    OPTIONAL,
    measurementHysteresisTime      ReportCharacteristicsType-ScaledMeasurementHysteresisTime
    OPTIONAL,
    reportPeriodicity              ReportCharacteristicsType-ReportPeriodicity
    OPTIONAL,
    iE-Extensions                  ProtocolExtensionContainer { { ReportCharacteristicsType-EventF-
ExtIEs} } OPTIONAL,
    ...
}

ReportCharacteristicsType-EventF-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold ::= CHOICE {
    received-total-wide-band-power    Received-total-wide-band-power-Value-
IncrDecrThres,
    transmitted-carrier-power        Transmitted-Carrier-Power-Value,
    acknowledged-prach-preambles    Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                  UL-TimeslotISCP-Value-IncrDecrThres,
    sir                               SIR-Value-IncrDecrThres,
    sir-error                         SIR-Error-Value-IncrDecrThres,
    transmitted-code-power           Transmitted-Code-Power-Value-IncrDecrThres,
    rscp                              RSCP-Value-IncrDecrThres,
    round-trip-time                  Round-Trip-Time-IncrDecrThres,
    acknowledged-PCPCH-access-preambles    Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles    Detected-PCPCH-access-preambles,
    ...
}

ReportCharacteristicsType-MeasurementThreshold ::= CHOICE {
    received-total-wide-band-power    Received-total-wide-band-power-Value,
    transmitted-carrier-power        Transmitted-Carrier-Power-Value,

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    acknowledged-prach-preambles      Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                    UL-TimeslotISCP-Value,
    sir                                 SIR-Value,
    sir-error                           SIR-Error-Value,
    transmitted-code-power              Transmitted-Code-Power-Value,
    rscp                                 RSCP-Value,
    rx-timing-deviation                 Rx-Timing-Deviation-Value,
    round-trip-time                     Round-Trip-Time-Value,
    acknowledged-PCPCH-access-preambles Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles     Detected-PCPCH-access-preambles,
    ...
}

ReportCharacteristicsType-ScaledMeasurementChangeTime ::= CHOICE {
    msec          MeasurementChangeTime-Scaledmsec,
    ...
}

MeasurementChangeTime-Scaledmsec ::= INTEGER (1..6000,...)
-- MeasurementChangeTime-Scaledmsec = Time * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms

ReportCharacteristicsType-ScaledMeasurementHysteresisTime ::= CHOICE {
    msec          MeasurementHysteresisTime-Scaledmsec,
    ...
}

MeasurementHysteresisTime-Scaledmsec ::= INTEGER (1..6000,...)
-- MeasurementHysteresisTime-Scaledmsec = Time * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms

ReportCharacteristicsType-ReportPeriodicity ::= CHOICE {
    msec          ReportPeriodicity-Scaledmsec,
    min          ReportPeriodicity-Scaledmin,
    ...
}

ReportPeriodicity-Scaledmsec ::= INTEGER (1..6000,...)
-- ReportPeriodicity-msec = ReportPeriodicity * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms

ReportPeriodicity-Scaledmin ::= INTEGER (1..60,...)
-- Unit min, Range 1min .. 60min(hour), Step 1min

ResourceOperationalState ::= ENUMERATED {
    enabled,
    disabled
}

CommonTransportChannel-InformationResponse ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    bindingID                     BindingID OPTIONAL,
    transportLayerAddress         TransportLayerAddress OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { { CommonTransportChannel-
InformationResponse-ExtIEs} } OPTIONAL,
    ...
}

CommonTransportChannel-InformationResponse-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

LimitedPowerIncrease ::= ENUMERATED {
    used,
    not-used
}

RL-ID ::= INTEGER (0..31)

RL-Set-ID ::= INTEGER (0..31)

Round-Trip-Time-IncrDecrThres ::= INTEGER(0..32766)

Round-Trip-Time-Value ::= INTEGER(0..32767)
-- According to mapping in [22]

RSCP-Value ::= INTEGER (0..81127)
-- According to mapping in [23]

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```

RSCP-Value-IncrDecrThres ::= INTEGER (0..80126)

Received-total-wide-band-power-Value ::= INTEGER(0..621)
-- According to mapping in [22]/[23]

Received-total-wide-band-power-Value-IncrDecrThres ::= INTEGER (0..620)

Rx-Timing-Deviation-Value ::= INTEGER (0..2047)

-- =====
-- U
-- =====

UARFCN ::= INTEGER (0..16383, ...)
-- corresponds to 1885.2MHz .. 2024.8MHz

UL-CapacityCredit ::= INTEGER (0..65535)

UL-DL-mode ::= ENUMERATED {
    ul-only,
    dl-only,
    both-ul-and-dl
}

Uplink-Compressed-Mode-Method ::= ENUMERATED {
    sFdiv2,
    higher-layer-scheduling,
    ...
}

UL-Timeslot-Information ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationItem

UL-Timeslot-InformationItem ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType,
    tFCI-Presence           TFCI-Presence,
    uL-Code-InformationList TDD-UL-Code-Information,
    iE-Extensions           ProtocolExtensionContainer { { UL-Timeslot-
InformationItem-ExtIEs } } OPTIONAL,
    ...
}

UL-Timeslot-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCCH-SlotFormat ::= INTEGER (0..5,...)

UL-SIR ::= INTEGER (-82..173)
-- According to mapping in [16]

UL-FP-Mode ::= ENUMERATED {
    normal,
    silent,
    ...
}

UL-PhysCH-SF-Variation ::= ENUMERATED {
    sf-variation-supported,
    sf-variation-not-supported
}

UL-ScramblingCode ::= SEQUENCE {
    uL-ScramblingCodeNumber      UL-ScramblingCodeNumber,
    uL-ScramblingCodeLength      UL-ScramblingCodeLength,
    iE-Extensions                 ProtocolExtensionContainer { { UL-ScramblingCode-ExtIEs } }
OPTIONAL,
    ...
}

UL-ScramblingCode-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

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}
...
UL-ScramblingCodeNumber ::= INTEGER (0..16777215)
UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long
}
UL-TimeSlot-ISCP-Info ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-TimeSlot-ISCP-InfoItem
UL-TimeSlot-ISCP-InfoItem ::= SEQUENCE {
    timeSlot          TimeSlot,
    iSCP              UL-TimeslotISCP-Value,
    iE-Extensions    ProtocolExtensionContainer { { UL-TimeSlot-ISCP-InfoItem-ExtIEs}
} OPTIONAL,
    ...
}
UL-TimeSlot-ISCP-InfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
USCH-Information ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationItem
USCH-InformationItem ::= SEQUENCE {
    uSCH-ID          USCH-ID,
    cCTrCH-ID       CCTrCH-ID,
    transportFormatSet TransportFormatSet,
    allocationRetentionPriority AllocationRetentionPriority,
    iE-Extensions  ProtocolExtensionContainer { { USCH-InformationItem-
ExtIEs} } OPTIONAL,
    ...
}
USCH-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
USCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationResponseItem
USCH-InformationResponseItem ::= SEQUENCE {
    uSCH-ID          USCH-ID,
    bindingID        BindingID OPTIONAL,
    transportLayerAddress TransportLayerAddress OPTIONAL,
    iE-Extensions  ProtocolExtensionContainer { { USCH-
InformationResponseItem-ExtIEs} } OPTIONAL,
    ...
}
USCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
| UL-TimeslotISCP-Value ::= INTEGER (0..84127)
-- According to mapping in [23]
| UL-TimeslotISCP-Value-IncrDecrThres ::= INTEGER (0..80126)
USCH-ID ::= INTEGER (0..255)

```

CHANGE REQUEST

⌘ **25.433 CR 353** ⌘ rev ⌘ Current version: **3.4.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Addition of SIB17
Source:	⌘ R-WG3
Work item code:	⌘ <input type="text"/>
Date:	⌘ 30.1.2001
Category:	⌘ F
Release:	⌘ R99

Use one of the following categories:

- F** (essential 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:

- 2** (GSM Phase 2)
- R96** (Release 1996)
- R97** (Release 1997)
- R98** (Release 1998)
- R99** (Release 1999)
- REL-4** (Release 4)
- REL-5** (Release 5)

Reason for change:	⌘ This CR solves the NBAP review comment Nr. 52 from RAN3#19. In RAN2, a new System Information Block, SIB17, was introduced.
Summary of change:	⌘ - The SIB17 is added after the ellipsis notation in the tabular and in the ASN.1 code.
Consequences if not approved:	⌘ The broadcasting of SIB17 will not be supported by NBAP. <u>Backward compatibility:</u> The changes in this CR are backward compatible with the previous version of the protocol.

Clauses affected:	⌘ 9.2.1.35, 9.3.4
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications ⌘ <input type="text"/> <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications
Other comments:	⌘ <input type="text"/>

How to create CRs using this form:

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

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

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

9.2.1.35 IB Type

The IB Type identifies a specific system information block.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB Type			Enumerated (MIB, SB1, SB2, SIB1, SIB2 SIB3, SIB4, SIB5, SIB6, SIB7, SIB8, SIB9, SIB10, SIB11, SIB12, SIB13, SIB13.1 SIB13.2, SIB13.3, SIB13.4, SIB14, SIB15, SIB15.1, SIB15.2, SIB15.3, SIB16, ... SIB17)	

9.3.4 Information Elements Definitions

***** TEXT SKIPPED *****

```
IB-Type ::= ENUMERATED {  
  mib,  
  sb1,  
  sb2,  
  sib1,  
  sib2,  
  sIB3,  
  sIB4,  
  sIB5,  
  sIB6,  
  sIB7,  
  sIB8,  
  sIB9,  
  sIB10,  
  sIB11,  
  sib12,  
  sIB13,  
  sIB13dot1,  
  sIB13dot2,  
  sIB13dot3,  
  sIB13dot4,  
  sIB14,  
  sIB15,  
  sIB15dot1,  
  sIB15dot2,  
  sIB15dot3,  
  sIB16,  
  ...  
  sIB17  
}
```

CHANGE REQUEST

⌘ **25.433 CR 354** ⌘ rev ⌘ Current version: **3.4.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Correction of Frame Handling Priority Presence
Source:	⌘ R-WG3
Work item code:	⌘ <input type="text"/>
Date:	⌘ 30.1.2001
Category:	⌘ F
Release:	⌘ R99
<p>Use <u>one</u> of the following categories:</p> <p>F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	
<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>	

Reason for change:	⌘ This CR solves the NBAP review comment Nr. 55 from RAN3#19. The presence of the Frame Handling Priority IE in DCH TDD Information IE was erroneously set to optional.
Summary of change:	⌘ - The presence of the Frame Handling Priority IE in DCH TDD Information IE is set to mandatory.
Consequences if not approved:	⌘ The presence of the frame handling priority is incorrect. <u>Backward compatibility:</u> The changes in this CR are not backward compatible for the TDD mode of operation.

Clauses affected:	⌘ 9.2.3.4C, 9.3.4
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications ⌘ <input type="text"/> <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications
Other comments:	⌘ <input type="text"/>

How to create CRs using this form:

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

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

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

9.2.3.4C DCH TDD Information

The *DCH TDD Information* IE provides information for DCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DCH TDD Information		1 to <maxnoof DCHs>			–	
>Payload CRC Presence Indicator	M		9.2.1.49		–	
>UL FP mode	M		9.2.1.66		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	
>DCH Specific Info		1..<maxno ofDCHs>			–	
>>DCH ID	M		9.2.1.20		–	
>>CCTrCH ID	M		9.2.3.3	UL CCTrCH in which the DCH is mapped	–	
>>CCTrCH ID	M		9.2.3.3	DL CCTrCH in which the DCH is mapped	–	
>>Transport Format Set	M		9.2.1.59	For UL	–	
>>Transport Format Set	M		9.2.1.59	For DL	–	
>>Allocation/Retention Priority	M		9.2.1.1A		–	
>>Frame Handling Priority	M ⊖		9.2.1.30		–	
>>QE-Selector	C-CoordDCH		9.2.1.50A		–	

Condition	Explanation
CoordDCH	This IE is present only this DCH is part of a set of coordinated DCHs (number of instances of DCH Specific Info is greater than 1)

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for one UE

9.3.4 Information Elements Definitions

***** TEXT SKIPPED *****

```
-- =====
-- D
-- =====
```

DCH-ID ::= INTEGER (0..255)

DCH-FDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-FDD-InformationItem

```
DCH-FDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator    PayloadCRC-PresenceIndicator,
    ul-FP-Mode                      UL-FP-Mode,
    toAWS                           ToAWS,
    toAWE                           ToAWE,
    dCH-SpecificInformationList     DCH-Specific-FDD-InformationList,
    iE-Extensions                   ProtocolExtensionContainer { { DCH-FDD-InformationItem-ExtIEs } } OPTIONAL,
    ...
}
```

```
DCH-FDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

DCH-Specific-FDD-InformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-FDD-Item

```
DCH-Specific-FDD-Item ::= SEQUENCE {
    dCH-ID                          DCH-ID,
    ul-TransportFormatSet           TransportFormatSet,
    dl-TransportFormatSet           TransportFormatSet,
    allocationRetentionPriority     AllocationRetentionPriority,
    frameHandlingPriority           FrameHandlingPriority,
    qE-Selector                     QE-Selector,
    iE-Extensions                   ProtocolExtensionContainer { { DCH-Specific-FDD-Item-ExtIEs } } OPTIONAL,
    ...
}
```

```
DCH-Specific-FDD-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

DCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem

```
DCH-InformationResponseItem ::= SEQUENCE {
    dCH-ID                          DCH-ID,
    bindingID                        BindingID OPTIONAL,
    transportLayerAddress            TransportLayerAddress OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { DCH-InformationResponseItem-ExtIEs } } OPTIONAL,
    ...
}
```

```

}

DCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-TDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-TDD-InformationItem

DCH-TDD-InformationItem ::= SEQUENCE {
  payloadCRC-PresenceIndicator      PayloadCRC-PresenceIndicator,
  ul-FP-Mode                        UL-FP-Mode,
  toAWS                             ToAWS,
  toAWE                             ToAWE,
  dCH-SpecificInformationList       DCH-Specific-TDD-InformationList,
  iE-Extensions                     ProtocolExtensionContainer { { DCH-TDD-InformationItem-ExtIEs} } OPTIONAL,
  ...
}

DCH-TDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-Specific-TDD-InformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-TDD-Item

DCH-Specific-TDD-Item ::= SEQUENCE {
  dCH-ID                            DCH-ID,
  ul-CCTrCH-ID                      CCTrCH-ID,
  dl-CCTrCH-ID                      CCTrCH-ID,
  ul-TransportFormatSet             TransportFormatSet,
  dl-TransportFormatSet             TransportFormatSet,
  allocationRetentionPriority        AllocationRetentionPriority,
  frameHandlingPriority              FrameHandlingPriority OPTIONAL,
  qE-Selector                       QE-Selector OPTIONAL,
  -- This IE is present only if DCH is part of set of Coordinated DCHs
  iE-Extensions                     ProtocolExtensionContainer { { DCH-Specific-TDD-Item-ExtIEs} } OPTIONAL,
  ...
}

DCH-Specific-TDD-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```


CHANGE REQUEST

⌘ **25.433 CR 355** ⌘ re **-** ⌘ Current version: **3.4.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ SCH Timeslot IE definition		
Source:	⌘ R-WG3		
Work item code:	⌘	Date:	⌘ February 2001
Category:	⌘ F	Release:	⌘ Release 99
Use <u>one</u> of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)	
Detailed explanations of the above categories can be found in 3GPP TR 21.900.			

Reason for change:	⌘ At NBAP review from RAN3#18 meeting, it was commented that the SCH Time slot IE definition should be improved (currently not a description). This CR therefore improves the IE definition.
Summary of change:	⌘ Improvement of SCH time slot IE definition
Consequences if not approved:	⌘ SCH Time slot IE definition is further unclear. <u>Backward compatibility:</u> This CR is backward compatible with the previous version of NBAP

Clauses affected:	⌘ 9.2.3.17		
Other specs affected:	<input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	25.423 CR307
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/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

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

9.2.3.17 SCH Time Slot

The *SCH Time Slot* IE represents the first time slot (k) of a pair of time slots inside a Radio Frame that shall be assigned to the Physical Channel SCH. The *SCH Time Slot* IE is only applicable if the value of *Sync Case* IE is Case 2 since in this case the SCH is allocated in TS#k and TS#k+8.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SCH Time Slot			INTEGER(0..6)	

CR-Form-v3

CHANGE REQUEST

⌘ **25.433 CR 356** ⌘ re **1** ⌘ Current version: **3.4.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ DL Timeslot ISCP report correction		
Source:	⌘ R-WG3		
Work item code:	⌘	Date:	⌘ February 2001
Category:	⌘ F	Release:	⌘ Release 99
<p>Use <u>one</u> of the following categories:</p> <p>F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>	

Reason for change:	⌘ At the NBAP review at RAN3#18 it was commented that the DL Timeslot ISCP Information should not contain a RL-id. This CR removes therefore the RL-Id from the DL Timeslot ISCP information since not necessary and refers to the DL Time slot ISCP Info IE.
Summary of change:	⌘ Removal of the RL-Id within DL Timeslot ISCP Information in the DL POWER TIMESLOT CONTROL REQUEST message Refer to <i>DL Time slot ISCP info</i> IE in RL Setup, RL Addition and DL Power Timeslot Control Request procedures, which is already defined but never used. Rev 1: TimeslotISCPInfo for DL Power Timeslot Control Request in ASN.1 indicated with global significance
Consequences if not approved:	⌘ If this CR is not approved an unnecessary IE will be defined. In addition this CR alignes the usage of IEs in different messages. Not doing this will increase the risk of an inconsistent specification also in future releases. <u>Backward compatibility:</u> Not Backward compatible due to different transfer syntax, although functionally no change

Clauses affected:	⌘ 8.2.17, 8.3.1, 9.1.36.2, 9.1.39.2, 9.1.67		
Other specs affected:	<input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	25.423 CR308r1
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/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ¶ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.2.17 Radio Link Setup

8.2.17.1 General

This procedure is used for establishing the necessary resources for a new Node B Communication Context in the Node B.

8.2.17.2 Successful Operation

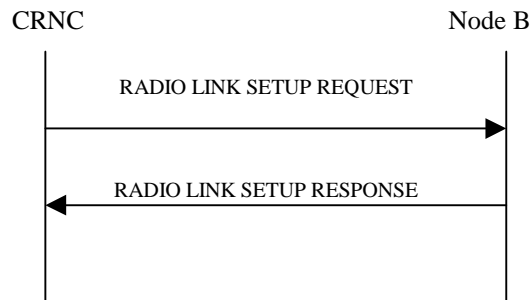


Figure 24: Radio Link Setup procedure: Successful Operation

The procedure is initiated with a RADIO LINK SETUP REQUEST message sent from the CRNC to Node B.

Upon reception of RADIO LINK SETUP REQUEST message, the Node B shall reserve necessary resources and configure the new Radio Link(s) according to the parameters given in the message.

[FDD – The RL Setup procedure can be used to setup one or more radio links. The procedure shall include the establishment of one or more DCHs on all radio links, and in addition, it can include the establishment of one or more DSCHs on one radio link.]

[TDD – The RL Setup procedure is used for setup of one radio link including one or more transport channels. The transport channels can be a mix of DCHs, DSCHs, and USCHs, including also combinations where one or more transport channel types are not present.]

[FDD - The *First RLS Indicator* IE indicates if the concerning RL shall be considered part of the first RLS established towards this UE. If the *First RLS indicator* IE is set to "first RLS", the Node B shall use a TPC pattern of $n \cdot "01" + "1"$ in the DL of the concerning RL and all RLs which are part of the same RLS, until UL synchronisation is achieved on the Uu. The parameter n shall be set equal to the value received in the *DL TPC pattern 01 count* IE in the Cell Setup procedure. The TPC pattern shall continuously be repeated but shall be restarted at the beginning of every frame with $CFN \bmod 4 = 0$. For all other RLs, the Node B shall use a TPC pattern of all "1"s in the DL until UL synchronisation is achieved on the Uu.]

[FDD - The *Diversity Control Field* IE indicates for each RL (except the first RL in the message) whether the Node B shall combine the concerned RL or not. If the *Diversity Control Field* IE indicates, "may be combined with already existing RLs", then Node B shall decide for either of the alternatives. If the *Diversity Control Field* IE is set to "Must", the Node B shall combine the RL with one of the other RL. Diversity combining is applied to Dedicated Transport Channels (DCH), i.e. it is not applied to the DSCHs. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.]

[FDD – If the received *Limited Power Increase* IE is set to 'Used', the DRNS shall, if supported, use Limited Power Increase according to ref. [10] section 5.2.1 for the inner loop DL power control.]

[FDD – If the received *Inner Loop DL PC Status* IE is set to "Active", the Node B shall activate the inner loop DL power control for all RLs. If *Inner Loop DL PC Status* IE is set to "Inactive", the Node B shall deactivate the inner loop DL power control for all RLs according to ref. [10]]

[TDD -If the *DCH Information* IE is present, the Node B shall configure the new DCH(s) according to the parameters given in the message.]

If the RADIO LINK SETUP REQUEST message includes a *DCH Info* IE with multiple *DCH Specific Info* IEs then, the Node B shall treat the DCHs in the *DCH Info* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.

[FDD – When more than one DL DPDCH are assigned per RL, the segmented physical channel shall be mapped on to DL DPDCHs according to [8]. When p number of DL DPDCHs are assigned to each RL, the first pair of DL Scrambling Code and FDD DL Channelisation Code Number corresponds to “*PhCH number 1*”, the second to “*PhCH number 2*”, and so on until the p th to “*PhCH number p*”.]

[FDD - For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to “selected”, the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [16]. If the *QE-Selector* is set to “non-selected”, the Physical channel BER shall be used for the QE in the UL data frames, ref. [16].]

For a set of co-ordinated DCHs the Transport channel BER from the DCH with the *QE-Selector* IE set to “selected” shall be used for the QE in the UL data frames, ref. [16]. [FDD - If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [16]. If all DCHs have *QE-Selector* IE set to “non-selected” the Physical channel BER shall be used for the QE, ref. [16]].

The Node B shall prioritise resource allocation for the RL(s) to be established according to Annex A.

The received *Frame Handling Priority* IE specified for each Transport Channel should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new RL(s) has been activated.

The Node B shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

The Node B shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

The Node B shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

[FDD - If the *Propagation Delay* IE is included, the Node B may use this information to speed up the detection of L1 synchronisation.]

[FDD - The *UL SIR Target* IE included in the message shall be used by the Node B as initial UL SIR target for the UL inner loop power control.]

[FDD - The Node B shall start the DL transmission using the initial DL power specified in the message on each DL channelisation code of the RL until either UL synchronisation is achieved for the RLS or a DL POWER CONTROL REQUEST message is received. No inner loop power control or balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10], chapter 5.2.1.2) with DPC MODE=0 and the power control procedure (see 8.3.7), but shall always be kept within the maximum and minimum limit specified in the RL SETUP REQUEST message.]

[TDD - The Node B shall start the DL transmission using the initial DL power specified in the message on each DL channelisation code and on each Time Slot of the RL until the UL synchronisation is achieved for the RL. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22], chapter 4.2.3.3), but shall always be kept within the maximum and minimum limit specified in the RL SETUP REQUEST message.]

If the *DSCH Information* IE Group is present, the Node B shall configure the new DSCH(s) according to the parameters given in the message.

[FDD - If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity* IE, the Node B shall activate SSDT, if supported, using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE.]

[FDD – If the RADIO LINK SETUP REQUEST message includes the *TFCI2 Bearer Information* IE then the Node B shall support the setup of a transport bearer on which the DSCH TFCI Signaling control frames shall be received. The Node B shall manage the time of arrival of these frames according to the values of *ToAWS* and *ToAWE* specified in the IE's. The *Binding ID* IE and *Transport Layer Address* IE for the new bearer to be set up for this purpose shall be returned in the RADIO LINK SETUP RESPONSE message.]

[FDD - If the *TFCI Signaling Mode* IE within the RADIO LINK SETUP message indicates that there shall be a hard split on the TFCI field but the *TFCI2 Bearer Information* IE is not included in the message then the Node B shall transmit the TFCI2 field with zero power.]

[FDD - If the *TFCI Signaling Mode* IE within the RADIO LINK SETUP message indicates that there shall be a hard split on the TFCI and the *TFCI2 Bearer Information* IE is included in the message then the Node B shall transmit the TFCI2 field with zero power until Synchronization is achieved on the TFCI2 transport bearer and the first valid DSCH TFCI Signaling control frame is received on this bearer (see ref.[24]).]

[FDD - If the RADIO LINK SETUP REQUEST message contains an *SSDT Cell Identity* IE the Node B shall activate SSDT, if supported, for the concerned new RL, with the indicated cell identity used for that RL.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, the Node B shall store the information about the Transmission Gap Pattern Sequences to be used in the Compressed Mode Configuration. This Compressed Mode Configuration shall be valid in the Node B until the next Compressed Mode Configuration is configured in the Node B or Node B Communication Context is deleted.]

[FDD - If the *Downlink compressed mode method* in one or more Transmission Gap Pattern Sequence is set to 'SF/2' in the RADIO LINK SETUP REQUEST message, the Node B shall use or not the alternate scrambling code as indicated for each DL Channelisation Code in the *Transmission Gap Pattern Sequence Code Information* IE.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE and the *Active Pattern Sequence Information* IE, the Node B shall immediately activate the indicated Transmission Gap Pattern Sequences. For each sequence the *TGCFN* refers to the latest passed CFN with that value. If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the Node B shall behave as specified in subclause 8.3.12.]

[FDD – For each RL not having a common generation of the TPC commands in the DL with another RL, the Node B shall assign the *RL Set ID* IE included in the RADIO LINK SETUP RESPONSE message a value that uniquely identifies the RL Set within the Node B Communication context.]

[FDD – For all RLs having a common generation of the TPC commands in the DL with another RL, the Node B shall assign the *RL Set ID* IE included in the RADIO LINK SETUP RESPONSE message the same value. This value shall uniquely identify the RL Set within the Node B Communication context.]

[TDD -If the *USCH Information* IE is present, the Node B shall configure the new USCH(s) according to the parameters given in the message.]

[TDD – If the *DL Time Slot ISCP Info* IE is present, the Node B shall use the indicated value when deciding the initial DL TX Power for each timeslot as specified in [21], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged].

If the RLs are successfully setup, the Node B shall start reception on the new RL(s) and respond with a RADIO LINK SETUP RESPONSE message.

[FDD - The Node B shall indicate with the *Diversity Indication* IE whether the RL is combined or not. In case of combining, only the *Reference RL ID* IE shall be included to indicate one of the existing RLs that the concerned RL is combined with. In case of not combining the Node B shall include in the RL SETUP RESPONSE the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DCH of this RL.]

[TDD – The Node B shall include in the RADIO LINK SETUP RESPONSE the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DCH of this RL.]

The Node B shall include in the RADIO LINK SETUP RESPONSE the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DSCH of this RL.

[TDD – In case the *USCH Information* IE is present, the Node B shall include in the RADIO LINK SETUP RESPONSE the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each USCH of this RL.]

In case of coordinated DCH, the *Binding ID* IE and the *Transport Layer Address* IE shall be specify for only one of the coordinated DCHs.

After sending of the RADIO LINK SETUP RESPONSE message the Node B shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The Node B shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in [16].

[FDD – When *Diversity Mode* IE is “*STTD*”, “*Closedloop mode1*”, or “*Closedloop mode2*”, the DRNC shall activate/deactivate the Transmit Diversity to each Radio Link in accordance with *Transmit Diversity Indication IE*]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity* IE, the Node B may activate SSDT using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE.]

[FDD - Irrespective of SSDT activation, the Node B shall include in the RADIO LINK SETUP RESPONSE message an indication concerning the capability to support SSDT on this RL. Only if the RADIO LINK SETUP REQUEST message requested SSDT activation and the RADIO LINK SETUP RESPONSE message indicates that the SSDT capability is supported for this RL, SSDT is activated in the Node B.]

[FDD –The UL out-of-sync algorithm defined in [10] shall for each of the established RL Set(s) use the maximum value of the parameters *N_OUTSYNC_IND* and *T_RLFAILURE*, and the minimum value of the parameters *N_INSYNC_IND*, that are configured in the cells supporting the radio links of the RL Set].

8.3.1 Radio Link Addition

8.3.1.1 General

This procedure is used for establishing the necessary resources in the Node B for one or more additional RLs towards a UE when there is already a Node B communication context for this UE in the Node B.

The Radio Link Addition procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in chapter 3.1.

8.3.1.2 Successful Operation

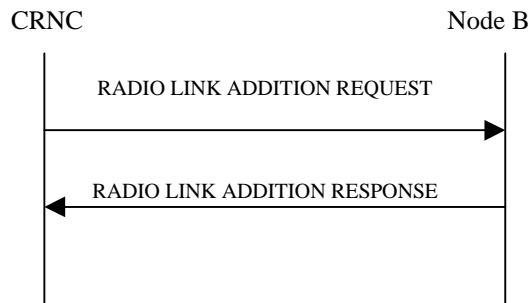


Figure: 28 Radio Link Addition procedure: Successful Operation

The procedure is initiated with a RADIO LINK ADDITION REQUEST message sent from the CRNC to the Node B.

Upon reception, the Node B shall reserve the necessary resources and configure the new RL(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

The Node B shall prioritise resource allocation for the RL(s) to be established according to Annex A.

[TDD - If the *UL CCTrCH Information* IE is present, the Node B shall configure the new UL CCTrCH(s) according to the parameters given in the message.]

[TDD - If the *DL CCTrCH Information* IE is present, the Node B shall configure the new DL CCTrCH(s) according to the parameters given in the message.]

[TDD - If the *UL DPCH Information* IE is present, the Node B shall configure the new UL DPCH(s) according to the parameters given in the message.]

[TDD - If the *DL DPCH Information* IE is present, the Node B shall configure the new DL DPCH(s) according to the parameters given in the message.]

The *Diversity Control Field* IE indicates for each RL whether the Node B shall combine the new RL with existing RL(s) or not. If the *Diversity Control Field* IE indicates, "may be combined with already existing RLs", then Node B shall decide for any of the alternatives. If the *Diversity Control Field* IE is set to "Must", the Node B shall combine the RL with one of the other RL. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Initial DL Transmission Power* IE, the Node B shall apply the given power to the transmission on each DL Channelisation Code of the RL when starting transmission until either UL synchronisation is achieved for the RLS or a DL POWER REQUEST message is received. If no *Initial DL Transmission power* IE is included, the Node B shall use any transmission power level currently used on already existing RL's for this UE. No inner loop power control or balancing] shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10], chapter 5.2.1.2) with DPC MODE=0 and the downlink power control procedure (see 8.3.7).].

[TDD – If the RADIO LINK ADDITION REQUEST message includes the *Initial DL Transmission Power* IE, the Node B shall apply the given power to the transmission on each DL Channelisation Code and on each Time Slot of the RL when starting transmission until the UL synchronisation is achieved for the RL. If no *Initial DL Transmission power* IE is included, the Node B shall use any transmission power level currently used on already existing RL's for this UE.

No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22], chapter 4.2.3.3.).

If the RADIO LINK ADDITION REQUEST message includes the *Maximum DL power* IE, the Node B shall store this value and never transmit with a higher power on any DL Channelisation Code of the RL. If no *Maximum DL power* IE is included, any Maximum DL power stored for already existing RLs for this UE shall be applied.

If the RADIO LINK ADDITION REQUEST message includes the *Minimum DL power* IE, the Node B shall store this value and never transmit with a lower power on any DL Channelisation Code of the RL. If no *Minimum DL power* IE is included, any Minimum DL power stored for already existing RLs for this UE shall be applied.

[FDD - If the RADIO LINK ADDITION REQUEST message contains an *SSDT Cell Identity* IE the Node B shall activate SSDT, if supported, for the concerned new RL, with the indicated SSDT cell identity used for that RL.]

[FDD – If the RADIO LINK ADDITION REQUEST includes the *Compressed Mode Deactivation Flag* IE with value "On", the Node B shall not activate any CM pattern sequence in the new RLs. In all the other cases (Flag set to "Off" or not present), the on going CM measurement (if existing) shall be applied also to the added RLs.]

[FDD- If the RADIO LINK ADDITION REQUEST contains the *Transmission Gap Pattern Sequence Code Information* IE Node B shall use or not the alternate scrambling code as indicated for each DL Channelisation Code.]

[TDD – If the RADIO LINK ADDITION REQUEST message includes the *DL Time Slot ISCP Info* IE, the Node B shall use the indicated value when deciding the DL TX Power for each timeslot as specified in [21], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged].

If all requested RLs are successfully added, the Node B shall respond with a RADIO LINK ADDITION RESPONSE message.

[FDD – When more than one DL DPDCH are assigned per RL, the segmented physical channel shall be mapped on to DL DPDCHs according to [8]. When p number of DL DPDCHs are assigned to each RL, the first pair of DL Scrambling Code and FDD DL Channelisation Code Number corresponds to "*PhCH number 1*", the second to "*PhCH number 2*", and so on until the p th to "*PhCH number p*".]

[FDD – For each RL not having a common generation of the TPC commands in the DL with another RL, the Node B shall assign the *RL Set ID* IE included in the RADIO LINK ADDITION RESPONSE message a value that uniquely identifies the RL Set within the Node B Communication context.]

[FDD – For all RLs having a common generation of the TPC commands in the DL with another new or existing RL, the Node B shall assign the *RL Set ID* IE included in the RADIO LINK ADDITION RESPONSE message the same value. This value shall uniquely identify the RL Set within the Node B Communication context.]

In the case of combining an RL with existing RL(s) the Node B shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that the RL is combined. In this case the Reference RL ID shall be included to indicate one of the existing RLs that the new RL is combined with.

In the case of not combining an RL with existing RL(s), the Node B shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that no combining is done. In this case the Node B shall include both the Transport Layer Address and the binding ID for the transport bearer to be established for each DCH, [TDD - DSCH, USCH] of the RL in the RADIO LINK ADDITION RESPONSE message.

In case of coordinated DCH, the binding ID and the transport address shall be included for only one of the coordinated DCHs.

The Node B shall include in the RADIO LINK ADDITION RESPONSE message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DSCH [and USCH].

After sending of the RADIO LINK ADDITION RESPONSE message the Node B shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The Node B shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in 25.427.

[FDD – When *Diversity Mode* IE is "*STTD*", "*Closedloop mode1*", or "*Closedloop mode2*", the DRNC shall activate/deactivate the Transmit Diversity to each Radio Link in accordance with *Transmit Diversity Indication* IE]

[FDD – When *Transmit Diversity Indicator* IE is present Node B shall activate/deactivate the Transmit Diversity to each new Radio Link in accordance with the *Transmit Diversity Indicator* IE and the already known diversity mode.]

[FDD – After addition of the new RL(s), the UL out-of-sync algorithm defined in [10] shall for each of the previously existing and newly established RL Set(s) use the maximum value of the parameters N_OUTSYNC_IND and T_RLFAILURE, and the minimum value of the parameters N_INSYNC_IND, that are configured in the cells supporting the radio links of the RL Set].

8.3.1.3 Unsuccessful Operation

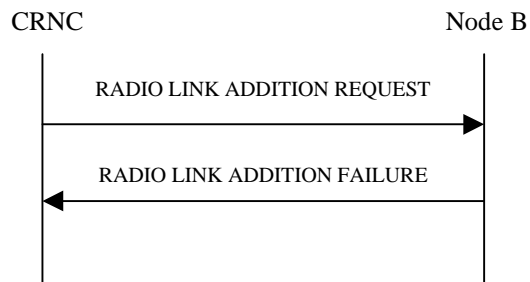


Figure 29: Radio Link Addition procedure: Unsuccessful Operation

If some RL(s) were established successfully, the Node B shall indicate this in the RADIO LINK ADDITION FAILURE message in the same way as in the RADIO LINK ADDITION RESPONSE message.

[FDD - If the RADIO LINK ADDITION REQUEST contains the *CM Deactivation Flag* IE with the value "On", and at least one of the new RL is added in one cell that has the same UARCFN of at least one cell with an already existing RL, the Node B shall regard the Radio Link Addition procedure as failed and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Invalid CM settings".]

Typical cause values are as follows:

Radio Network Layer Cause

- RL Already Activated/allocated
- Combining not supported
- Combining Resources not available
- Requested Tx Diversity Mode not supported
- UL SF not supported
- DL SF not supported
- Invalid CM Settings
- Reconfiguration CFN not elapsed
- CM not supported

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention
- Unspecified

- Control processing overload
- HW failure

9.1.36 RADIO LINK SETUP REQUEST

9.1.36.1 FDD message

9.1.36.2 TDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL CCTrCH Information		0 to <maxno CCTrCH>			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>UL DPCH Information		0..1			YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
DL CCTrCH Information		0 to <maxno CCTrCH>			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>TDD TPC DL Step Size	M		9.2.3.21		–	
>TPC CCTrCH List		0 to <maxnoC CCTrCH>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>DL DPCH information		0..1			YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
DCH Information	O		DCH TDD Information 9.2.3.4C		YES	reject
DSCH Information	O		DSCH TDD Information 9.2.3.5A		YES	reject
USCH Information	O		9.2.3.28		YES	reject
RL Information		1			YES	reject
>RL ID	M		9.2.1.53		–	

>C-ID	M		9.2.1.9		-	
>Frame Offset	M		9.2.1.31		-	
>Initial DL transmission Power	M		DL Power 9.2.1.21		-	
>Maximum DL power	M		DL Power 9.2.1.21		-	
>Minimum DL power	M		DL Power 9.2.1.21		-	
>DL Time Slot ISCP Info	Q		9.2.3.4F		=	
>DL Timeslot ISCP Information		<i>0..<maxno ofDLts></i>			-	
—>>Time slot	M		9.2.3.23		-	
—>>DL Timeslot ISCP	M		9.2.3.4B		-	

Range bound	Explanation
MaxnoCCTrCH	Number of CCTrCH for one UE.
<i>MaxnoofDLts</i>	<i>Maximum number of Downlink time slots per Radio Link</i>

9.1.39 RADIO LINK ADDITION REQUEST

9.1.39.1 FDD Message

9.1.39.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL CCTrCH Information		0 to <maxn o CCTrC H>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>UL DPCH Information		0..1			YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
DL CCTrCH Information		0 to <maxn o CCTrC H>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>DL DPCH information		0..1			YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
RL Information		1			YES	reject
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Diversity Control Field	M		9.2.1.25		–	
>Initial DL transmission Power	O		DL Power 9.2.1.21		–	
>Maximum DL power	O		DL Power 9.2.1.21		–	
>Minimum DL power	O		DL Power 9.2.1.21		–	
>DL Time Slot ISCP Info	O		9.2.3.4F		–	
>DL Timeslot ISCP Information		0..<maxn xnoofD Lts>			–	
—>>Time slot	M		9.2.3.23		–	
—>>DL Timeslot ISCP	M		9.2.3.4B		–	

Range bound	Explanation
MaxnoCCTrCH	Number of CCTrCH for one UE.
MaxnoofDLts	Maximum number of Downlink time slots per Radio Link

9.1.67 DL POWER TIMESLOT CONTROL REQUEST [TDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
DL Time Slot ISCP Info	M		9.2.3.4E		YES	ignore
DL Timeslot ISCP Information		1..<maxnoof DLts>			GLOBAL	ignore
>RL ID	M		9.2.1.53		–	
>Time slot	M		9.2.3.23		–	
>DL Timeslot ISCP	M		9.2.3.4B		–	

Range-Bound	Explanation
MaxnoofDLts	Maximum number of Downlink time slots per Radio Link

9.3.3 PDU Definitions

```
-- *****
--
-- PDU definitions for NBAP.
--
-- *****

NBAP-PDU-Contents {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=
```

```
***** TEXT SKIPPED *****
```

```
id-Active-Pattern-Sequence-Information,
id-AdjustmentRatio,
id-AICH-Information,
id-AICH-ParametersListIE-CTCH-ReconfRqstFDD,
id-AP-AICH-Information,
id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD,
id-BCH-Information,
id-BCCH-ModificationTime,
id-BlockingPriorityIndicator,
id-Cause,
id-CauseLevel-PSCH-ReconfFailureTDD,
id-CauseLevel-RL-AdditionFailureFDD,
id-CauseLevel-RL-AdditionFailureTDD,
id-CauseLevel-RL-ReconfFailure,
id-CauseLevel-RL-SetupFailureFDD,
id-CauseLevel-RL-SetupFailureTDD,
id-CCP-InformationItem-AuditRsp,
id-CCP-InformationList-AuditRsp,
id-CCP-InformationItem-ResourceStatusInd,
id-CDCA-ICH-Information,
id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD,
id-Cell-InformationItem-AuditRsp,
id-Cell-InformationItem-ResourceStatusInd,
id-Cell-InformationList-AuditRsp,
id-CellParameterID,
id-CFN,
id-CFNReportingIndicator,
id-C-ID,
id-Closed-Loop-Timing-Adjustment-Mode,
id-CommonMeasurementObjectType-CM-Rprt,
id-CommonMeasurementObjectType-CM-Rqst,
id-CommonMeasurementObjectType-CM-Rsp,
id-CommonMeasurementType,
id-CommonPhysicalChannelID,
id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD,
id-CommonPhysicalChannelType-CTCH-SetupRqstFDD,
id-CommonPhysicalChannelType-CTCH-SetupRqstTDD,
id-CommonTransportChannelType-CTCH-ReconfRqstTDD,
id-CommunicationContextInfoItem-Reset,
id-CommunicationControlPortID,
id-CommunicationControlPortInfoItem-Reset,
id-Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD,
id-ConfigurationGenerationID,
id-CPCH-Information,
id-CPCH-Parameters-CTCH-SetupRsp,
id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD,
id-CRNC-CommunicationContextID,
id-CriticalityDiagnostics,
id-DCHs-to-Add-FDD,
id-DCHs-to-Add-TDD,
id-DCH-AddList-RL-ReconfPrepTDD,
id-DCH-DeleteList-RL-ReconfPrepFDD,
id-DCH-DeleteList-RL-ReconfPrepTDD,
id-DCH-DeleteList-RL-ReconfRqstFDD,
id-DCH-DeleteList-RL-ReconfRqstTDD,
id-DCH-FDD-Information,
id-DCH-TDD-Information,
id-DCH-InformationResponse,
id-FDD-DCHs-to-Modify,
id-TDD-DCHs-to-Modify,
```

id-DedicatedMeasurementObjectType-DM-Rprt,
 id-DedicatedMeasurementObjectType-DM-Rqst,
 id-DedicatedMeasurementObjectType-DM-Rsp,
 id-DedicatedMeasurementType,
 id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,
 id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,
 id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,
 id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,
 id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD,
 id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD,
 id-DL-CCTrCH-InformationList-RL-SetupRqstTDD,
 id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,
 id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,
 id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,
 id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD,
 id-DL-DPCH-InformationDeleteListIE-RL-ReconfPrepTDD,
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 id-DL-DPCH-InformationList-RL-SetupRqstTDD,
 id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD,
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 id-DL-DPCH-Information-RL-ReconfRqstFDD,
 id-DL-DPCH-Information-RL-SetupRqstFDD,
 id-DL-ReferencePowerInformationItem-DL-PC-Rqst,
 id-DLReferencePower,
 id-DLReferencePowerList-DL-PC-Rqst,
 id-DL-TPC-Pattern01Count,
 id-DPCHConstant,
 id-DSCH-AddItem-RL-ReconfPrepFDD,
 id-DSCH-AddItem-RL-ReconfRqstFDD,
 id-DSCHs-to-Add-FDD,
 id-DSCH-DeleteItem-RL-ReconfPrepFDD,
 id-DSCH-DeleteItem-RL-ReconfRqstFDD,
 id-DSCH-DeleteList-RL-ReconfPrepFDD,
 id-DSCH-ID,
 id-DSCHs-to-Add-TDD,
 id-DSCH-Information-DeleteList-RL-ReconfPrepTDD,
 id-DSCH-Information-ModifyList-RL-ReconfPrepTDD,
 id-DSCH-InformationResponse,
 id-DSCH-FDD-Information,
 id-DSCH-TDD-Information,
 id-DSCH-ModifyItem-RL-ReconfPrepFDD,
 id-DSCH-ModifyItem-RL-ReconfRqstFDD,
 id-DSCH-ModifyList-RL-ReconfPrepFDD,
 id-End-Of-Audit-Sequence-Indicator,
 id-FACH-Information,
 id-FACHItem-CTCH-SetupRsp,
 id-FACH-ParametersList-CTCH-ReconfRqstTDD,
 id-FACH-ParametersList-CTCH-SetupRsp,
 id-FACH-ParametersListIE-CTCH-ReconfRqstFDD,
 id-FACH-ParametersListIE-CTCH-SetupRqstFDD,
 id-FACH-ParametersListIE-CTCH-SetupRqstTDD,
 id-IndicationType-ResourceStatusInd,
 id-InnerLoopDLPCStatus,
 id-limited-power-increase-information-Cell-SetupRqstFDD,
 id-Local-Cell-ID,
 id-Local-Cell-Group-InformationItem-AuditRsp,
 id-Local-Cell-Group-InformationItem-ResourceStatusInd,
 id-Local-Cell-Group-InformationItem2-ResourceStatusInd,
 id-Local-Cell-Group-InformationList-AuditRsp,
 id-Local-Cell-InformationItem-AuditRsp,
 id-Local-Cell-InformationItem-ResourceStatusInd,
 id-Local-Cell-InformationItem2-ResourceStatusInd,
 id-Local-Cell-InformationList-AuditRsp,
 id-AdjustmentPeriod,
 id-MaxAdjustmentStep,
 id-MaximumTransmissionPower,
 id-MeasurementFilterCoefficient,
 id-MeasurementID,
 id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst,
 id-NodeB-CommunicationContextID,
 id-P-CCPCH-Information,
 id-P-CPICH-Information,
 id-P-SCH-Information,
 id-PCCPCH-Information-Cell-ReconfRqstTDD,
 id-PCCPCH-Information-Cell-SetupRqstTDD,
 id-PCH-Parameters-CTCH-ReconfRqstTDD,

id-PCH-Parameters-CTCH-SetupRsp,
id-PCH-ParametersItem-CTCH-ReconfRqstFDD,
id-PCH-ParametersItem-CTCH-SetupRqstFDD,
id-PCH-ParametersItem-CTCH-SetupRqstTDD,
id-PCH-Information,
id-PCPCH-Information,
id-PCPCH-ParametersList-CTCH-ReconfRqstFDD,
id-PICH-ParametersItem-CTCH-ReconfRqstFDD,
id-PD,
id-PDSCH-Information-AddListIE-PSCH-ReconfRqst,
id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst,
id-PDSCHSets-AddList-PSCH-ReconfRqst,
id-PDSCHSets-DeleteList-PSCH-ReconfRqst,
id-PDSCHSets-ModifyList-PSCH-ReconfRqst,
id-PICH-Information,
id-PICH-Parameters-CTCH-ReconfRqstTDD,
id-PICH-ParametersItem-CTCH-SetupRqstTDD,
id-PowerAdjustmentType,
id-PRACH-Information,
id-PRACHConstant,
id-PRACH-ParametersItem-CTCH-SetupRqstTDD,
id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD,
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD,
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD,
id-PrimaryCPICH-Information-Cell-ReconfRqstFDD,
id-PrimaryCPICH-Information-Cell-SetupRqstFDD,
id-PrimarySCH-Information-Cell-ReconfRqstFDD,
id-PrimarySCH-Information-Cell-SetupRqstFDD,
id-PrimaryScramblingCode,
id-ProcedureScopeType-DL-PC-Rqst,
id-SCH-Information-Cell-ReconfRqstTDD,
id-SCH-Information-Cell-SetupRqstTDD,
id-PUSCH-Information-AddListIE-PSCH-ReconfRqst,
id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst,
id-PUSCHConstant,
id-PUSCHSets-AddList-PSCH-ReconfRqst,
id-PUSCHSets-DeleteList-PSCH-ReconfRqst,
id-PUSCHSets-ModifyList-PSCH-ReconfRqst,
id-RACH-Information,
id-RACHItem-CTCH-SetupRsp,
id-RACH-Parameters-CTCH-SetupRsp,
id-RACH-ParametersItem-CTCH-SetupRqstFDD,
id-RACH-ParameterItem-CTCH-SetupRqstTDD,
id-ReportCharacteristics,
id-Reporting-Object-RL-FailureInd,
id-Reporting-Object-RL-RestoreInd,
id-ResetIndicator,
id-RL-ID,
id-RL-InformationItem-DM-Rprt,
id-RL-InformationItem-DM-Rqst,
id-RL-InformationItem-DM-Rsp,
id-RL-InformationItem-RL-AdditionRqstFDD,
id-RL-InformationItem-RL-DeletionRqst,
id-RL-InformationItem-RL-FailureInd,
id-RL-InformationItem-RL-PreemptRequiredInd,
id-RL-InformationItem-RL-ReconfPrepFDD,
id-RL-InformationItem-RL-ReconfRqstFDD,
id-RL-InformationItem-RL-RestoreInd,
id-RL-InformationItem-RL-SetupRqstFDD,
id-RL-InformationList-RL-AdditionRqstFDD,
id-RL-InformationList-RL-DeletionRqst,
id-RL-InformationList-RL-PreemptRequiredInd,
id-RL-InformationList-RL-ReconfPrepFDD,
id-RL-InformationList-RL-ReconfRqstFDD,
id-RL-InformationList-RL-SetupRqstFDD,
id-RL-InformationResponseItem-RL-AdditionRspFDD,
id-RL-InformationResponseItem-RL-ReconfReady,
id-RL-InformationResponseItem-RL-ReconfRsp,
id-RL-InformationResponseItem-RL-SetupRspFDD,
id-RL-InformationResponseList-RL-AdditionRspFDD,
id-RL-InformationResponseList-RL-ReconfReady,
id-RL-InformationResponseList-RL-ReconfRsp,
id-RL-InformationResponseList-RL-SetupRspFDD,
id-RL-InformationResponse-RL-AdditionRspTDD,
id-RL-InformationResponse-RL-SetupRspTDD,
id-RL-Information-RL-AdditionRqstTDD,
id-RL-Information-RL-ReconfRqstTDD,
id-RL-Information-RL-ReconfPrepTDD,

id-RL-Information-RL-SetupRqstTDD,
 id-RL-ReconfigurationFailureItem-RL-ReconfFailure,
 id-RL-Set-InformationItem-DM-Rprt,
 id-RL-Set-InformationItem-DM-Rsp,
 id-RL-Set-InformationItem-RL-FailureInd,
 id-RL-Set-InformationItem-RL-RestoreInd,
 id-S-CCPCH-Information,
 id-S-CPICH-Information,
 id-SCH-Information,
 id-S-SCH-Information,
 id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD,
 id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD,
 id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD,
 id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD,
 id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD,
 id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD,
 id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD,
 id-SecondarySCH-Information-Cell-ReconfRqstFDD,
 id-SecondarySCH-Information-Cell-SetupRqstFDD,
 id-SegmentInformationListIE-SystemInfoUpdate,
 id-SFN,
 id-SFNReportingIndicator,
 id-ShutdownTimer,
 id-Start-Of-Audit-Sequence-Indicator,
 id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD,
 id-Successful-RL-InformationRespItem-RL-SetupFailureFDD,
 id-Successful-RL-InformationRespList-RL-AdditionFailureFDD,
 id-Successful-RL-InformationRespList-RL-SetupFailureFDD,
 id-Synchronisation-Configuration-Cell-ReconfRqst,
 id-Synchronisation-Configuration-Cell-SetupRqst,
 id-SyncCase,
 id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH,
 id-T-Cell,
 id-TFCI2-Bearer-Information-RL-SetupRqstFDD,
 id-TFCI2-BearerInformationResponse,
 id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD,
 id-Transmission-Gap-Pattern-Sequence-Information,
 id-TimeSlotConfigurationList-Cell-ReconfRqstTDD,
 id-TimeSlotConfigurationList-Cell-SetupRqstTDD,
 id-TimeslotISCPInfoList-RL-PC-RqstTDD,
 id-TimingAdvanceApplied,
 id-TransmissionDiversityApplied,
 id-UARFCNforNt,
 id-UARFCNforNd,
 id-UARFCNforNu,
 id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,
 id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,
 id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,
 id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,
 id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD,
 id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD,
 id-UL-CCTrCH-InformationList-RL-SetupRqstTDD,
 id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,
 id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,
 id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,
 id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD,
 id-UL-DPCH-InformationItem-RL-AdditionRqstTDD,
 id-UL-DPCH-InformationList-RL-SetupRqstTDD,
 id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD,
 id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD,
 id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD,
 id-UL-DPCH-Information-RL-ReconfPrepFDD,
 id-UL-DPCH-Information-RL-ReconfRqstFDD,
 id-UL-DPCH-Information-RL-SetupRqstFDD,
 id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD,
 id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD,
 id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD,
 id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD,
 id-Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD,
 id-Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD,
 id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD,
 id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD,
 id-USCH-Information-Add,
 id-USCH-Information-AddList-RL-ReconfRqstTDD,
 id-USCH-Information-DeleteList-RL-ReconfPrepTDD,
 id-USCH-Information-DeleteList-RL-ReconfRqstTDD,
 id-USCH-Information-ModifyList-RL-ReconfPrepTDD,
 id-USCH-Information-ModifyList-RL-ReconfRqstTDD,

```

id-USCH-InformationResponse,
id-USCH-Information,
id-TimeslotISCPInfo,

```

```

maxNrOfCCTrCHs,
maxNrOfCodes,
maxNrOfCPCHs,
maxNrOfDCHs,
maxNrOfDLCodes,
maxNrOfDLTSS,
maxNrOfDPCHs,
maxNrOfDSCHs,
maxNrOfFACHs,
maxNrOfRLs,
maxNrOfRLSets,
maxNrOfPCPCHs,
maxNrOfPDSCHs,
maxNrOfPUSCHs,
maxNrOfPDSCHSets,
maxNrOfPUSCHSets,
maxNrOfSCCPCHs,
maxNrOfULTSS,
maxNrOfUSCHs,
maxAPSigNum,
maxCPCHCell,
maxFACHCell,
maxNoofLen,
maxRACHCell,
maxPCPCHCell,
maxPRACHCell,
maxSCCPCHCell,
maxSCPICHCell,
maxCellinNodeB,
maxCCPinNodeB,
maxCommunicationContext,
maxLocalCellinNodeB,
maxNrOfSlotFormatsPRACH,
maxIB,
maxIBSEG

```

```
FROM NBAP-Constants;
```

```
***** TEXT SKIPPED *****
```

```

-- *****
--
-- RADIO LINK SETUP REQUEST TDD
--
-- *****

```

```

RadioLinkSetupRequestTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkSetupRequestTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupRequestTDD-Extensions}}
    OPTIONAL,
    ...
}

```

```

RadioLinkSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID          CRITICALITY reject          TYPE
      CRNC-CommunicationContextID                PRESENCE mandatory    }|
    { ID id-UL-CCTrCH-InformationList-RL-SetupRqstTDD CRITICALITY notify          TYPE
      UL-CCTrCH-InformationList-RL-SetupRqstTDD PRESENCE optional    }|
    { ID id-DL-CCTrCH-InformationList-RL-SetupRqstTDD CRITICALITY notify          TYPE
      DL-CCTrCH-InformationList-RL-SetupRqstTDD PRESENCE optional    }|
    { ID id-DCH-TDD-Information                    CRITICALITY reject          TYPE    DCH-TDD-
      Information                                  PRESENCE optional          }|
    { ID id-DSCH-TDD-Information                    CRITICALITY reject          TYPE    DSCH-TDD-
      Information                                  PRESENCE optional          }|
    { ID id-USCH-Information                        CRITICALITY reject          TYPE    USCH-Information
      PRESENCE optional          }|
    { ID id-RL-Information-RL-SetupRqstTDD          CRITICALITY reject          TYPE
      RL-Information-RL-SetupRqstTDD              PRESENCE mandatory    },
    ...
}

```

```

RadioLinkSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

UL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE(1..maxNrOfCCTrCHs)) OF
  ProtocolIE-Single-Container{{ UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD }}

UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD CRITICALITY notify TYPE
  UL-CCTrCH-InformationItem-RL-SetupRqstTDD PRESENCE mandatory}
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  tFCS TFCS,
  tFCI-Coding TFCI-Coding,
  punctureLimit PunctureLimit,
  uL-DPCH-Information UL-DPCH-Information-RL-SetupRqstTDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { UL-CCTrCH-
InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-DPCH-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{{ UL-DPCH-InformationIE-RL-
SetupRqstTDD }}

UL-DPCH-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationList-RL-SetupRqstTDD CRITICALITY notify TYPE UL-DPCH-
InformationItem-RL-SetupRqstTDD PRESENCE mandatory }
}

UL-DPCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  tdd-DPCHOffset TDD-DPCHOffset,
  uL-Timeslot-Information UL-Timeslot-Information,
  iE-Extensions ProtocolExtensionContainer { { UL-DPCH-InformationItem-
RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-
Single-Container{{ DL-CCTrCH-InformationItemIE-RL-SetupRqstTDD }}

DL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD CRITICALITY notify
  TYPE DL-CCTrCH-InformationItem-RL-SetupRqstTDD PRESENCE mandatory}
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  tFCS TFCS,
  tFCI-Coding TFCI-Coding,
  punctureLimit PunctureLimit,
  tdd-TPC-DownlinkStepSize TDD-TPC-DownlinkStepSize,
  cCTrCH-TPCList CCTrCH-TPCList-RL-SetupRqstTDD OPTIONAL,
  dL-DPCH-Information DL-DPCH-Information-RL-SetupRqstTDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { DL-CCTrCH-
InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CCTrCH-TPCList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCItem-RL-
SetupRqstTDD

CCTrCH-TPCItem-RL-SetupRqstTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  iE-Extensions ProtocolExtensionContainer { { CCTrCH-TPCItem-RL-
SetupRqstTDD-ExtIEs} } OPTIONAL,

```



```

}
...
}
CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
DL-DPCH-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{{ DL-DPCH-InformationIE-RL-
SetupRqstTDD }}
DL-DPCH-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
{ ID id-DL-DPCH-InformationList-RL-SetupRqstTDD CRITICALITY notify TYPE DL-DPCH-
InformationItem-RL-SetupRqstTDD PRESENCE mandatory }
}
DL-DPCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
repetitionPeriod RepetitionPeriod,
repetitionLength RepetitionLength,
tdd-DPCHOffset TDD-DPCHOffset,
dL-Timeslot-Information DL-Timeslot-Information,
iE-Extensions ProtocolExtensionContainer { { DL-DPCH-InformationItem-
RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
...
}
DL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
RL-Information-RL-SetupRqstTDD ::= SEQUENCE {
rL-ID RL-ID,
c-ID C-ID,
frameOffset FrameOffset,
initialDL-transmissionPower DL-Power,
maximumDL-power DL-Power,
minimumDL-power DL-Power,
timeslotISCPInfoList TimeslotISCPInfoList-RL-SetupRqstTDD OPTIONAL
dL-TimeSlotISCPInfo DL-TimeSlotISCPInfo OPTIONAL,
iE-Extensions ProtocolExtensionContainer { { RL-Information-RL-
SetupRqstTDD-ExtIEs} } OPTIONAL,
...
}
TimeslotISCPInfoList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF TimeslotISCPInfoItem-
RL-SetupRqstTDD
TimeslotISCPInfoItem-RL-SetupRqstTDD ::= SEQUENCE {
timeslot TimeSlot,
dL TimeslotISCP DL TimeslotISCP,
iE-Extensions ProtocolExtensionContainer { {TimeslotISCPInfoItem-RL-SetupRqstTDD-
ExtIEs} } OPTIONAL,
...
}
TimeslotISCPInfoItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
RL-Information-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK ADDITION REQUEST TDD
--
-- *****

RadioLinkAdditionRequestTDD ::= SEQUENCE {
protocolIEs ProtocolIE-Container {{RadioLinkAdditionRequestTDD-IEs}},
protocolExtensions ProtocolExtensionContainer {{RadioLinkAdditionRequestTDD-Extensions}}
OPTIONAL,
...
}
RadioLinkAdditionRequestTDD-IEs NBAP-PROTOCOL-IES ::= {

```

```

    { ID      id-NodeB-CommunicationContextID          CRITICALITY  reject
      TYPE    NodeB-CommunicationContextID            PRESENCE     mandatory  }|
    { ID      id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD  CRITICALITY  reject
      TYPE    UL-CCTrCH-InformationList-RL-AdditionRqstTDD  PRESENCE     optional   }|
    { ID      id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD  CRITICALITY  reject
      TYPE    DL-CCTrCH-InformationList-RL-AdditionRqstTDD  PRESENCE     optional   }|
    { ID      id-RL-Information-RL-AdditionRqstTDD             CRITICALITY  reject
      TYPE    RL-Information-RL-AdditionRqstTDD             PRESENCE     mandatory  },
    ...
}

RadioLinkAdditionRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-
InformationItem-RL-AdditionRqstTDD

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    uL-DPCH-Information      UL-DPCH-InformationList-RL-AdditionRqstTDD
    OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { { UL-CCTrCH-
InformationItem-RL-AdditionRqstTDD-ExtIEs } }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationList-RL-AdditionRqstTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-
InformationItemIE-RL-AdditionRqstTDD }}

UL-DPCH-InformationItemIE-RL-AdditionRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID      id-UL-DPCH-InformationItem-RL-AdditionRqstTDD          CRITICALITY  notify
      TYPE    UL-DPCH-InformationItem-RL-AdditionRqstTDD            PRESENCE     mandatory}
}

UL-DPCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tdd-DPCHOffset            TDD-DPCHOffset,
    uL-Timeslot-Information    UL-Timeslot-Information,
    iE-Extensions            ProtocolExtensionContainer { { UL-DPCH-
InformationItem-RL-AdditionRqstTDD-ExtIEs } }
    OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-
InformationItem-RL-AdditionRqstTDD

DL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    dL-DPCH-Information      DL-DPCH-InformationList-RL-AdditionRqstTDD
    OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { { DL-CCTrCH-
InformationItem-RL-AdditionRqstTDD-ExtIEs } }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationList-RL-AdditionRqstTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-
InformationItemIE-RL-AdditionRqstTDD }}

DL-DPCH-InformationItemIE-RL-AdditionRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID      id-DL-DPCH-InformationItem-RL-AdditionRqstTDD          CRITICALITY  notify
      TYPE    DL-DPCH-InformationItem-RL-AdditionRqstTDD            PRESENCE     mandatory}
}

DL-DPCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {

```

```

    repetitionPeriod                RepetitionPeriod,
    repetitionLength                RepetitionLength,
    tdd-DPCHOffset                 TDD-DPCHOffset,
    dL-Timeslot-Information         DL-Timeslot-Information,
    iE-Extensions                  ProtocolExtensionContainer { { DL-DPCH-
InformationItem-RL-AdditionRqstTDD-ExtIEs } }          OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    c-ID                C-ID,
    frameOffset         FrameOffset,
    diversityControlField DiversityControlField,
    initial-DL-Transmission-Power DL-Power OPTIONAL,
    maximumDL-Power     DL-Power OPTIONAL,
    minimumDL-Power     DL-Power OPTIONAL,
    timeslotISCPInfoList TimeslotISCPInfoList RL-AdditionRqstTDD OPTIONAL
    dL-TimeSlotISCPInfo DL-TimeSlotISCPInfo OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { { RL-information-RL-
AdditionRqstTDD-ExtIEs } }          OPTIONAL,
    ...
}

RL-information-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TimeslotISCPInfoList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF
TimeslotISCPInfoItem-RL-AdditionRqstTDD

TimeslotISCPInfoItem-RL-AdditionRqstTDD ::= SEQUENCE {
    timeslot                TimeSlot,
    dL-TimeSlotISCP        DL-TimeSlotISCP,
    iE-Extensions         ProtocolExtensionContainer { {TimeslotISCPInfoItem-
RL-AdditionRqstTDD-ExtIEs} }          OPTIONAL,
    ...
}

TimeslotISCPInfoItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DL POWER TIMESLOT CONTROL REQUEST TDD
--
-- *****

DL-PowerTimeslotControlRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{DL-PowerTimeslotControlRequest-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{DL-PowerTimeslotControlRequest-
Extensions}}          OPTIONAL,
    ...
}

DL-PowerTimeslotControlRequest-IEs NBAP-PROTOCOL-IEs ::= {
    { ID id-NodeB-CommunicationContextID          CRITICALITY ignore          TYPE          NodeB-
CommunicationContextID          PRESENCE          mandatory } |
    { ID id-TimeslotISCPInfoList-DL-PC-RqstTDD    CRITICALITY ignore          TYPE
TimeslotISCPInfoList-DL-PC-RqstTDD-DL-TimeSlotISCPInfo          PRESENCE          mandatory },
    ...
}

TimeslotISCPInfoList-DL-PC-RqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF TimeslotISCPInfoItem-DL-
PC-RqstTDD

TimeslotISCPInfoItem-DL-PC-RqstTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    timeslot                TimeSlot,
    dL-TimeSlotISCP        DL-TimeSlotISCP,

```

```


    if-Extensions ProtocolExtensionContainer { {TimeslotISCPInfoItem-DL-PC-RqstTDD-
    ExtIEs} } OPTIONAL,
    ...
}


```

```

TimeslotISCPInfoItem-DL-PC-RqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

DL-PowerTimeslotControlRequest-Extensions NBAP-PROTOC
OL-EXTENSION ::= {
    ...
}

```

***** TEXT SKIPPED *****

```

-- *****
--
-- IEs
--
-- *****

```

id-AICH-Information	ProtocolIE-ID ::= 0
id-AICH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 1
id-BCH-Information	ProtocolIE-ID ::= 7
id-BCH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 8
id-BCCH-ModificationTime	ProtocolIE-ID ::= 9
id-BlockingPriorityIndicator	ProtocolIE-ID ::= 10
id-Cause	ProtocolIE-ID ::= 13
id-CCP-InformationItem-AuditRsp	ProtocolIE-ID ::= 14
id-CCP-InformationList-AuditRsp	ProtocolIE-ID ::= 15
id-CCP-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 16
id-Cell-InformationItem-AuditRsp	ProtocolIE-ID ::= 17
id-Cell-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 18
id-Cell-InformationList-AuditRsp	ProtocolIE-ID ::= 19
id-CellParameterID	ProtocolIE-ID ::= 23
id-CFN	ProtocolIE-ID ::= 24
id-C-ID	ProtocolIE-ID ::= 25
id-CommonMeasurementObjectType-CM-Rpirt	ProtocolIE-ID ::= 31
id-CommonMeasurementObjectType-CM-Rqst	ProtocolIE-ID ::= 32
id-CommonMeasurementObjectType-CM-Rsp	ProtocolIE-ID ::= 33
id-CommonMeasurementType	ProtocolIE-ID ::= 34
id-CommonPhysicalChannelID	ProtocolIE-ID ::= 35
id-CommonPhysicalChannelType-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 36
id-CommonPhysicalChannelType-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 37
id-CommonTransportChannelType-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 38
id-CommunicationControlPortID	ProtocolIE-ID ::= 40
id-ConfigurationGenerationID	ProtocolIE-ID ::= 43
id-CRNC-CommunicationContextID	ProtocolIE-ID ::= 44
id-CriticalityDiagnostics	ProtocolIE-ID ::= 45
id-DCHs-to-Add-FDD	ProtocolIE-ID ::= 48
id-DCH-AddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 49
id-DCHs-to-Add-TDD	ProtocolIE-ID ::= 50
id-DCH-DeleteList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 52
id-DCH-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 53
id-DCH-DeleteList-RL-ReconfRqstFDD	ProtocolIE-ID ::= 54
id-DCH-DeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 55
id-DCH-FDD-Information	ProtocolIE-ID ::= 56
id-DCH-TDD-Information	ProtocolIE-ID ::= 57
id-DCH-InformationResponse	ProtocolIE-ID ::= 59
id-FDD-DCHs-to-Modify	ProtocolIE-ID ::= 62
id-TDD-DCHs-to-Modify	ProtocolIE-ID ::= 63
id-DCH-ModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 65
id-DedicatedMeasurementObjectType-DM-Rpirt	ProtocolIE-ID ::= 67
id-DedicatedMeasurementObjectType-DM-Rqst	ProtocolIE-ID ::= 68
id-DedicatedMeasurementObjectType-DM-Rsp	ProtocolIE-ID ::= 69
id-DedicatedMeasurementType	ProtocolIE-ID ::= 70
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD	ProtocolIE-ID ::= 72
id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD	ProtocolIE-ID ::= 73
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 76
id-DL-DPCH-InformationItem-RL-AdditionRqstTDD	ProtocolIE-ID ::= 77
id-DL-DPCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 79
id-DL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 81
id-DL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 82
id-DL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 83
id-DL-ReferencePowerInformationItem-DL-PC-Rqst	ProtocolIE-ID ::= 84

id-DLReferencePower	ProtocolIE-ID ::= 85
id-DLReferencePowerList-DL-PC-Rqst	ProtocolIE-ID ::= 86
id-DSCH-AddItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 87
id-DSCH-AddItem-RL-ReconfRqstFDD	ProtocolIE-ID ::= 88
id-DSCHs-to-Add-FDD	ProtocolIE-ID ::= 89
id-DSCH-DeleteItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 91
id-DSCH-DeleteItem-RL-ReconfRqstFDD	ProtocolIE-ID ::= 92
id-DSCH-DeleteList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 93
id-DSCH-ID	ProtocolIE-ID ::= 95
id-DSCHs-to-Add-TDD	ProtocolIE-ID ::= 96
id-DSCH-Information-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 98
id-DSCH-Information-ModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 100
id-DSCH-InformationResponse	ProtocolIE-ID ::= 105
id-DSCH-FDD-Information	ProtocolIE-ID ::= 106
id-DSCH-TDD-Information	ProtocolIE-ID ::= 107
id-DSCH-ModifyItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 108
id-DSCH-ModifyItem-RL-ReconfRqstFDD	ProtocolIE-ID ::= 109
id-DSCH-ModifyList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 112
id-End-Of-Audit-Sequence-Indicator	ProtocolIE-ID ::= 113
id-FACH-Information	ProtocolIE-ID ::= 116
id-FACH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 117
id-FACHItem-CTCH-SetupRsp	ProtocolIE-ID ::= 118
id-FACH-ParametersList-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 120
id-FACH-ParametersListIE-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 121
id-FACH-ParametersListIE-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 122
id-IndicationType-ResourceStatusInd	ProtocolIE-ID ::= 123
id-Local-Cell-ID	ProtocolIE-ID ::= 124
id-Local-Cell-Group-InformationItem-AuditRsp	ProtocolIE-ID ::= 2
id-Local-Cell-Group-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 3
id-Local-Cell-Group-InformationItem2-ResourceStatusInd	ProtocolIE-ID ::= 4
id-Local-Cell-Group-InformationList-AuditRsp	ProtocolIE-ID ::= 5
id-Local-Cell-InformationItem-AuditRsp	ProtocolIE-ID ::= 125
id-Local-Cell-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 126
id-Local-Cell-InformationItem2-ResourceStatusInd	ProtocolIE-ID ::= 127
id-Local-Cell-InformationList-AuditRsp	ProtocolIE-ID ::= 128
id-AdjustmentPeriod	ProtocolIE-ID ::= 129
id-MaxAdjustmentStep	ProtocolIE-ID ::= 130
id-MaximumTransmissionPower	ProtocolIE-ID ::= 131
id-MeasurementFilterCoefficient	ProtocolIE-ID ::= 132
id-MeasurementID	ProtocolIE-ID ::= 133
id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst	ProtocolIE-ID ::= 134
id-NodeB-CommunicationContextID	ProtocolIE-ID ::= 143
id-P-CCPCH-Information	ProtocolIE-ID ::= 144
id-P-CCPCH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 145
id-P-CPICH-Information	ProtocolIE-ID ::= 146
id-P-CPICH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 147
id-P-SCH-Information	ProtocolIE-ID ::= 148
id-PCCPCH-Information-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 150
id-PCCPCH-Information-Cell-SetupRqstTDD	ProtocolIE-ID ::= 151
id-PCH-Parameters-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 155
id-PCH-ParametersItem-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 156
id-PCH-ParametersItem-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 157
id-PCH-Information	ProtocolIE-ID ::= 158
id-PD	ProtocolIE-ID ::= 160
id-PDSCH-Information-AddListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 161
id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 162
id-PDSCHSets-AddList-PSCH-ReconfRqst	ProtocolIE-ID ::= 163
id-PDSCHSets-DeleteList-PSCH-ReconfRqst	ProtocolIE-ID ::= 164
id-PDSCHSets-ModifyList-PSCH-ReconfRqst	ProtocolIE-ID ::= 165
id-PICH-Information	ProtocolIE-ID ::= 166
id-PICH-Parameters-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 168
id-PowerAdjustmentType	ProtocolIE-ID ::= 169
id-PRACH-Information	ProtocolIE-ID ::= 170
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 175
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 176
id-PrimaryCPICH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 177
id-PrimaryCPICH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 178
id-PrimarySCH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 179
id-PrimarySCH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 180
id-PrimaryScramblingCode	ProtocolIE-ID ::= 181
id-ProcedureScopeType-DL-PC-Rqst	ProtocolIE-ID ::= 182
id-SCH-Information-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 183
id-SCH-Information-Cell-SetupRqstTDD	ProtocolIE-ID ::= 184
id-PUSCH-Information-AddListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 185
id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 186
id-PUSCHSets-AddList-PSCH-ReconfRqst	ProtocolIE-ID ::= 187
id-PUSCHSets-DeleteList-PSCH-ReconfRqst	ProtocolIE-ID ::= 188
id-PUSCHSets-ModifyList-PSCH-ReconfRqst	ProtocolIE-ID ::= 189

id-RACH-Information	ProtocolIE-ID ::= 190
id-RACHItem-CTCH-SetupRsp	ProtocolIE-ID ::= 192
id-RACH-ParametersItem-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 196
id-RACH-ParameterItem-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 197
id-ReportCharacteristics	ProtocolIE-ID ::= 198
id-Reporting-Object-RL-FailureInd	ProtocolIE-ID ::= 199
id-Reporting-Object-RL-RestoreInd	ProtocolIE-ID ::= 200
id-RL-ID	ProtocolIE-ID ::= 201
id-RL-InformationItem-DM-Rprt	ProtocolIE-ID ::= 202
id-RL-InformationItem-DM-Rqst	ProtocolIE-ID ::= 203
id-RL-InformationItem-DM-Rsp	ProtocolIE-ID ::= 204
id-RL-InformationItem-RL-AdditionRqstFDD	ProtocolIE-ID ::= 205
id-RL-informationItem-RL-DeletionRqst	ProtocolIE-ID ::= 206
id-RL-InformationItem-RL-FailureInd	ProtocolIE-ID ::= 207
id-RL-InformationItem-RL-PreemptRequiredInd	ProtocolIE-ID ::= 286
id-RL-InformationItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 208
id-RL-InformationItem-RL-ReconfRqstFDD	ProtocolIE-ID ::= 209
id-RL-InformationItem-RL-RestoreInd	ProtocolIE-ID ::= 210
id-RL-InformationItem-RL-SetupRqstFDD	ProtocolIE-ID ::= 211
id-RL-InformationList-RL-AdditionRqstFDD	ProtocolIE-ID ::= 212
id-RL-informationList-RL-DeletionRqst	ProtocolIE-ID ::= 213
id-RL-InformationList-RL-PreemptRequiredInd	ProtocolIE-ID ::= 237
id-RL-InformationList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 214
id-RL-InformationList-RL-ReconfRqstFDD	ProtocolIE-ID ::= 215
id-RL-InformationList-RL-SetupRqstFDD	ProtocolIE-ID ::= 216
id-RL-InformationResponseItem-RL-AdditionRspFDD	ProtocolIE-ID ::= 217
id-RL-InformationResponseItem-RL-ReconfReady	ProtocolIE-ID ::= 218
id-RL-InformationResponseItem-RL-ReconfRsp	ProtocolIE-ID ::= 219
id-RL-InformationResponseItem-RL-SetupRspFDD	ProtocolIE-ID ::= 220
id-RL-InformationResponseList-RL-AdditionRspFDD	ProtocolIE-ID ::= 221
id-RL-InformationResponseList-RL-ReconfReady	ProtocolIE-ID ::= 222
id-RL-InformationResponseList-RL-ReconfRsp	ProtocolIE-ID ::= 223
id-RL-InformationResponseList-RL-SetupRspFDD	ProtocolIE-ID ::= 224
id-RL-InformationResponse-RL-AdditionRspTDD	ProtocolIE-ID ::= 225
id-RL-InformationResponse-RL-SetupRspTDD	ProtocolIE-ID ::= 226
id-RL-Information-RL-AdditionRqstTDD	ProtocolIE-ID ::= 227
id-RL-Information-RL-ReconfRqstTDD	ProtocolIE-ID ::= 228
id-RL-Information-RL-ReconfPrepTDD	ProtocolIE-ID ::= 229
id-RL-Information-RL-SetupRqstTDD	ProtocolIE-ID ::= 230
id-RL-ReconfigurationFailureItem-RL-ReconfFailure	ProtocolIE-ID ::= 236
id-RL-Set-InformationItem-DM-Rprt	ProtocolIE-ID ::= 238
id-RL-Set-InformationItem-DM-Rsp	ProtocolIE-ID ::= 240
id-RL-Set-InformationItem-RL-FailureInd	ProtocolIE-ID ::= 241
id-RL-Set-InformationItem-RL-RestoreInd	ProtocolIE-ID ::= 242
id-S-CCPCH-Information	ProtocolIE-ID ::= 247
id-S-CPICH-Information	ProtocolIE-ID ::= 249
id-SCH-Information	ProtocolIE-ID ::= 251
id-S-SCH-Information	ProtocolIE-ID ::= 253
id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 257
id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 258
id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 259
id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 260
id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD	ProtocolIE-ID ::= 261
id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 262
id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD	ProtocolIE-ID ::= 263
id-SecondarySCH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 264
id-SecondarySCH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 265
id-SegmentInformationListIE-SystemInfoUpdate	ProtocolIE-ID ::= 266
id-SFN	ProtocolIE-ID ::= 268
id-ShutdownTimer	ProtocolIE-ID ::= 269
id-Start-Of-Audit-Sequence-Indicator	ProtocolIE-ID ::= 114
id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD	ProtocolIE-ID ::= 270
id-Successful-RL-InformationRespItem-RL-SetupFailureFDD	ProtocolIE-ID ::= 271
id-Successful-RL-InformationRespList-RL-AdditionFailureFDD	ProtocolIE-ID ::= 272
id-Successful-RL-InformationRespList-RL-SetupFailureFDD	ProtocolIE-ID ::= 273
id-SyncCase	ProtocolIE-ID ::= 274
id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH	ProtocolIE-ID ::= 275
id-T-Cell	ProtocolIE-ID ::= 276
id-TimeSlotConfigurationList-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 277
id-TimeSlotConfigurationList-Cell-SetupRqstTDD	ProtocolIE-ID ::= 278
id-TransmissionDiversityApplied	ProtocolIE-ID ::= 279
id-UARFCNforNt	ProtocolIE-ID ::= 280
id-UARFCNforNd	ProtocolIE-ID ::= 281
id-UARFCNforNu	ProtocolIE-ID ::= 282
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD	ProtocolIE-ID ::= 284
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD	ProtocolIE-ID ::= 285
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 288
id-UL-DPCH-InformationItem-RL-AdditionRqstTDD	ProtocolIE-ID ::= 289

id-UL-DPCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 291
id-UL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 293
id-UL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 294
id-UL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 295
id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD	ProtocolIE-ID ::= 296
id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD	ProtocolIE-ID ::= 297
id-Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD	ProtocolIE-ID ::= 298
id-Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD	ProtocolIE-ID ::= 299
id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD	ProtocolIE-ID ::= 300
id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD	ProtocolIE-ID ::= 301
id-USCH-Information-Add	ProtocolIE-ID ::= 302
id-USCH-Information-AddList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 303
id-USCH-Information-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 304
id-USCH-Information-DeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 305
id-USCH-Information-ModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 306
id-USCH-Information-ModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 307
id-USCH-InformationResponse	ProtocolIE-ID ::= 309
id-USCH-Information	ProtocolIE-ID ::= 310
id-Active-Pattern-Sequence-Information	ProtocolIE-ID ::= 315
id-AICH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 316
id-AdjustmentRatio	ProtocolIE-ID ::= 317
id-AP-AICH-Information	ProtocolIE-ID ::= 320
id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 322
id-FACH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 323
id-CauseLevel-PSCH-ReconfFailureTDD	ProtocolIE-ID ::= 324
id-CauseLevel-RL-AdditionFailureFDD	ProtocolIE-ID ::= 325
id-CauseLevel-RL-AdditionFailureTDD	ProtocolIE-ID ::= 326
id-CauseLevel-RL-ReconfFailure	ProtocolIE-ID ::= 327
id-CauseLevel-RL-SetupFailureFDD	ProtocolIE-ID ::= 328
id-CauseLevel-RL-SetupFailureTDD	ProtocolIE-ID ::= 329
id-CDCA-ICH-Information	ProtocolIE-ID ::= 330
id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 332
id-Closed-Loop-Timing-Adjustment-Mode	ProtocolIE-ID ::= 333
id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 334
id-Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD	ProtocolIE-ID ::= 335
id-CPCH-Information	ProtocolIE-ID ::= 336
id-CPCH-Parameters-CTCH-SetupRsp	ProtocolIE-ID ::= 342
id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 343
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 346
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 347
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 348
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 349
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 350
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 351
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 352
id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 353
id-DL-DPCH-InformationDeleteListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 354
id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 355
id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 356
id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 357
id-DL-TPC-Pattern01Count	ProtocolIE-ID ::= 358
id-DPCHConstant	ProtocolIE-ID ::= 359
id-FACH-ParametersList-CTCH-SetupRsp	ProtocolIE-ID ::= 362
id-Limited-power-increase-information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 369
id-PCH-Parameters-CTCH-SetupRsp	ProtocolIE-ID ::= 374
id-PCH-ParametersItem-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 375
id-PCPCH-Information	ProtocolIE-ID ::= 376
id-PCPCH-ParametersList-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 379
id-PICH-ParametersItem-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 380
id-PRACHConstant	ProtocolIE-ID ::= 381
id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 383
id-PUSCHConstant	ProtocolIE-ID ::= 384
id-RACH-Parameters-CTCH-SetupRsp	ProtocolIE-ID ::= 385
id-Synchronisation-Configuration-Cell-ReconfRqst	ProtocolIE-ID ::= 393
id-Synchronisation-Configuration-Cell-SetupRqst	ProtocolIE-ID ::= 394
id-Transmission-Gap-Pattern-Sequence-Information	ProtocolIE-ID ::= 395
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 396
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 397
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 398
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 399
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 400
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 401
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 402
id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 403
id-UL-DPCH-InformationDeleteListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 404
id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 405
id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 406
id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 407

id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD	ProtocolIE-ID ::= 408
id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD	ProtocolIE-ID ::= 409
id-CommunicationContextInfoItem-Reset	ProtocolIE-ID ::= 412
id-CommunicationControlPortInfoItem-Reset	ProtocolIE-ID ::= 414
id-ResetIndicator	ProtocolIE-ID ::= 416
id-TFCI2-Bearer-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 417
id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD	ProtocolIE-ID ::= 418
id-TFCI2-BearerInformationResponse	ProtocolIE-ID ::= 419
id-TimingAdvanceApplied	ProtocolIE-ID ::= 287
id-CFNReportingIndicator	ProtocolIE-ID ::= 6
id-SFNReportingIndicator	ProtocolIE-ID ::= 11
id-InnerLoopDLPCStatus	ProtocolIE-ID ::= 12
id-TimeslotISCPInfoList-RL-PC-RqstTDD	ProtocolIE-ID ::= 283
id-PICH-ParametersItem-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 167
id-PRACH-ParametersItem-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 20

END

CHANGE REQUEST

⌘ **25.433 CR 365** ⌘ rev **-** ⌘ Current version: **3.4.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ DL power clarification		
Source:	⌘ R-WG3		
Work item code:	⌘	Date:	⌘ February 2001
Category:	⌘ F	Release:	⌘ R99
<p>Use <u>one</u> of the following categories:</p> <p>F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>	

Reason for change:	⌘ During RAN3#18, it was noted that there is an unclarity in the NBAP specification w.r.t the minimum/maximum/initial DL power. It was agreed that it should be clarified that these DL power IE's refer to the DPCH and e.g. not to the PDSCH. Note: the RNSAP specification is already clear in this respect.
Summary of change:	⌘ In the tabular format, where applicable, a clarification is included.
Consequences if not approved:	⌘ Unclarity in the specification could lead to multi-vendor problems. Backward compatibility: this CR is backward compatible with the intended behaviour of NBAP V3.4.1.

Clauses affected:	⌘ 9.1.36; 9.1.39; 9.1.42; 9.1.47; 9.1.51		
Other specs affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> 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/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

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

9.1.36 RADIO LINK SETUP REQUEST

9.1.36.1 FDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL DPCH Information		1			YES	reject
>UL Scrambling Code	M		9.2.2.59		–	
>Min UL Channelisation Code length	M		9.2.2.22		–	
>Max Number of UL DPDCHs	C – CodeLen		9.2.2.21		–	
>puncture Limit	M		9.2.1.50	For UL	–	
>TFCS	M		9.2.1.58	for UL	–	
>UL DPCCH Slot Format	M		9.2.2.57		–	
> UL SIR Target	M		UL SIR 9.2.2.58		–	
>Diversity mode	M		9.2.2.9		–	
>SSDT cell ID Length	O		9.2.2.45		–	
>S Field Length	C-FBI		9.2.2.40		–	
DL DPCH Information		1			YES	reject
>TFCS	M		9.2.1.58	For DL	–	
>DL DPCH Slot Format	M		9.2.2.10		–	
>TFCI signalling mode	M		9.2.2.50		–	
>TFCI presence	C- SlotFormat		9.2.1.57		–	
>Multiplexing Position	M		9.2.2.23		–	
>PDSCH RL ID	C-DSCH		RL ID 9.2.1.53		–	
>PDSCH code mapping	C-DSCH		9.2.2.25		–	
>Power Offset Information		1			–	
>>PO1	M		Power Offset 9.2.2.29	Power offset for the TFCI bits	–	
>>PO2	M		Power Offset 9.2.2.29	Power offset for the TPC bits	–	
>>PO3	M		Power Offset 9.2.2.29	Power offset for the pilot bits	–	
>FDD TPC DL Step Size	M		9.2.2.16		–	
>Limited Power Increase	M		9.2.2.18A		–	
>Inner Loop DL PC Status	M		9.2.2.18B		–	
DCH Information	M		DCH FDD Information 9.2.2.4D		YES	reject
DSCH Information	O		DSCH FDD Information 9.2.2.13B		YES	reject
TFCI2 bearer information		0..1			-	

>ToAWS	M		9.2.1.61		-	
>ToAWE	M		9.2.1.60		-	
RL Information		1 to <maxnoof RLS>			EACH	notify
>RL ID	M		9.2.1.53		-	
>C-ID	M		9.2.1.9		-	
>First RLS Indicator	M		9.2.2.16A		-	
>Frame Offset	M		9.2.1.31		-	
>Chip Offset	M		9.2.2.2		-	
>Propagation Delay	O		9.2.2.35		-	
>Diversity Control Field	C – NotFirstRL		9.2.1.25		-	
>DL Code Information	M		FDD DL Code Information 9.2.2.14A		-	
>Initial DL transmission Power	M		DL Power 9.2.1.21	<u>Initial power on DPCH</u>	-	
>Maximum DL power	M		DL Power 9.2.1.21	<u>Maximum allowed power on DPCH</u>	-	
>Minimum DL power	M		DL Power 9.2.1.21	<u>Minimum allowed power on DPCH</u>	-	
>SSDT Cell Identity	O		9.2.2.44		-	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2.53		-	
Transmission Gap Pattern Sequence Information	O		9.2.2.53A		YES	reject
Active Pattern Sequence Information	O		9.2.2.A		YES	reject

Condition	Explanation
CodeLen	This IE is present only if "Min UL Channelisation Code length" equals to 4
FBI	This IE shall be present if the <i>UL DPCCH Slot Format</i> IE indicates a slot format with 1 or 2 FBI bits (see ref.[7])
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information.
DSCH	This IE is present only if the <i>DSCH Information</i> IE is present
SlotFormat	This IE is only present if the DL DPCH slot format is equal to any of the value 12 to 16.
Diversity mode	This IE is present unless <i>Diversity Mode</i> IE in <i>UL DPCH Information</i> IE is "none"

Range bound	Explanation
MaxnoofRLs	Maximum number of RLS for one UE.

9.1.36.2 TDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL CTrCH Information		0 to <maxno CTrCH>			EACH	notify
>CTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>UL DPCH Information		0..1			YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
DL CTrCH Information		0 to <maxno CTrCH>			EACH	notify
>CTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>TDD TPC DL Step Size	M		9.2.3.21		–	
>TPC CTrCH List		0 to <maxnoC CTrCH>		List of uplink CTrCH which provide TPC	–	
>>TPC CTrCH ID	M		CTrCH ID 9.2.3.3		–	
>DL DPCH information		0..1			YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
DCH Information	O		DCH TDD Information 9.2.3.4C		YES	reject
DSCH Information	O		DSCH TDD Information 9.2.3.5A		YES	reject
USCH Information	O		9.2.3.28		YES	reject
RL Information		1			YES	reject
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Initial DL transmission Power	M		DL Power 9.2.1.21	Initial power on DPCH	–	

>Maximum DL power	M		DL Power 9.2.1.21	<u>Maximum allowed power on DPCH</u>	–	
>Minimum DL power	M		DL Power 9.2.1.21	<u>Minimum allowed power on DPCH</u>	–	
>DL Timeslot ISCP Information		<i>0..<maxno ofDLts></i>			–	
>>Time slot	M		9.2.3.23		–	
>>DL Timeslot ISCP	M		9.2.3.4B		–	

Range bound	Explanation
MaxnoCCTrCH	Number of CCTrCH for one UE.
<i>MaxnoofDLts</i>	Maximum number of Downlink time slots per Radio Link

9.1.39 RADIO LINK ADDITION REQUEST

9.1.39.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
Compressed Mode Deactivation Flag	O		9.2.2.3A		YES	reject
RL Information		1..<maxnoofRL-1>			EACH	notify
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Chip Offset	M		9.2.2.2		–	
>Diversity Control Field	M		9.2.1.25		–	
>DL Code Information	M		FDD DL Code Information 9.2.2.14A		–	
>Initial DL transmission power	O		DL Power 9.2.1.21	<u>Initial power on DPCH</u>	–	
>Maximum DL power	O		DL Power 9.2.1.21	<u>Maximum allowed power on DPCH</u>	–	
>Minimum DL power	O		DL Power 9.2.1.21	<u>Minimum allowed power on DPCH</u>	–	
>SSDT Cell Identity	O		9.2.2.44		–	
>Transmit Diversity Indicator	O		9.2.2.53		–	

Range bound	Explanation
<i>MaxnoofRL</i>	Maximum number of RLs for one UE
<i>MaxnoofDL Codes</i>	Maximum number of DL code information

9.1.39.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL CCTrCH Information		0 to <maxn o CCTrC H>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>UL DPCH Information		0..1			YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
DL CCTrCH Information		0 to <maxn o CCTrC H>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>DL DPCH information		0..1			YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
RL Information		1			YES	reject
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Diversity Control Field	M		9.2.1.25		–	
>Initial DL transmission Power	O		DL Power 9.2.1.21	<u>Initial power on DPCH</u>	–	
>Maximum DL power	O		DL Power 9.2.1.21	<u>Maximum allowed power on DPCH</u>	–	
>Minimum DL power	O		DL Power 9.2.1.21	<u>Minimum allowed power on DPCH</u>	–	
>DL Timeslot ISCP Information		0..<maxnoofDLts>			–	
>>Time slot	M		9.2.3.23		–	
>>DL Timeslot ISCP	M		9.2.3.4B		–	

Range bound	Explanation
MaxnoCCTrCH	Number of CCTrCH for one UE.
MaxnoofDLts	Maximum number of Downlink time slots per Radio Link

9.1.42 RADIO LINK RECONFIGURATION PREPARE

9.1.42.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL DPCH Information		0..1			YES	reject
>UL Scrambling code	O		9.2.2.59		–	
>UL SIR Target	O		UL SIR 9.2.2.58		–	
>Min UL Channelisation Code Length	O		9.2.2.22		–	
>Max Number of UL DPDCHs	C – CodeLen		9.2.2.20		–	
>Puncture Limit	O		9.2.1.50	For UL	–	
>TFCS	O		9.2.1.58		–	
>UL DPCCH Slot Format	O		9.2.2.57		–	
>Diversity mode	O		9.2.2.9		–	
>SSDT Cell Identity Length	O		9.2.2.45		–	
>S-Field Length	O		9.2.2.40		–	
DL DPCH Information		0..1			YES	reject
>TFCS	O		9.2.1.58		–	
>DL DPCH Slot Format	O		9.2.2.10		–	
>TFCI Signalling Mode	O		9.2.2.50		–	
>TFCI presence	C-Slot Format		9.2.1.57		–	
>Multiplexing Position	O		9.2.2.23		–	
>PDSCH code mapping	O		9.2.2.25		–	
>PDSCH RL ID	O		RL ID 9.2.1.53		–	
>Limited Power Increase	O		9.2.2.18A		–	
DCHs to Modify	O		DCHs FDD to Modify 9.2.2.4E		YES	reject
DCHs to Add	O		DCH FDD Information 9.2.2.4D		YES	reject
DCHs to Delete		0..<max noofDC Hs>			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
DSCH to modify		0..<max noofDS CHs>			YES	reject
>DSCH ID	M		9.2.1.27		–	
>Transport Format Set	O		9.2.1.59	For the DL.	–	
>Allocation/Retention Priority	O		9.2.1.1A		–	
>Frame Handling Priority	O		9.2.1.30		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	

>Transport Bearer Request Indicator	M		9.2.1.62A		–	
DSCH to add	O		DSCH FDD Information 9.2.2.13B		YES	reject
DSCH to Delete		<i>0..<max noofDS CHs></i>			YES	reject
>DSCH ID	M		9.2.1.27		–	
TFCI2 bearer specific information		0..1			YES	reject
>CHOICE <i>TFCI2 bearer action</i>	M				–	
>> <i>Add or modify</i>					–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	
>> <i>Delete</i>			NULL		–	
RL Information		<i>0..<max noofRLs ></i>			EACH	reject
>RL ID	M		9.2.1.53		–	
>DL Code Information	O		FDD DL Code Information 9.2.2.14A		–	
>Maximum DL Power	O		DL Power 9.2.1.21	<u>Maximum allowed power on DPCH</u>	–	
>Minimum DL Power	O		DL Power 9.2.1.21	<u>Minimum allowed power on DPCH</u>	–	
>SSDT Indication	O		9.2.2.47		–	
>SSDT Cell Identity	C–SSDTIndON		9.2.2.44		–	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2.53		–	
Transmission Gap Pattern Sequence Information	O		9.2.2.53A		YES	reject

Condition	Explanation
SSDTIndON	The IE may be present if the SSDT Indication is set to 'SSDT Active in the UE'.
CodeLen	This IE is present only if "Min UL Channelisation Code length" equals to 4.
SlotFormat	This IE is only present if the DL DPCH slot format is equal to any of the value 12 to 16.
SF/2	This IE is present only if the <i>Transmission Gap Pattern Sequence Information</i> IE is included and the indicated Downlink Compressed Mode method for at least one of the included Transmission Gap Pattern Sequence is set to "SF/2".
Diversity mode	This IE is present unless <i>Diversity Mode</i> IE in <i>UL DPCH Information</i> group, unless it is equal to "none"

Range Bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs for a UE.
<i>MaxnoofDSCHs</i>	Maximum number of DSCHs for a UE.
<i>MaxnoofRLs</i>	Maximum number of RLs for a UE.

9.1.42.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL CCTrCH to Add		0..<maxno of CCTrC Hs>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>UL DPCH Information		0..1			YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
UL CCTrCH to Modify		0..<maxno of CCTrC Hs>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>TFCI Coding	O		9.2.3.22		–	
>Puncture Limit	O		9.2.1.50		–	
>UL DPCH to add		0..1			YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
>UL DPCH to modify		0..1			YES	reject
>>Repetition Period	O		9.2.3.16		–	
>>Repetition Length	O		9.2.3.15		–	
>>TDD DPCH Offset	O		9.2.3.19A		–	
>>UL Timeslot Information		0 to <maxno of ULTs>			–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift and Burst Type	O		9.2.3.7		–	
>>>TFCI Presence	O		9.2.1.57		–	
>>>UL Code Information		0 to <maxno OfDPC H>			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code	O		9.2.3.19		–	
>UL DPCH to delete		0..			GLOBAL	reject

		<maxno of DPCHs >				
>>DPCH ID	M		9.2.3.5		–	
UL CCTrCH to Delete		0.. <maxno of CCTrCHs>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
DL CCTrCH to Add		0.. <maxno of CCTrCHs>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>PunctureLimit	M		9.2.1.50		–	
>TPC CCTrCH List		0 to <maxno CCTrCH>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>DL DPCH Information		0..1			YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
DL CCTrCH to Modify		0.. <maxno of CCTrCHs>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3.		–	
>TFCS	O		9.2.1.58		–	
>TFCI Coding	O		9.2.3.22		–	
>PunctureLimit	O		9.2.1.50		–	
>TPC CCTrCH List		0 to <maxno CCTrCH>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>DL DPCH to add		0..1			YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
>DL DPCH to modify		0..1			YES	reject
>>Repetition Period	O		9.2.3.16		–	
>>Repetition Length	O		9.2.3.15		–	
>>TDD DPCH Offset	O		9.2.3.19A		–	
>>DL Timeslot Information		0 .. <maxno ofDLTs>			–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift and	O		9.2.3.7		–	

Burst Type						
>>>TFCI Presence	O		9.2.1.57		–	
>>>DL Code Information		0 .. <maxno OFDPC H>			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code	O		9.2.3.19		–	
>DL DPCH to delete		0.. <maxno of DPCHs >			GLOBAL	reject
>>DPCH ID	M		9.2.3.5		–	
DL CCTrCH to Delete		0.. <maxno of CCTrC Hs			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
DCHs to Modify	O		DCHs TDD to Modify 9.2.3.4D		YES	reject
DCHs to Add	O		DCH TDD Information 9.2.3.4C		YES	reject
DCHs to Delete		0.. <i><max noofDC Hs></i>			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
DSCH Information to modify		0 .. <Maxno of DSCHs >			GLOBAL	reject
>DSCH ID	M		9.2.1.27		–	
>CCTrCH ID	O		9.2.3.3	DL CCTrCH in which the DSCH is mapped	–	
>Transport Format Set	O		9.2.1.59		–	
> Allocation/Retention Priority	O		9.2.1.1A		–	
>Frame Handling Priority	O		9.2.1.30		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
DSCH Information to add	O		DSCH TDD Information 9.2.3.5A		YES	reject
DSCH Information to delete		0 .. <Maxno of DSCHs >			GLOBAL	reject
>DSCH ID	M		9.2.1.27		–	
USCH Information to modify		0 .. <Maxno of USCHs >			GLOBAL	reject
>USCH ID	M		9.2.3.27		–	

>Transport Format Set	O		9.2.1.59		–	
> Allocation/Retention Priority	O		9.2.1.1A		–	
>CCTrCH ID	O		9.2.3.2	UL CCTrCH in which the USCH is mapped	–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
USCH Information to add	O		USCH Information 9.2.3.28		YES	reject
USCH Information to delete		0 .. <Maxno of USCHs >			GLOBAL	reject
>USCH ID	M		9.2.3.27		–	
RL Information		0..1			YES	reject
>RL ID	M		9.2.1.53		–	
>Maximum Downlink Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum Downlink Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	

Condition	Explanation
CoorDCH	This IE is present only this DCH is part of a set of coordinated DCHs (number of instances of DCH Specific Info is greater than 1)

Range Bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs for a UE.
<i>MaxnoofCCTrCHs</i>	Maximum number of CCTrCHs for a UE.
<i>MaxnoofDPCHs</i>	Maximum number of DPCHs in one CCTrCH.
<i>MaxnoofDSCHs</i>	Maximum number of DSCHs for one UE
<i>MaxnoofUSCHs</i>	Maximum number of USCHs for one UE
<i>MaxnoofDLts</i>	Maximum number of Downlink time slots per Radio Link
<i>MaxnoofULts</i>	Maximum number of Uplink time slots per Radio Link

9.1.47 RADIO LINK RECONFIGURATION REQUEST

9.1.47.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL DPCH Information		0..1			YES	reject
>TFCS	O		9.2.1.58	For the UL.	–	
DL DPCH Information		0..1			YES	reject
>TFCS	O		9.2.1.58	For the DL.	–	
>TFCI Signalling Mode	O		9.2.2.50		–	
>Limited Power Increase	O		9.2.2.18A		–	
DCHs to Modify	O		DCHs FDD to Modify 9.2.2.4E		YES	reject
DCHs to Add	O		DCH FDD Information 9.2.2.4D		YES	reject
DCHs to Delete		0..<maxnoofDCHs>			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
Radio Link Information		0..<maxnoofRLs>			EACH	reject
>RL ID	M		9.2.1.53		–	
>Maximum DL Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum DL Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>DL Code Information	C-SF/2		FDD DL Code Information 9.2.2.14A		–	
Transmission Gap Pattern Sequence Information	O		9.2.2.53A		YES	reject

Range Bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs for a UE.
<i>MaxnoofRLs</i>	Maximum number of RLs for a UE.

Condition	Explanation
SF/2	This IE group is present only if the <i>Transmission Gap Pattern Sequence Information</i> IE is included and the indicated Downlink Compressed Mode method for at least one of the included Transmission Gap Pattern Sequence is set to "SF/2".

9.1.47.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL CCTrCH to modify		<i>0..<maxn oofCCTr CHs></i>			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>Puncture Limit	O		9.2.1.50		–	
UL CCTrCH to delete		<i>0..<maxn oofCCTr CHs></i>			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
DL CCTrCH to modify		<i>0..<maxn oofCCTr CHs></i>			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>Puncture Limit	O		9.2.1.50		–	
DL CCTrCH to delete		<i>0..<maxn oofCCTr CHs></i>			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
DCHs to Modify	O		DCHs TDD to Modify 9.2.3.4D		YES	reject
DCHs to Add	O		DCH TDD Information 9.2.3.4C		YES	reject
DCHs to Delete		<i>0..<maxn oofDSCH s></i>			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
RL Information		<i>0..1</i>			YES	reject
>RL ID	M		9.2.1.53		–	
>Maximum Downlink Power	O		DL Power 9.2.1.21	<u>Maximum allowed power on DPCH</u>	–	
>Minimum Downlink Power	O		DL Power 9.2.1.21	<u>Minimum allowed power on DPCH</u>	–	

Range bound	Explanation
<i>MaxnoofCCTrCHs</i>	Maximum number of CCTrCHs for a UE.

9.1.51 DL POWER CONTROL REQUEST [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
Power Adjustment Type	M		9.2.2.27		YES	ignore
DL Reference Power	C-Common		DL power 9.2.1.21	Power on DPCH	YES	Ignore
Inner Loop DL PC Status	O		9.2.2.18B		YES	ignore
DL Reference Power Information	C-Individual	1..<maxnoof RLs>			GLOBAL	ignore
>RL ID	M		9.2.1.53		–	
>DL Reference Power	M		DL power 9.2.1.21	Power on DPCH	–	
Max Adjustment Step	C-CommonOrIndividual		9.2.2.20		YES	ignore
Adjustment Period	C-CommonOrIndividual		9.2.2.A		YES	ignore
Adjustment Ratio	C-CommonOrIndividual		9.2.2.B		YES	ignore

Condition	Explanation
Common	This IE is present only "Adjustment Type " equals to 'Common'
Individual	This IE is present only "Adjustment Type " equals to 'Individual'
CommonOrIndividual	This IE is present only "Adjustment Type " equals to 'Common' or 'Individual'

Range Bound	Explanation
MaxnoofRLs	Maximum number of Radio Links for a UE

CR-Form-v3

CHANGE REQUEST

⌘ **25.433 CR 367** ⌘ rev **-** ⌘ Current version: **3.4.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Modification of Context ID presence in RESET REQUEST		
Source:	⌘ R-WG3		
Work item code:	⌘	Date:	⌘ February 2001
Category:	⌘ F	Release:	⌘ R99
Use <u>one</u> of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)	

Reason for change:	⌘ CR 299r2 was approved by TSG RAN #10. However that CR lacks revision marks to indicate the change of a IE presence from conditional to mandatory in the Reset Request message in 9.1.65, so it was not completely implemented. This CR fixes this problem.
Summary of change:	⌘ Section 9.1.65 is aligned to the intention of CR 299r2.
Consequences if not approved:	⌘ There would be a misalignment between the tabular format and the ASN.1 regarding the Reset Request message. Backward compatibility: the CR is backward compatible with NBAP V3.4.1, as the ASN.1 takes precedence over the tabular format according to subclause 9.1.1.

Clauses affected:	⌘ 9.1.65		
Other specs affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> 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/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

9.1.65 RESET REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CHOICE <i>Reset Indicator</i>	M				YES	ignore
> <i>CommunicationContext</i>					–	
>> Communication Context Information		1..<maxCommunicationContext>			EACH	reject
>>>CHOICE <i>Communication Context Type</i>	M				–	
>>>>CRNC <i>Communication Context</i>					–	
>>>>>CRNC <i>Communication Context ID</i>	C-ifULM		9.2.1.18		–	
>>>>Node B <i>Communication Context</i>					–	
>>>>>Node B <i>Communication Context ID</i>	C-ifDLM		9.2.1.48		–	
> <i>CommunicationControl Port</i>					–	
>> Communication Control Port Information		1..<maxCCPinNodeB>			EACH	reject
>>>Communication <i>Control Port ID</i>	M		9.2.1.15		–	
> <i>Node B</i>			NULL		–	

Range bound	Explanation
ifDL	This IE is only present when message is sent by the CRNC.
ifUL	This IE is only present when message is sent by the Node B.
1..maxCommunicationContext	Maximum number of communication contexts that can exist in the Node-B
1.. maxCCPinNodeB	Maximum number of communication control ports that can exist in the Node B

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

10 Handling of unknown, unforeseen and erroneous protocol data

10.1 General

Protocol Error cases can be divided into three classes:

- Transfer Syntax Error
- Abstract Syntax Error
- Logical Error

Protocol errors can occur in the following functions within a receiving node:

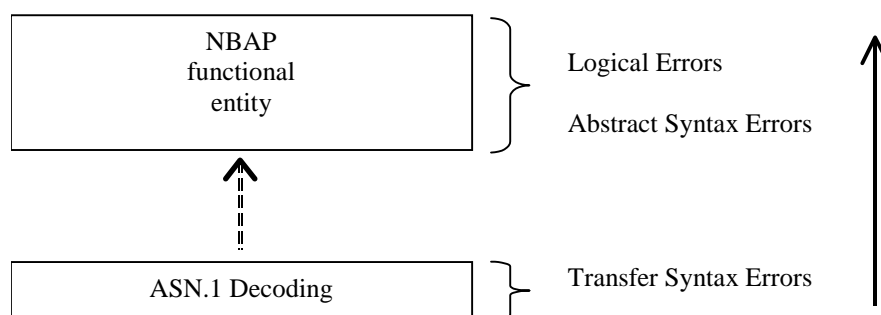


Figure 38: Protocol Errors in NBAP.

10.2 Transfer Syntax Error

A Transfer Syntax Error occurs when the receiver is not able to decode the received physical message. Transfer syntax errors are always detected in the process of ASN.1 decoding. If a Transfer Syntax Error occurs, the receiver should initiate Error Indication procedure with appropriate cause value for the Transfer Syntax protocol error.

Examples for Transfer Syntax Errors are:

- Violation of value ranges in ASN.1 definition of messages. e.g.: If an IE has a defined value range of 0 to 10 (ASN.1: INTEGER (0..10)), and 12 will be received, then this will be treated as a transfer syntax error.
- Violation in list element constraints. e.g.: If a list is defined as containing 1 to 10 elements, and 12 elements will be received, than this case will be handled as a transfer syntax error.
- Missing mandatory elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message).
- Wrong order of elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message).

10.3 Abstract Syntax Error

10.3.1 General

An Abstract Syntax Error occurs when the receiving functional NBAP entity:

1. receives IEs or IE groups that cannot be understood (unknown id);
2. receives IEs for which the logical range is violated (e.g.: ASN.1 definition: 0 to 15, the logical range is 0 to 10 (values 11 to 15 are undefined), and 12 will be received; this case will be handled as an abstract syntax error using criticality information sent by the originator of the message);

3. does not receive IEs or IE groups but according to the specified presence of the concerning object, the IEs or IE groups should have been present in the received message;
4. receives IEs or IE groups that are defined to be part of that message in wrong order or with too many occurrences of the same IE or IE group.

Cases 1 and 2 (not comprehended IE/IE group) are handled based on received Criticality information. Case 3 (missing IE/IE group) is handled based on Criticality information and Presence information for the missing IE/IE group specified in the version of the specification used by the receiver. Case 4 (IEs or IE groups in wrong order or with too many occurrences) results in rejecting the procedure.

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error that belong to cases 1-3 act according to the Criticality Information and Presence Information for the IE/IE group due to which Abstract Syntax Error occurred in accordance with subclauses 10.3.4 and 10.3.5. The handling of case 4 is specified in subclause 10.3.6.

10.3.2 Criticality Information

In the NBAP messages there is criticality information set for individual IEs and/or IE groups. This criticality information instructs the receiver how to act when receiving an IE or an IE group that is not comprehended, i.e. the entire item (IE or IE group) which is not (fully or partially) comprehended shall be treated in accordance with its own criticality information as specified in chapter 10.3.4.

In addition, the criticality information is used in case of the missing IE/IE group abstract syntax error (see subclause 10.3.5).

The receiving node shall take different actions depending on the value of the Criticality Information. The three possible values of the Criticality Information for an IE/IE group are:

- Reject IE
- Ignore IE and Notify Sender
- Ignore IE

The following rules restrict when a receiving entity may consider an IE, an IE group or an EP not comprehended (not implemented), and when action based on criticality information is applicable:

1. IE or IE group: When one new or modified IE or IE group is implemented for one EP from a standard version, then other new or modified IEs or IE groups specified for that EP in that standard version shall be considered comprehended by the receiving entity (some may still remain unsupported).

Note that this restriction is applicable to a sending entity for constructing messages.

2. EP: The comprehension of different EPs within a standard version or between different standard versions is not mandated. Any EP that is not supported may be considered not comprehended, even if another EP from that standard version is comprehended, and action based on criticality shall be applied.

10.3.3 Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, NBAP specifies separately if the presence of these IEs/IE groups is optional or mandatory with respect to RNS application by means of the presence field of the concerning object of class NBAP-PROTOCOL-IES, NBAP-PROTOCOL-IES-PAIR, NBAP-PROTOCOL-EXTENSION or NBAP-PRIVATE-IES.

The presence field of the indicated classes supports three values:

1. Optional;
2. Conditional;
3. Mandatory.

If an IE/IE group is not included in a received message and the presence of the IE/IE group is mandatory or the presence is conditional and the condition is true according to the version of the specification used by the receiver, an abstract syntax error occurs due to a missing IE/IE group.

10.3.4 Not comprehended IE/IE group

10.3.4.1 Procedure ID

The receiving node shall treat the different types of received criticality information of the *Procedure ID* according to the following:

Reject IE:

- If a message is received with a *Procedure ID* marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall reject the procedure using the Error Indication procedure.

Ignore IE and Notify Sender:

- If a message is received with a *Procedure ID* marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the procedure and initiate the Error Indication procedure.

Ignore IE:

- If a message is received with a *Procedure ID* marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the procedure.

When using the Error Indication procedure to reject a procedure or to report an ignored procedure it shall include the *Procedure ID IE*, the *Triggering Message IE*, and the *Procedure Criticality IE* in the *Criticality Diagnostics IE*.

10.3.4.2 IEs other than the Procedure ID

The receiving node shall treat the different types of received criticality information of an IE/IE group other than the *Procedure ID* according to the following:

Reject IE:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the rejection of one or more IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall terminate the procedure and initiate the Error Indication procedure.
- If a *response* message is received containing one or more IEs/IE groups marked with "*Reject IE*" that the receiving node does not comprehend, the receiving node shall initiate local error handling.

Ignore IE and Notify Sender:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups and report in the response message of the procedure that one or more IEs/IE groups have been ignored.
- if a message *initiating* a procedure that does not have a message to report the outcome of the procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and initiate the Error Indication procedure to report that one or more IEs/IE groups have been ignored.

- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and initiate the Error Indication procedure.

Ignore IE:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using the understood IEs/IE groups.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. The *Repetition Number* IE shall be included in the *Information Element Criticality Diagnostics* IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure ID* IE, the *Triggering Message* IE, *Procedure Criticality* IE, the *Transaction Id* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. The *Repetition Number* IE shall be included in the *Information Element Criticality Diagnostics* IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

10.3.5 Missing IE or IE group

The receiving node shall treat the missing IE/IE group according to the criticality information for the missing IE/IE group in the received message specified in the version of this specification used by the receiver:

Reject IE:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Reject IE*"; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the missing IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure.
- if a received message *initiating* a procedure that does not have a message to report unsuccessful outcome is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall **terminate the procedure and** initiate the Error Indication procedure.
- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall initiate local error handling.

Ignore IE and Notify Sender:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and report in the response message of the procedure that one or more IEs/IE groups were missing.
- if a received message *initiating* a procedure that does not have a message to report the outcome of the procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.
- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall initiate the Error Indication procedure.

Ignore IE:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure ID* IE, the *Triggering Message* IE, *Procedure Criticality* IE, the *Transaction Id* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group.

10.3.6 IEs or IE groups received in wrong order or with too many occurrences

If a message with IEs or IE groups in wrong order or with too many occurrences is received, the receiving node shall behave according to the following:

- If a message *initiating* a procedure is received containing IEs or IE groups in wrong order or with too many occurrences, none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the cause value "Abstract Syntax Error (Falsely Constructed Message)" using the message normally used to report unsuccessful outcome of the procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing IEs or IE groups in wrong order or with too many occurrences, the receiving node shall **terminate the procedure and** initiate the Error Indication procedure, and use cause value "Abstract Syntax Error (Falsely Constructed Message)".
- If a *response* message is received containing IEs or IE groups in wrong order or with too many occurrences, the receiving node shall initiate local error handling.

10.4 Logical Error

Logical error situations occur when a message is comprehended correctly, but the information contained within the message is not valid (i.e. semantic error), or describes a procedure which is not compatible with the state of the receiver. In these conditions, the following behaviour shall be performed (unless otherwise specified) as defined by the class of the elementary procedure, irrespective of the criticality of the IEs/IE groups containing the erroneous values.

Class 1:

Where the logical error occurs in a request message of a class 1 procedure, and the procedure has a failure message, the failure message shall be sent with an appropriate cause value.

Typical cause values are:

- Protocol Causes:
 1. Semantic Error
 2. Message not compatible with receiver state

Where the logical error is contained in a request message of a class 1 procedure, and the procedure does not have a failure message, the **procedure shall be terminated and the** ERROR INDICATION procedure shall be initiated with an appropriate cause value.

Where the logical error exists in a response message of a class 1 procedure, local error handling shall be initiated.

Class 2:

Where the logical error occurs in a message of a class 2 procedure, the **procedure shall be terminated and the** ERROR INDICATION procedure shall be initiated with an appropriate cause value.

9.2.1.65 UARFCN

Designate the central frequency of the channel number.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
UARFCN			INTEGER (0..16383, ...)	corresponds to 0.0Hz.. 3276.6MHz ({15} section-subclause 5.4.3 in [14] and [15])

~~[Editor's Note: in RRC they have additional attributes such as the "raster" included in the IE]~~

CHANGE REQUEST

⌘ **25.433** **CR 370** ⌘ rev **-** ⌘ Current version: **3.4.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Mapping of TFS to TFI		
Source:	⌘ R-WG3		
Work item code:	⌘	Date:	⌘ February 2001
Category:	⌘ F	Release:	⌘ R99
	<i>Use <u>one</u> of the following categories:</i> F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		<i>Use <u>one</u> of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ The mapping of TFS to TFI values is not clarified in the TFS IE.
Summary of change:	⌘ In the tabular format of the TFS IE a description has been added to clarify that the first instance of the TF parameter corresponds to TFI zero, the second to 1 and so on.
Consequences if not approved:	⌘ The mapping of TFS and TFI values is not clear and may cause confusion and problems in multivendor environment. The correction is backward compatible.

Clauses affected:	⌘ 9.2.1.59		
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘		

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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.

9.2.1.59 Transport Format Set

The Transport Format Set is defined as the set of Transport Formats associated to a Transport Channel, e.g. DCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transport Format Set				
>Dynamic Transport Format Information		1 to <maxTFcount>		The first instance of the <u>parameter corresponds to TFI zero, the second to 1 and so on.</u>
>>Number of Transport blocks	M		INTEGER (0..512)	
>>Transport Block Size	C – Blocks		INTEGER (0..5000)	Bits
>>CHOICE mode	M			
>>>TDD				
>>>>Transmission Time interval Information	C-TTIdynamic	1 to <maxTTIcount>		
>>>>Transmission time interval	M		Enumerated(10, 20, 40, 80,...)	ms
>Semi-static Transport Format Information		1		
>>Transmission time interval	M		ENUMERATED (10, 20, 40, 80, dynamic,...)	ms Value “dynamic” for TDD only
>>Type of channel coding	M		ENUMERATED (No coding, Convolutional, Turbo,...)	
>>Coding Rate	C – Coding		ENUMERATED (1/2, 1/3,...)	
>>Rate matching attribute	M		INTEGER (1..maxRM)	
>>CRC size	M		ENUMERATED (0, 8, 12, 16, 24,...)	
>>CHOICE mode	M			
>>>TDD				
>>>>2 nd interleaving mode	M		Enumerated(Frame related, Timeslot related,...)	

Condition	Explanation
Blocks	This IE is only present if "Number of Transport Blocks" is greater than 0.
Coding	This IE is only present if IE "Type of channel coding" is "Convolutional" or "Turbo"
TTIdynamic	This IE is mandatory if the “Transmission Time Interval” of the “Semi-static Transport Format Information” is “dynamic”. Otherwise it is absent.

Range bound	Explanation
MaxTFcount	Maximum number of different transport formats that can be included in the Transport format set for one transport channel.
MaxRM	Maximum number that could be set as rate matching attribute for a transport channel.
MaxTTIcount	The amount of different TTI that are possible for that transport format.

CR-Form-v3

CHANGE REQUEST

⌘ **25.433 CR 371** ⌘ rev **-** ⌘ Current version: **3.4.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ General clarifications and corrections		
Source:	⌘ R-WG3		
Work item code:	⌘	Date:	⌘ February 2001
Category:	⌘ F	Release:	⌘ R99
	<i>Use one of the following categories:</i> F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.		

Reason for change:	⌘ Several unclear or incorrect details have been found in the NBAP specification.		
Summary of change:	⌘ This CR corrects minor errors and clarifies some sentences. Backward compatibility: this CR is backward compatible with the previous version of TS 25.433.		
Consequences if not approved:	⌘ Unclarities and errors that this CR fixes would remain in the specification.		

Clauses affected:	⌘ 8.2.1, 8.2.2, 8.2.16, 8.4, 9.1.58, 9.1.59.		
Other specs affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘		

How to create CRs using this form:

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- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.2.1 Common Transport Channel Setup

8.2.1.1 General

This procedure is used for establishing the necessary resources in Node B, regarding Secondary CCPCH, PICH, PRACH, PCPCH[FDD], AICH [FDD], AP_AICH[FDD], CD/CA-ICH[FDD], FACH, PCH, RACH and CPCH[FDD].

8.2.1.2 Successful Operation

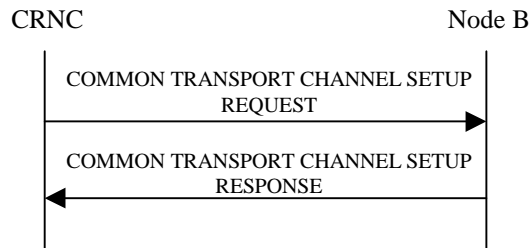


Figure 1: Common Transport Channel Setup procedure, Successful Operation

The procedure is initiated with a COMMON TRANSPORT CHANNEL SETUP REQUEST message sent from the CRNC to the Node B.

One message can configure only one of the following combinations:

- [FDD-one Secondary CCPCH, and FACHes, PCH and PICH related to that Secondary CCPCH], or
- [TDD- Secondary CCPCHes and FACHes, PCH with the corresponding PICH related to that group of Secondary CCPCHes], or
- one PRACH, and one RACH and one AICH(FDD) related to that PRACH at the time.
- [FDD-PCPCHes, one CPCH, one AP_AICH and one CD/CA-ICH related to that group of PCPCHes at the time.]

Secondary CCPCH:

[FDD - When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains a Secondary CCPCH, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message. ~~The handling of the optional STTD IE is FFS.~~]

[TDD - When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains one or more Secondary CCPCHs, the Node B shall configure and activate them according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.]

[TDD- FACHs and PCH may be mapped onto a CCTrCH which may consist of several Secondary CCPCHs]

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains one or several FACHs, the Node B shall configure and activate them according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains a PCH and a PICH, the Node B shall configure and activate them according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message. [FDD- The handling of the optional STTD IE for PICH is FFS.]

PRACH:

When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains a PRACH, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

[FDD-PCPCHes]:

When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains PCPCHes, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes *CD Signatures* IE, the Node B may use only the given CD signatures on CD/CA-ICH.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes Channel Request Parameters IE group, the Node B shall use the parameters to distinguish the PCPCHs.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes *AP Sub Channel Number* IE in Channel Request Parameters IE group, the Node B shall use AP sub channel number to distinguish the PCPCHs.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes *AP Sub Channel Number* IE in SF Request Parameters IE group, the Node B shall use AP sub channel number to distinguish the requested Spreading Factors.

After a successful procedure, the defined common transport channels and the common physical channels shall adopt the state Enabled [6] in Node B and the common transport channels exist on the Uu interface. The Node B shall store the value of *Configuration Generation ID* IE and it shall respond with the COMMON TRANSPORT CHANNEL SETUP RESPONSE message with the *Common Transport Channel ID* IE, the *Binding ID* IE and the *Transport Layer address* IE for the configured common transport channels.

8.2.1.3 Unsuccessful Operation

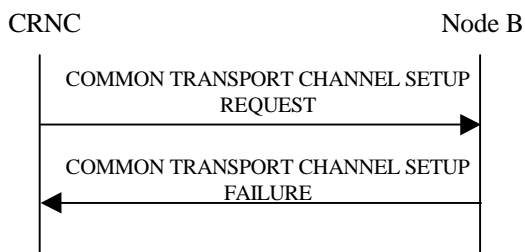


Figure 2: Common Transport Channel Setup procedure, Unsuccessful Operation

If the state already is Enabled or Disabled [6] for at least one channel in the COMMON TRANSPORT CHANNEL SETUP REQUEST message is received, the Node B shall reject the configuration of all channels with the *Cause* IE set to "Message not compatible with receiver state".

If the Node B is not able to support all part of the configuration, it shall reject the configuration of all the channels in the COMMON TRANSPORT CHANNEL SETUP REQUEST message. The channels in the COMMON TRANSPORT CHANNEL SETUP REQUEST message shall remain in the same state as prior to the procedure. The *Cause* IE shall be set to an appropriate value. The value of *Configuration Generation ID* IE from the COMMON TRANSPORT CHANNEL SETUP REQUEST message shall not be stored.

If the configuration was unsuccessful, the Node B shall respond with a COMMON TRANSPORT CHANNEL SETUP FAILURE message.

Typical cause values are as follows:

Radio Network Layer Cause

- Cell not available
- Unknown C-ID
- Power level not supported

- Node B Resources unavailable
- Requested Tx Diversity Mode not supported
- UL SF not supported
- DL SF not supported
- Common Transport Channel Type not supported

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error
- Message not compatible with receiver state

Miscellaneous Cause

- O&M Intervention
- Unspecified
- Control processing overload
- HW failure

8.2.1.4 Abnormal Conditions

-

8.2.2 Common Transport Channel Reconfiguration

8.2.2.1 General

This procedure is used for reconfiguring common transport channels and/or common physical channels, while they still might be in operation.

8.2.2.2 Successful Operation

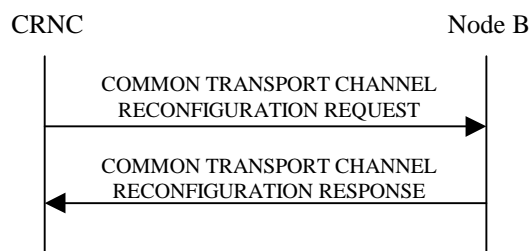


Figure 3: Common Transport Channel Reconfiguration, Successful Operation

The procedure is initiated with a COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message sent from the CRNC to the Node B.

One message can configure only one of the following combinations:

- [FDD- FACHes, one PCH and/or one PICH related to one Secondary CCPCH], or
- [TDD- Secondary CCPCHes and FACHes, PCH with the corresponding PICH related to that group of Secondary CCPCHes], or

- one RACH and/or one AICH(FDD) related to one PRACH, or
- [FDD- one CPCH and/or one AP-AICH and/or one CD/CA-ICH related to one CPCH

at the time.

[TDD S-CCPCH]: If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *S-CCPCH Power* IE, the Node B shall reconfigure the power that the indicated S-CCPCH shall use.]

FACH: When one or several FACHs are present Node B shall reconfigures the indicated FACHs.

[FDD - If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *Max FACH Power* IE, the Node B shall reconfigure the maximum power that the FACH may use.]

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWS* IE, the Node B shall reconfigure the time of arrival window startpoint that the FACH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWE* IE, the Node B shall reconfigure the time of arrival window endpoint that the FACH shall use.

PCH: When the PCH is present Node B shall reconfigures the indicated PCH.

[FDD - If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *PCH Power* IE, the Node B shall reconfigure the power that the PCH shall use.]

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWS* IE, the Node B shall reconfigure the time of arrival window startpoint that the PCH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWE* IE, the Node B shall reconfigure the time of arrival window endpoint that the PCH shall use.

PICH: When a PICH is present Node B shall reconfigures the indicated PICH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *PICH Power* IE, the Node B shall reconfigure the power that the PICH shall use.

[FDD- PRACH]: When a PRACH is present Node B shall reconfigures the indicated PRACH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the Allowed Preamble Signatures Information, the Node B shall reconfigure the preamble signatures that the PRACH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the Allowed Slot Format Information, the Node B shall reconfigure the slot formats that the PRACH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the Allowed Sub Channel Information, the Node B shall reconfigure the sub channel numbers that the PRACH shall use.

[FDD- AICH]: When a AICH is present Node B shall reconfigures the indicated AICH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *AICH Power* IE, the Node B shall reconfigure the power that the AICH shall use.

[FDD- CPCH]: When a CPCH is present Node B shall reconfigures the indicated CPCH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes UL SIR Information, the Node B shall reconfigure the UL SIR for the UL power control for the CPCH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes Initial DL transmission Power Information, the Node B shall reconfigure the Initial DL transmission Power for the CPCH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes Maximum DL Power Information, the Node B shall apply this value to the new configuration and never transmit with a higher power on any DL PCPCHes once the new configuration is being used.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes Minimum DL Power Information, the Node B shall apply this value to the new configuration and never transmit with a lower power on any DL PCPCHes once the new configuration is being used.

[FDD- AP-AICH]: When a AP-AICH is present Node B shall reconfigures the indicated AP-AICH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *AP-AICH Power* IE, the Node B shall reconfigure the power that the AP-AICH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *CSICH Power* IE, the Node B shall reconfigure the power that the CSICH shall use.

[FDD-CD/CA-ICH]:When a CD/CA-ICH is present Node B shall reconfigures the indicated CD/CA-ICH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *CD/CA-AICH Power* IE, the Node B shall reconfigure the power that the CD/CA-AICH shall use.

After a successful procedure, the channels have adopted the new configuration in Node B. The channels in the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message shall remain in the same state as prior to the procedure. Node B shall store the value of *Configuration Generation ID* IE, and the Node B shall respond with the COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE message.

8.2.16 System Information Update

8.2.16.1 General

The System Information Update procedure performs the necessary operations in order for the Node B to apply the correct scheduling of and/or to include the appropriate content provision of to the system information segments broadcast on the BCCH, ~~to the Node B.~~

8.2.16.2 Successful Operation

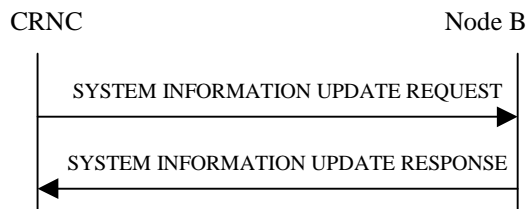


Figure 22: System Information Update procedure: Successful Operation

The procedure is initiated with a SYSTEM INFORMATION UPDATE REQUEST message sent from the CRNC to the Node B.

The Node B shall consider the requested updates to the BCCH schedule in the same order as the MIB/SB/SIB information is included in the SYSTEM INFORMATION UPDATE REQUEST message.

If the SYSTEM INFORMATION UPDATE message includes the *BCCH Modification Time* IE, the updates to the BCCH schedule (possibly consisting of IB occurrence additions, IB occurrence deletions and IB occurrence content updates) indicated in the SYSTEM INFORMATION UPDATE REQUEST message shall be applied by Node B at the first time instance starting from the SFN value set by the *BCCH Modification Time* IE. If no *BCCH Modification Time* IE is included, the updates to the BCCH schedule shall be applied as soon as possible.

Information Block addition

If the SYSTEM INFORMATION UPDATE REQUEST message includes segments of a certain MIB/SB/SIB, the Node-B shall assume that all segments for that Information Block are included in the message and ordered with increasing Segment Index (starting from 0). For each included segment, segment type information is also given in the SYSTEM INFORMATION UPDATE REQUEST message.

The Node B shall determine the correct cell system frame number(s) (SFN) for transmission of the segments of system information, from the scheduling parameters provided in the SYSTEM INFORMATION UPDATE REQUEST message. The SFN for transmitting the segments shall be determined by the *SIB SG REP* IE and *SIB SG POS* IE such that:

$$- \text{SFN mod IB_SG_REP} = \text{IB_SG_POS}$$

If the SYSTEM INFORMATION UPDATE REQUEST message contains Master Information Block (MIB) segments in addition to SIB or SB segments, the MIB segments shall first be sent in the physical channel by the Node B. Once these MIB segments have been sent in the physical channel, the updated SB/SIB segments shall then be sent in the physical channel.

Only if the inclusion of each new IB segment in the BCCH schedule leads to a valid segment combination according to [18], the Node B shall accept the system information update.

If the *SIB Originator* IE value is set to 'Node B' the Node B shall create the SIB segment of the SIB type given by the *IB Type* IE and autonomously update the SIB segment and apply the scheduling and repetition as given by the *IB SG REP* IE and *IB SG POS* IE.

SIBs originating from the Node B can only be SIBs containing information that the Node B can obtain on its own.

Information Block deletion

If the *IB Deletion Indicator* IE value is set to 'Deletion' the Node B shall delete the IB indicated by the *IB Type* IE and *IB OC ID* IE from the transmission schedule on BCCH.

Information Block update

If the SYSTEM INFORMATION UPDATE REQUEST message contains segments for an IB without *IB SG REP IE* and *IB SG POS IE* and there is already an IB in the BCCH schedule with the same IB Type and IB OC ID which is not requested to be deleted from the BCCH schedule by an IB deletion indicated in a *MIB/SB/SIB information IE* group repetition present in the SYSTEM INFORMATION UPDATE REQUEST message before the IB segments are included, then the Node B shall only update the contents of the IB segments without any modification in segment scheduling.

If the Node B successfully completes the updating of the physical channel scheduling cycle according to the parameters given in the SYSTEM INFORMATION UPDATE REQUEST message, it shall respond to the CRNC with a SYSTEM INFORMATION UPDATE RESPONSE message.

8.2.16.3 Unsuccessful Operation

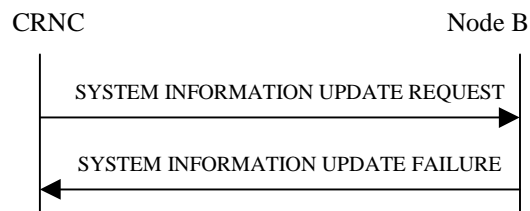


Figure 23: System Information Update procedure: Unsuccessful Operation

If the Node B is unable to update the physical channel scheduling cycle according to all the parameters given in the SYSTEM INFORMATION UPDATE REQUEST message, it shall respond with a SYSTEM INFORMATION UPDATE FAILURE message with an appropriate cause value. No changes to the BCCH schedule are made in this case.

Node B shall reject, with cause value ‘SIB origination in Node B not supported’, requests for Node B originated system information blocks that make use of a value tag.

Node B shall reject the requested update with cause value “BCCH scheduling error” if:

- after having handled a certain *MIB/SB/SIB information IE* group repetition, an illegal BCCH schedule results;
- if a *MIB/SB/SIB information IE* group repetition includes an *IB SG REP IE* or an *IB SG POS IE* and there is already an IB in the BCCH schedule with the same IB Type and IB OC ID which is not requested to be deleted from the BCCH schedule by an IB deletion indicated in a *MIB/SB/SIB information IE* group repetition present in the SYSTEM INFORMATION UPDATE REQUEST message before the IB addition is indicated. This rule shall apply even if the scheduling instructions in *IB SG REP IE* and *IB SG POS IE* were the same as the current scheduling instructions for the concerned IB;
- if a *MIB/SB/SIB information IE* group repetition includes no *IB SG REP IE* and *IB SG POS IE* and there is no IB in the BCCH schedule with the same IB Type and IB OC ID;
- if a *MIB/SB/SIB information IE* group repetition includes no *IB SG REP IE* and *IB SG POS IE* and there is already an IB in the BCCH schedule with the same IB Type and IB OC ID but it is requested to be deleted from the BCCH schedule by an IB deletion indicated in a *MIB/SB/SIB information IE* group repetition present in the SYSTEM INFORMATION UPDATE REQUEST message before the IB addition is indicated;

Possible cause values are:

Radio Network Layer Cause

- Unknown C-ID
- SIB Origination in Node B not Supported
- BCCH scheduling error

Miscellaneous Cause

- Hardware failure

- Control Processing overload
- O&M Intervention
- Unspecified

In the case of failure, the Node B shall not incorporate any of the requested changes into the physical channel scheduling cycle, and the previous system information configuration shall remain intact.

8.2.16.4 Abnormal Conditions

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8.4 Error Handling Procedures

8.4.1 Error Indication

8.4.1.1 General

The Error Indication procedure is initiated by a node to report detected errors in one incoming message, provided they cannot be reported by an appropriate failure message.

8.4.1.2 Successful Operation

When the conditions defined in chapter 10 are fulfilled, the Error Indication procedure is initiated by an ERROR INDICATION message sent from the receiving node.

When the ERROR INDICATION message is sent from a Node B to its CRNC, the *CRNC Communication Context ID* IE shall be included in the message if available. When the ERROR INDICATION message is sent from a CRNC to a Node B, the *Node B Communication Context ID* IE shall be included in the message if available.

When a message for a dedicated procedure is received in Node B with an invalid *Node B Communication Context ID* IE, the Node B shall include the unknown *Node B Communication Context ID* IE from the dedicated message in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

Typical cause values for the ERROR INDICATION message are:

Protocol Causes:

- Transfer Syntax Error
- Abstract Syntax Error (Reject)
- Abstract Syntax Error (Ignore and Notify)
- Message not Compatible with Receiver State
- Unspecified

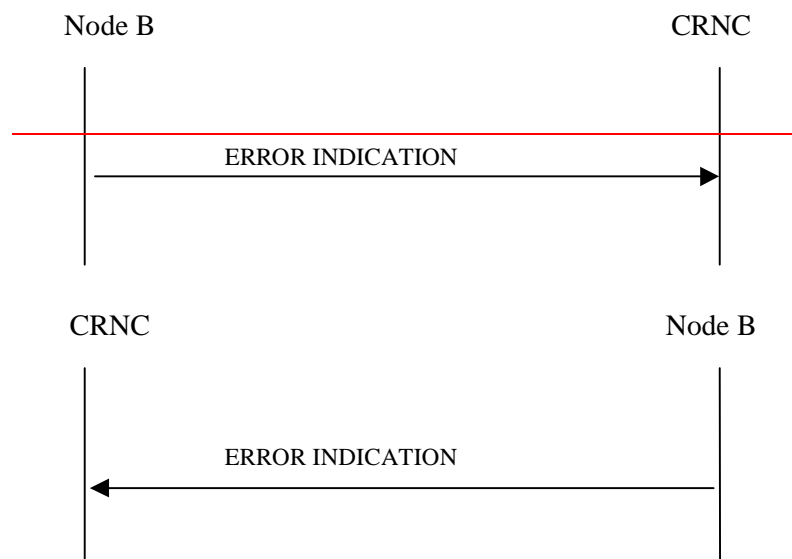


Figure 49: Error Indication procedure (Node B to CRNC): Successful Operation



Figure 50: Error Indication procedure (CRNC to Node B): Successful Operation

8.4.1.3 Abnormal Conditions

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9.1.58 RADIO LINK FAILURE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
CHOICE <i>Reporting Object</i>	M			Object for which the Failure shall be reported.	YES	ignore
>RL					–	
>>RL Information		1 to <MaxnoofRLs>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
>RL Set					–	
>>RL Set Information		1 to <MaxnoofRLSets>			EACH	ignore
>>>RL Set ID	M		9.2.2.39		–	
>>>Cause	M		9.2.1.6		–	

Range bound	Explanation
<i>MaxnoofRLs</i>	Maximum number of RLs for one UE.
<i>MaxnoofRLSets</i>	Maximum number of RL Sets for one UE.

9.1.59 RADIO LINK RESTORE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
CHOICE <i>Reporting Object</i>	M			Object for which the Restoration shall be reported.	YES	ignore
>RL					–	
>>Radio Link Information		1 to <MaxnoofRLs>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>RL Set					–	
>>RL Set Information		1 to <MaxnoofRL Sets>			EACH	ignore
>>>RL Set ID	M		9.2.2.39		–	

Range bound	Explanation
<i>MaxnoofRLs</i>	Maximum number of RLs for one UE.
<i>MaxnoofRLSets</i>	Maximum number of RL Sets for one UE.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Frame Handling Priority			INTEGER (0..15)	0=lower priority, 15=higher priority

CHANGE REQUEST

⌘ **25.433 CR 377** ⌘ rev **1** ⌘ Current version: **3.4.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ NBAP correction in tabular format		
Source:	⌘ R-WG3		
Work item code:	⌘	Date:	⌘ February, 2001
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.		

Reason for change:	⌘ In the current NBAP specification some IEs have an "internal" structure. For some such IEs the structure does not have any repetition, i.e. the range is 1, e.g. the <i>Allocation/Retention Priority</i> IE. It is reasonable to remove the IE from the internal structure if it has only one repetition.
Summary of change:	⌘ This CR removes the virtual place for criticality assignment from chapter 9.2 by removing the group name from IEs in chapter 9.2 that have the range 1. Consequently the indentation of all the IEs below the group name have been reduced by one level (">").
Consequences if not approved:	⌘ If this CR is not approved the above described ambiguity will remain in the specification. Backward compatibility: This CR is backward compatible with the previous version of NBAP.

Clauses affected:	⌘ 9.2.1.1A, 9.2.1.9A, 9.2.1.12, 9.2.1.12A, 9.2.1.13A, 9.2.1.14A, 9.2.1.14B, 9.2.1.17, 9.2.1.20A, 9.2.1.24, 9.2.1.24A, 9.2.1.46, 9.2.1.51, 9.2.1.59, 9.2.2.49A, 9.2.2.59,
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/> Test specifications <input type="checkbox"/> 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/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☒ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

9.2 Information Element Functional Definition and Contents

9.2.0 General

Section 9.2 presents the NBAP IE definitions in tabular format. The corresponding ASN.1 definition is presented in section 9.3. In case there is contradiction between the tabular format in section 9.2 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional elements, where the tabular format shall take precedence.

9.2.1 Common parameters

9.2.1.1 Add/Delete Indicator

The add/delete indicator shall notify the RNC whether the associated resource has been added to or removed from the Node B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Add/Delete Indicator			ENUMERATED(Add, Delete)	

9.2.1.1A Allocation/Retention Priority

This parameter indicates the priority level in the allocation and retention of Node B internal resources. See Annex A.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Allocation/Retention Priority				
➤Priority Level	M		INTEGER (0..15)	This IE indicates the priority of the request. 0 = spare. 1 = highest priority. . . . 14 = Lowest priority. 15= not used.
➤Pre-emption Capability	M		ENUMERATED(shall not trigger pre-emption, may trigger pre-emption)	
➤Pre-emption Vulnerability	M		ENUMERATED(not pre-emptable, pre-emptable)	

9.2.1.2 Availability Status

The availability status is used to indicate more detailed information of the availability of the resource. In accordance with [6], following values are defined. If the value of this attribute is an empty set, this implies that none of the status conditions described in [6] are present.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Availability Status			ENUMERATED (empty, in test, failed, power off, off line, off duty, dependency, degraded, not installed, log full, ...)	

9.2.1.3 BCCH Modification Time

Indicates the time after which the new system information shall be applied on BCCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
BCCH Modification Time			Integer (0..511)	All SFN values in which MIB may be mapped are allowed. The tabular description is presented in [18].

9.2.1.4 Binding ID

The Binding ID is the identifier of a user data stream. It is allocated at Node B and it is unique for each transport bearer under establishment to/from the Node B. The length of this parameter is variable.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Binding ID			Octetstring (1..4,...)	

9.2.1.5 Blocking Priority Indicator

The Blocking priority indicator shall indicate the immediacy with which a resource should be blocked from use. The following priority classes shall be supported in the Blocking priority indicator.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Blocking Priority Indicator			ENUMERATED (High, Normal, Low,...)	High priority: Block resource immediately. Normal priority: Block resource when idle or upon timer expiry. Low priority: Block resource when idle.

9.2.1.6 Cause

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE Cause group				
>Radio Network Layer				
>Radio Network Layer Cause	M		Enumerated (unknown C-ID, Cell not available, Power level not supported, DL radio resources not available, UL radio resources not available, RL Already Activated/allocated, Node B Resources Unavailable, Measurement not supported for the object, Combining Resources not available, Requested configuration not supported, Synchronization failure, Priority transport channel established, SIB Origination in Node B not Supported, Requested Tx Diversity Mode not supported, Unspecified, BCCH scheduling error, Measurement Temporarily not Available, Invalid CM Setting, Reconfiguration CFN not elapsed, Number of DL codes not supported, S-CPICH not supported, Combining not supported, UL SF not supported, DL SF not supported, Common Transport Channel Type not supported, Dedicated Transport Channel Type not supported, Downlink Shared Channel Type not supported, Uplink Shared Channel Type not supported, CM not supported, Tx diversity no longer supported, Unknown Local Cell ID, ...)	
>Transport Layer				
>Transport Layer Cause	M		Enumerated (Transport resource unavailable, Unspecified, ...)	
>Protocol				
>Protocol Cause			Enumerated (Transfer syntax error, Abstract syntax error (reject), Abstract syntax error (ignore and notify),	

			Message not compatible with receiver state, Semantic error, Unspecified, Abstract syntax error (falsely constructed message), ...)	
>Misc				
>Miscellaneous Cause	M		Enumerated (Control processing overload Hardware failure, O&M intervention, Not enough user plane processing resources, Unspecified, ...)	

The meaning of the different cause values is described in the following table. In general, "not supported" cause values indicate that the concerning capability is missing. On the other hand, "not available" cause values indicate that the concerning capability is present, but insufficient resources were available to perform the requested action.

Radio Network Layer cause	Meaning
BCCH scheduling error	The Node B has detected an illegal BCCH schedule update (see 8.2.16.3)
Cell not Available,	The concerning cell or local cell is not available
Combining not supported	The Node B does not support RL combining for the concerning cells
Combining Resources Not Available	The value of the received <i>Diversity Control Field</i> IE was set to 'Must', but the Node B cannot perform the requested combining
CM not supported	The concerning cell(s) do not support Compressed Mode
Common Transport Channel Type not supported	The concerning cell(s) do not support the RACH and/or FACH and/or CPCH Common Transport Channel Type
Dedicated Transport Channel Type not supported	The concerning cell(s) do not support the Dedicated Transport Channel Type
DL Radio Resources not Available	The Node B does not have sufficient DL radio resources available
DL SF not supported	The concerning cell(s) do not support the requested DL SF
DL Shared Channel Type not supported	The concerning cell(s) do not support the Downlink Shared Channel Type
Invalid CM Settings	The concerning cell(s) consider the requested Compressed Mode settings invalid
Measurement not Supported For The Object	At least one of the concerning cell(s) does not support the requested measurement on the concerning object type
Measurement Temporarily not Available	The Node B can temporarily not provide the requested measurement value
Node B resources unavailable	The Node B does not have sufficient resources available
Number of DL codes not supported	The concerning cell(s) do not support the requested number of DL codes
Power Level not Supported	A DL power level was requested which the concerning cell(s) do not support
Priority transport channel established	The CRNC cannot perform the requested blocking since a transport channel with a high priority is present
Reconfiguration CFN not elapsed	The requested action cannot be performed due to that a COMMIT message was received previously, but the concerning CFN has not yet elapsed
Requested Configuration not Supported	The concerning cell(s) do not support the requested configuration i.e. power levels, Transport Formats, physical channel parameters,.....
Requested Tx Diversity mode not supported	The concerning cell(s) do not support the requested transmit diversity mode
RL already Activated/ allocated	The Node B has already allocated an RL with the requested RL-id for this UE context
S-CPICH not supported	The concerning cell(s) do not support S-CPICH
SIB origination in Node B not supported	The Node B does not support the origination of the requested SIB for the concerning cell
Synchronisation Failure	Loss of UL Uu synchronisation

Tx diversity no longer supported	Tx diversity can no longer be supported in the concerning cell.
UL Radio Resources not Available	The Node B does not have sufficient UL radio resources available
UL SF not supported	The concerning cell(s) do not support the requested UL SF
UL Shared Channel Type not supported	The concerning cell(s) do not support the Uplink Shared Channel Type
Unknown C-ID	The Node B is not aware of a cell with the provided C-ID
Unknown Local Cell ID	The Node B is not aware of a local cell with the provided Local Cell ID
Unspecified	Sent when none of the above cause values applies but still the cause is Radio Network layer related

Transport Network Layer cause	Meaning
Transport resource unavailable	The required transport resources are not available
Unspecified	Sent when none of the above cause values applies but still the cause is Transport Network layer related

Protocol cause	Meaning
Abstract Syntax Error (Reject)	The received message included an abstract syntax error and the concerning criticality indicated “reject” (see subclause 10.3)
Abstract Syntax Error (Ignore and Notify)	The received message included an abstract syntax error and the concerning criticality indicated “ignore and notify” (see subclause 10.3)
Abstract syntax error (falsely constructed message)	The received message contained IEs or IE groups in wrong order or with too many occurrences (see subclause 10.3)
Message not Compatible with Receiver State	The received message was not compatible with the receiver state (see subclause 10.4)
Semantic Error	The received message included a semantic error (see subclause 10.4)
Transfer Syntax Error	The received message included a transfer syntax error (see section 10.2)
Unspecified	Sent when none of the above cause values applies but still the cause is protocol related

Miscellaneous cause	Meaning
Control Processing Overload	Node B control processing overload
Hardware Failure	Node B hardware failure
Not enough User Plane Processing Resources	Node B has insufficient user plane processing resources available
O&M Intervention	Operation and Maintenance intervention related to Node B equipment
Unspecified	Sent when none of the above cause values applies and the cause is not related to any of the categories Radio Network Layer, Transport Network Layer or Protocol.

9.2.1.7 CFN

Connection Frame Number for the radio connection, see ref. [17].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CFN			Integer (0..255)	

9.2.1.8 CFN Offset

Void

9.2.1.9 C-ID

The C-ID (Cell identifier) is the identifier of a cell in one RNC.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
C-ID			INTEGER (0..65535)	

9.2.1.9A Common Channels Capacity Consumption Law

The capacity consumption law indicates the CRNC how the Capacity Credit is consumed by NBAP set of procedures, depending on the allocated Spreading Factor.

This capacity consumption law indicates the consumption law to be used with the following procedures :

- Common Transport Channel Setup

In case of usage of the Common Transport Channel Deletion, the consumption cost given in the consumption law must be credited to the Capacity Credit.

If the modelling of the internal resource capability of the B is modelled independently for the Uplink and Downlink, the "DL cost" shall be applied to the "DL or Global Capacity Credit" and the "UL Cost" shall be applied to the "UL Capacity Credit". If it is modelled as shared resources, both the "DL cost" and the "UL cost" shall be applied to the "DL or Global Capacity Credit".

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Common Channels Capacity Consumption Law				
>SF allocation law		<maxNumberOfSF>		For each SF, cost of its allocation: the first instance corresponds to SF = 4, the second to SF = 8, the third to SF = 16 and so on.
>>DL cost	M		INTEGER (0..65535)	
>>UL cost	M		INTEGER (0..65535)	

9.2.1.10 Common Measurement Object Type

The Common Measurement Object type indicates the type of object that the measurement is to be performed on.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Measurement Object Type			ENUMERATED (CELL, RACH, CPCH,...)	

9.2.1.11 Common Measurement Type

The Common Measurement Type identifies which measurement that shall be performed.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Measurement Type			ENUMERATED (Received total wide band power, Transmitted Carrier Power, Acknowledged PRACH preambles, UL Timeslot ISCP, Acknowledged PCPCH Access Preambles, Detected PCPCH Access Preambles, ...)	UL Timeslot ISCP is used by TDD only, Acknowledged PRACH preambles, Acknowledged PCPCH Access Preambles, Detected PCPCH Access Preambles are used by FDD only

9.2.1.12 Common Measurement Value

The Common Measurement Value shall be the most recent value for this measurement, for which the reporting criteria were met.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
➤ Transmitted Carrier Power Value	C <i>MeasValue</i>		INTEGER(0..100)	According to mapping in [22] and [23]
➤ Received total wide band power Value	C <i>MeasValue</i>		INTEGER(0..621)	According to mapping in [22] and [23]
➤ Acknowledged PRACH Preamble Value (FDD only)	C <i>MeasValue</i>		INTEGER(0..240, ...)	According to mapping in [22]
➤ UL Timeslot ISCP (TDD only)	C <i>MeasValue</i>		INTEGER(0..81)	According to mapping in [23]
➤ Acknowledged PCPCH Access Preambles (FDD only)	C <i>MeasValue</i>		INTEGER(0..15,...)	According to mapping in [22]
➤ Detected PCPCH Access Preambles (FDD only)	C <i>MeasValue</i>		INTEGER(0..240,...)	According to mapping in [22]

Condition	Explanation
<i>MeasValue</i>	Only one measurement value can be present at the same time.

9.2.1.12A Common Measurement Value Information

The *Common Measurement Value Information* IE provides information both on whether or not the Common Measurement Value is provided in the message or not and if provided also the Common Measurement Value itself.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Common Measurement Value Information		4			–	
➤CHOICE <i>Measurement Availability Indicator</i>	M				–	
➤➤ <i>Measurement Available</i>					–	
➤➤➤Common Measurement value	M		9.2.1.12		–	
➤➤ <i>Measurement not Available</i>			NULL		–	

9.2.1.13 Common Physical Channel ID

Common Physical Channel ID is the unique identifier for one common physical channel within a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Common Physical Channel ID			Integer(0..255)	

9.2.1.13A Common Physical Channel Status Information

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Common Physical Channel Status Information		4			–	
➤Common Physical Channel ID	M		9.2.1.13		–	
➤Resource Operational State	M		9.2.1.52		–	
➤Availability Status	M		9.2.1.2		–	

9.2.1.14 Common Transport Channel ID

Common Transport Channel ID is the unique identifier for one common transport channel within a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Common Transport Channel ID			Integer(0..255)	

9.2.1.14A Common Transport Channel Information Response

The *Common Transport Channel Information Response* IE provides information for Common Transport Channels that have been established or modified.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Common Transport Channel Information Response		1			–	
➤Common Transport Channel ID	M		9.2.1.14		–	
➤Binding ID	O		9.2.1.4		–	
➤Transport Layer Address	O		9.2.1.63		–	

9.2.1.14B Common Transport Channel Status Information

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Common Transport Channel Status Information		1			–	
➤Common Transport Channel ID	M		9.2.1.14		–	
➤Resource Operational State	M		9.2.1.52		–	
➤Availability Status	M		9.2.1.2		–	

9.2.1.15 Communication Control Port ID

A Communication Control Port corresponds to one signalling bearer between the RNC and Node B for the control of Node B Communication Contexts. Node B may have multiple Communication Control Ports (one per Traffic Termination Point). The Communication Control Port is selected at creation of the Node B Communication Context. The Communication Control Port ID is the identifier of the Communication Control Port.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Communication Control Port ID			INTEGER (0..65535)	

9.2.1.16 Configuration Generation ID

The Configuration Generation ID describes the generation of the configuration of logical resources in a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Configuration Generation ID			Integer(0..255)	Value '0' means "No configuration". At possible wraparound of the ID counter in CRNC the value '0' shall not be used.

9.2.1.17 Criticality Diagnostics

The *Criticality Diagnostics* IE is sent by a Node B or the CRNC when parts of a received message have not been comprehended or are missing. It contains information about which IE was not comprehended or is missing.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Criticality Diagnostics				
➤Procedure ID		0..1		Procedure ID is to be used if Criticality Diagnostics is part of Error Indication procedure, and not within the response message of the same procedure that caused the error
➤➤Procedure Code	M		INTEGER (0..255)	
➤➤Ddmode	M		ENUMERATED (FDD, TDD, Common)	Common = common to FDD and TDD.
➤Triggering Message	O		ENUMERATED (initiating message, successful outcome, unsuccessful outcome)	The Triggering Message is used only if the Criticality Diagnostics is part of Error Indication.
➤ Procedure Criticality	O		ENUMERATED (reject, ignore, notify)	This Procedure Criticality is used for reporting the Criticality of the Triggering message (Procedure). The value 'ignore' shall never be used.
➤Transaction ID	O		Transaction ID 9.2.1.62	
➤Information Element Criticality Diagnostics		0 to <maxnoof errors>		
➤➤IE Criticality	M		ENUMERATED (reject, ignore, notify)	The IE Criticality is used for reporting the criticality of the triggering IE. The value 'ignore' shall never be used.
➤➤IE ID	M		INTEGER (0..65535)	The IE ID of the not understood or missing IE
➤➤Repetition Number	O		INTEGER (1..256)	The repetition number of the not understood IE if applicable

Range bound	Explanation
<i>Maxnooferrors</i>	Maximum no. of IE errors allowed to be reported with a single message.

9.2.1.18 CRNC Communication Context ID

The CRNC Communication Context ID is the identifier of the Communication Context in the CRNC.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CRNC Communication Context ID			INTEGER (0..2 ²⁰ - 1)	2 ²⁰ -1 is reserved value to indicate all the CRNC communication contexts that can be reached by the communication control port (All CRNCCC).

9.2.1.19 DCH Combination Indicator

Void

9.2.1.20 DCH ID

The DCH ID is the identifier of an active dedicated transport channel. It is unique for each active DCH among the active DCHs simultaneously allocated for the same UE.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DCH ID			INTEGER (0..255)	

9.2.1.20A Dedicated Channels Capacity Consumption Law

The capacity consumption law indicates the CRNC how the Capacity Credit is consumed by NBAP set of procedures, depending on the allocated Spreading Factor and the RL/RLS situation.

This capacity consumption law indicates the consumption law to be used with the following procedures :

- Radio Link Setup
- Radio Link Addition
- Radio Link Reconfiguration (case of increase of the SF)

In case of usage of the Radio Link Deletion or of the Radio Link Reconfiguration (case of decrease of the SF) procedure, the consumption cost given in the consumption law shall be credited to the Capacity Credit.

If the modelling of the internal resource capability of the B is modelled independently for the Uplink and Downlink, the DL cost shall be applied to the DL or Global Capacity Credit and the UL Cost shall be applied to the UL Capacity Credit. If it is modelled as shared resources, both the DL costs" and the UL costs shall be applied to the DL or Global Capacity Credit.

For a Radio Link creating a Radio Link Set (first RL of a RLS), the cost for the RL and RLS shall be taken into account. When adding a Radio Link to a Radio Link Set, only the RL cost shall be taken into account.

In the case of multiple Radio Links are established in one procedure, for every created Radio Link Set the first Radio Link is always the Radio Link with the lowest repetition number.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Dedicated Channels Capacity Consumption Law				
➤SF allocation law		1..<maxNumberOf SF>		For each SF, cost of its allocation: the first instance corresponds to SF = 4, the second to SF = 8, the third to SF = 16 and so on.
➤➤DL cost RLS	M		INTEGER (0..65535)	
➤➤DL cost RL	M		INTEGER (0..65535)	
➤➤UL cost RLS	M		INTEGER (0..65535)	
➤➤UL cost RL	M		INTEGER (0..65535)	

9.2.1.20B DL or Global Capacity Credit

The capacity credit indicates to the CRNC the Downlink or global capacity of a Local Cell or a Local Cell Group.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL or Global Capacity Credit			INTEGER (0..65535)	

9.2.1.20C DCH Information Response

The *DCH Information Response* IE provides information for DCHs that have been established or modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DCH Information Response		1 to <maxnoofDC Hs>		Only one DCH per set of coordinated DCH shall be included	–	
>DCH ID	M		9.2.1.20		–	
>Binding ID	O		9.2.1.4		–	
>Transport Layer Address	O		9.2.1.63		–	

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCH per UE.

9.2.1.21 DL Power

The DL Power IE indicates a power level relative to the [FDD-primary CPICH power] [TDD-primary CCPCH power] configured in a cell [FDD-If referred to a DPCH, it indicates the power of the DPDCH symbols].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL Power			Enumerated(-35..+15dB)	Step 0.1dB

9.2.1.22 Dedicated Measurement Object Type

The Dedicated Measurement Object type indicates the type of object that the measurement is to be performed on.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated Measurement Object Type			ENUMERATED (RL, RLS, ALL RL, ALL RLS,...)	

9.2.1.23 Dedicated Measurement Type

The Dedicated Measurement Type identifies the type of measurement that shall be performed.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated Measurement Type			ENUMERATED (SIR, SIR Error, Transmitted Code Power, RSCP, Rx Timing Deviation, Round Trip Time,...)	RSCP, Rx Timing Deviation are used by TDD only, Round Trip Time, SIR Error are used by FDD only.

Note: For definitions of the measurement types refer to [4] and [5].

9.2.1.24 Dedicated Measurement Value

The Dedicated Measurement Value shall be the most recent value for this measurement, for which the reporting criteria were met.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated measurement Value				
➤SIR value	C <i>MeasValue</i>		INTEGER(0..63)	According to mapping in [22] and [23]
➤SIR error Value	C <i>MeasValue</i>		INTEGER(0..125)	According to mapping in [22], (FDD only)
➤Transmitted Code Power Value	C <i>MeasValue</i>		INTEGER(0..127)	According to mapping in [22] and [23]
➤RSCP	C <i>MeasValue</i>		INTEGER(0..81)	According to mapping in [23], (TDD only)
➤Rx Timing Deviation	C <i>MeasValue</i>		INTEGER(0..2047)	According to mapping in [23], (TDD only)
➤Round Trip Time	C <i>MeasValue</i>		INTEGER(0..32767)	According to mapping in [22], (FDD only)

Condition	Explanation
<i>MeasValue</i>	Only one measurement value can be present at the same time.

9.2.1.24A Dedicated Measurement Value Information

The *Dedicated Measurement Value Information* IE provides information both on whether or not the Dedicated Measurement Value is provided in the message or not and if provided also the Dedicated Measurement Value itself.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Dedicated Measurement Value Information		4			–	
»CHOICE Measurement Availability Indicator	M				–	
»»Measurement Available					–	
»»»Dedicated Measurement Value	M		9.2.1.24		–	
»»»CFN	O		9.2.1.7	Dedicated Measurement Time Reference	–	
»»Measurement not Available			NULL		–	

9.2.1.25 Diversity Control Field

The Diversity Control Field indicates if the current RL may, must or must not be combined with the already existing RLs.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Diversity Control Field			ENUMERATED(May, Must, Must not)	

9.2.1.26 Diversity Indication

The Diversity Indication indicates if the RL has been or has not been combined with another RL.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Diversity Indication			ENUMERATED(Combined, not combined)	

9.2.1.27 DSCH ID

The DSCH ID uniquely identifies a DSCH within a Node B Communication Context.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DSCH ID			INTEGER(0..255)	

9.2.1.27A DSCH Information Response

The *DSCH Information Response* IE provides information for DSCHs that have been established or modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DSCH Information Response		<i>1 to <Numof DSCH></i>			–	
>DSCH ID	M		9.2.1.27		–	
>Binding ID	O		9.2.1.4		–	
>Transport Layer Address	O		9.2.1.63		–	

Range bound	Explanation
<i>MaxnoofDSCHs</i>	Maximum number of DSCHs for one UE.

9.2.1.28 DSCH Transport Format Set

Void

9.2.1.29 DSCH Transport Format Combination Set

Void

9.2.1.29A End Of Audit Sequence Indicator

Indicates if the AUDIT RESPONSE message ends an audit sequence or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
End Of Audit Sequence Indicator			ENUMERATED(end of audit sequence, not end of audit sequence)	End of audit sequence = all audit information has been provided by the Node B; Not end of audit sequence = more audit information is available;

9.2.1.29B FN reporting indicator

Frame Number reporting indicator.

Indicates if the SFN or CFN shall be included together with the reported measurement value.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FN reporting indicator			ENUMERATED(FN Reporting Required, FN Reporting Not Required)	

9.2.1.30 Frame Handling Priority

This parameter indicates the priority level to be used during the lifetime of the DCH/DSCH for temporary restriction of the allocated resources due overload reason.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Frame Handling Priority			INTEGER (0..15)	0=lower priority, 15=higher priority

9.2.1.31 Frame Offset

Frame Offset is the required offset between the dedicated channel downlink transmission frames (CFN, Connection Frame Number) and the broadcast channel frame offset (Cell Frame Number). The Frame_offset is used in the translation between Connection Frame Number (CFN) on lub/lur and least significant 8 bits of SFN (System Frame Number) on Uu. The Frame Offset is UE and cell specific.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Frame Offset			INTEGER (0..255)	Frames

9.2.1.31A IB_OC_ID

The IB OC ID identifies the occurrence of a specific Information Block.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB OC ID			INTEGER (1..16)	

9.2.1.32 IB_SG_DATA

Segment as defined in [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB SG DATA			Bit String	Contains "SIB data fixed" or "SIB data variable" in segment as encoded in ref: [18].

9.2.1.33 IB_SG_POS

First position of an Information Block segment in the SFN cycle ($IB_SG_POS < IB_SG_REP$).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB SG POS			INTEGER (0.. 4094)	Only even positions allowed. Reference [18]

9.2.1.34 IB_SG_REP

Repetition distance for an Information Block segment. The segment shall be transmitted when $SFN \bmod IB_SG_REP = IB_SG_POS$.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB SG REP			ENUMERATED (4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, 4096)	Repetition period for the IB segment in frames

9.2.1.35 IB Type

The IB Type identifies a specific system information block.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB Type			Enumerated (MIB, SB1, SB2, SIB1, SIB2, SIB3, SIB4, SIB5, SIB6, SIB7, SIB8, SIB9, SIB10, SIB11, SIB12, SIB13, SIB13.1, SIB13.2, SIB13.3, SIB13.4, SIB14, SIB15, SIB15.1, SIB15.2, SIB15.3, SIB16, ...)	

9.2.1.36 Indication Type

The indication type shall indicate the category of a failure with respect to its impact on the logical resources supported at Node B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Indication Type			ENUMERATED (No Failure, Service Impacting, ...)	Service Impacting – The failure has impacted on the logical resources supported at Node B.

9.2.1.37 Limited Power Increase

Void.

9.2.1.37A Local Cell Group ID

The Local Cell Group ID represents resources in the Node B, which has been pooled from a capacity point of view.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Local Cell Group ID			Local Cell ID 9.2.1.38	

9.2.1.38 Local Cell ID

The local cell ID represents resources in Node B that can be used for the configuration of a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Local Cell ID			INTEGER(0 ...26843545 5)	

9.2.1.39 Maximum DL Power Capability

This parameter indicates the maximum DL power capability for a local cell within Node B. The reference point is the antenna connector.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Maximum DL Power Capability			ENUMERATED(0...500)	dBm, granularity 0.1 dB 0: 0 dBm 1: 0.1 dBm ... 499: 49.9 dBm 500: 50.0 dBm

9.2.1.40 Maximum Transmission Power

Maximum Transmission Power is maximum power for all downlink channels added together, that is allowed to be used simultaneously in a cell. The reference point is the antenna connector.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Maximum transmission Power			ENUMERATED(0,..500)	Unit dBm Granularity 0.1 dB 0: 0 dBm 1: 0.1 dBm ... 499: 49.9 dBm 500: 50.0 dBm

9.2.1.40A Measurement Availability Indicator

Indicates if measurement is available or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Measurement Availability Indicator			ENUMERATED(measurement available, measurement not available)	

9.2.1.41 Measurement Filter Coefficient

The Measurement Filter Coefficient determines the amount of filtering to be applied for measurements.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Measurement Filter Coefficient			ENUMERATED (0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 15, 17, 19)	

9.2.1.42 Measurement ID

The Measurement ID uniquely identifies any measurement per (Node B- or communication) control port.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Measurement ID			Integer(0 .. 2 ²⁰ -1)	

9.2.1.43 Measurement Increase/Decrease Threshold

The Measurement Increase/Decrease Threshold defines the threshold that shall trigger Event C or D.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
Received total wide band power	<i>C – Threshold</i>		INTEGER(0..620)	0: 0 dB 1: 0.1 dB 2: 0.2 dB ... 620: 62dB
Transmitted Carrier Power	<i>C – Threshold</i>		INTEGER(0..100)	According to mapping in [22] and [23]
Acknowledged PRACH Preambles	<i>C – Threshold</i>		INTEGER(0..240,...)	According to mapping in [22], (FDD only)
UL Timeslot ISCP	<i>C – Threshold</i>		INTEGER(0..80)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 80: 40dB, (TDD only)
SIR	<i>C – Threshold</i>		INTEGER(0..62)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 62: 31dB
SIR Error	<i>C – Threshold</i>		INTEGER(0..124)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 124: 62 dB, (FDD only)
Transmitted Code Power	<i>C – Threshold</i>		INTEGER(0..112,...)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 112: 56 dB
RSCP	<i>C – Threshold</i>		INTEGER(0..80)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 80: 40dB, (TDD only)
Round Trip Time	<i>C – Threshold</i>		INTEGER(0..32766)	0: 0 chips 1: 0.0625 chips 2: 0.1250 chips ... 32766: 2047.875 chips, (FDD only)
Acknowledged PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..15,...)	According to mapping in [22] (FDD only)
Detected PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..240,...)	According to mapping in [22] (FDD only)

Condition	Explanation
<i>Threshold</i>	Only one measurement threshold can be present at the same time.

9.2.1.44 Measurement Threshold

The Measurement Threshold defines which threshold that shall trigger Event A, B, E or F.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
Received total wide band power	<i>C – Threshold</i>		INTEGER(0..621)	According to mapping in [22] and [23]
Transmitted Carrier Power	<i>C – Threshold</i>		INTEGER(0..100)	According to mapping in [22] and [23]
Acknowledged PRACH Preambles	<i>C – Threshold</i>		INTEGER(0..240,...)	According to mapping in [22], (FDD only)
UL Timeslot ISCP	<i>C – Threshold</i>		INTEGER(0..81)	According to mapping in [23] (TDD only)
SIR	<i>C – Threshold</i>		INTEGER(0..63)	According to mapping in [22] and [23]
SIR Error	<i>C – Threshold</i>		INTEGER(0..125)	According to mapping in [22], (FDD only)
Transmitted Code Power	<i>C – Threshold</i>		INTEGER(0..127)	According to mapping in [22] and [23]
RSCP	<i>C – Threshold</i>		INTEGER(0..81)	According to mapping in [23] (TDD only)
Rx Timing Deviation	<i>C – Threshold</i>		INTEGER(0..2047)	According to mapping in [23] (TDD only)
Round Trip Time	<i>C – Threshold</i>		INTEGER(0..32767)	According to mapping in [22] (FDD only)
Acknowledged PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..15,...)	According to mapping in [22] (FDD only)
Detected PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..240,...)	According to mapping in [22] (FDD only)

Condition	Explanation
<i>Threshold</i>	Only one measurement threshold can be present at the same time.

9.2.1.45 Message Discriminator

This field is used to discriminate between Dedicated NBAP and Common NBAP messages.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator			ENUMERATED(Common, Dedicated)	

9.2.1.46 Message Type

The Message Type uniquely identifies the message being sent.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type				
>Procedure ID	M	1		
>>Procedure Code	M		ENUMERATED (COMMON TRANSPORT CHANNEL SETUP, COMMON TRANSPORT CHANNEL RECONFIGURATION, COMMON TRANSPORT CHANNEL DELETION, BLOCK RESOURCE, UNBLOCK RESOURCE, AUDIT REQUIRED, AUDIT, COMMON MEASUREMENT INITIATION, COMMON MEASUREMENT REPORTING, COMMON MEASUREMENT TERMINATION, COMMON MEASUREMENT FAILURE, CELL SETUP, CELL RECONFIGURATION, CELL DELETION, RESOURCE STATUS INDICATION, SYSTEM INFORMATION UPDATE, RL SETUP, RL ADDITION, SYNCHRONISED RL RECONFIGURATION PREPARATION, SYNCHRONISED RL RECONFIGURATION COMMIT, SYNCHRONISED RL RECONFIGURATION CANCELLATION, UNSYNCHRONISED RL RECONFIGURATION, RL DELETION, DL POWER CONTROL, DL POWER TIMESLOT CONTROL, DEDICATED MEASUREMENT INITIATION, DEDICATED MEASUREMENT REPORTING, DEDICATED MEASUREMENT TERMINATION, DEDICATED MEASUREMENT FAILURE, RL FAILURE, RL RESTORATION, COMPRESSED MODE COMMAND, ERROR INDICATION, PHYSICAL SHARED CHANNEL RECONFIGURATION, RESET, ...)	
>>Ddmode	M		ENUMERATED (FDD, TDD, Common, ...)	Common = common to FDD and TDD.
>Type of Message	M		ENUMERATED (Initiating Message, Successful Outcome, Unsuccessful Outcome, Outcome)	

9.2.1.46A Minimum DL Power Capability

This parameter indicates the minimum DL power capability for a local cell within Node B. The reference point is the antenna connector.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Minimum DL Power Capability			ENUMERATED(0..800)	dBm, granularity 0.1 dB 0: -30.0 dBm 1: -29.9 dBm ... 799: 49.9 dBm 800: 50.0 dBm

9.2.1.47 Minimum Spreading Factor

This parameter indicates the minimum spreading factor supported at a cell within the Node B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Minimum Spreading Factor			Enumerated(4, 8, 16, 32, 64, 128, 256, 512)	

9.2.1.47A N_INSYNC_IND

This parameter defines the number of successive in-sync indications after which the Node B shall trigger the Radio Link Restore procedure (see also [10] and [21]).

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
N_INSYNC_IND			Integer (1, 2, ..., 256)	

9.2.1.47B N_OUTSYNC_IND

This parameter defines the number of consecutive out-of-sync indications after which the timer T_RLFFAILURE shall be started (see also [10] and [21]).

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
N_OUTSYNC_IND			Integer (1, 2, ..., 256)	

9.2.1.48 Node B Communication Context ID

The Node B Communication Context ID is the identifier of the Communication Context in the Node B, it corresponds to the dedicated resources which are necessary for an UE using one or more dedicated channels in a given Node B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Node B Communication Context ID			INTEGER (0..2 ²⁰ -1)	2 ²⁰ -1 is reserved value to indicate all the existing and future Node B communication contexts that can be reached by the communication control port (All NBCC).

9.2.1.49 Payload CRC Presence Indicator

This parameter indicates whether FP payload 16 bit CRC is used or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Payload CRC Presence Indicator			ENUMERATED (CRC Included, CRC not included)	

9.2.1.49A PICH Power

The PICH Power IE indicates a power level relative to the [FDD-primary CPICH power] [TDD-primary CCPCH power] configured in a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PICH Power			Enumerated(-10..+5dB)	Step 1dB

9.2.1.50 Puncture Limit

The Puncture limit limits the amount of puncturing that can be applied in order to minimise the number of dedicated physical channels.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Puncture limit			INTEGER (0..15)	0: 40% 1: 44 % ... 14: 96% 15: 100%

9.2.1.50A QE-Selector

The QE-Selector indicates from which source the value for the quality estimate (QE) shall be taken.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
QE-Selector			ENUMERATED(selected, non-selected)	

9.2.1.51 Report Characteristics

The report characteristics, defines how the reporting shall be performed.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Report characteristics				
➤Report characteristics type			ENUMERATED(On Demand, Periodic, Event A, Event B, Event C, Event D, Event E, Event F,...)	
➤Periodic Report Information	C – Periodic			
➤➤Report Periodicity	M		ENUMERATED (10ms...1min,...) step 10ms, (1min...1hr,...) step 1min,...	The frequency with which the Node B shall send measurement reports.
➤Event A	C – Event A			
➤➤Measurement Threshold	M		Measurement Threshold 9.2.1.44	The threshold for which the Node B shall trigger a measurement report.
➤➤Measurement Hysteresis Time	O		ENUMERATED (10ms...1min,...) step 10ms,...	
➤Event B	C – Event B			
➤➤Measurement Threshold	M		Measurement Threshold 9.2.1.44	The threshold for which the Node B shall trigger a measurement report.
➤➤Measurement Hysteresis Time	O		ENUMERATED (10ms...1min,...) step 10ms,...	
➤Event C	C – Event C			
➤➤Measurement Increase/Decrease Threshold	M		Measurement Increase/Decrease Threshold 9.2.1.43	
➤➤Measurement Change Time	M		ENUMERATED (10ms...1min,...) step 10ms,...	The time the measurement entity shall rise on (in ms), in order to trigger a measurement report.
➤Event D	C – Event D			
➤➤Measurement Increase/Decrease Threshold	M		Measurement Increase/Decrease Threshold 9.2.1.43	
➤➤Measurement Change Time	M		ENUMERATED (10ms...1min,...)	The time the measurement entity shall fall (in ms), in order to trigger a measurement report.

			step 10ms,...	
➤Event E	C – Event E			
➤➤Measurement Threshold 1	M		Measureme nt Threshold 9.2.1.44	
➤➤Measurement Threshold 2	O		Measureme nt Threshold 9.2.1.44	
➤➤Measurement Hysteresis Time	O		ENUMERAT ED (10ms...1mi n,...) step 10ms,...	The hysteresis time in ms
➤➤Report Periodicity	O		ENUMERAT ED (10ms...1mi n,...) step 10ms, (1min...1hr, ...) step 1min,...	The frequency with which the Node B shall send measurement reports.
➤Event F	C – Event F			
➤➤Measurement Threshold 1	M		Measureme nt Threshold 9.2.1.44	
➤➤Measurement Threshold 2	O		Measureme nt Threshold 9.2.1.44	
➤➤Measurement Hysteresis Time	O		ENUMERAT ED (10ms...1mi n,...) step 10ms,...	The hysteresis time in ms
➤➤Report Periodicity	O		ENUMERAT ED (10ms...1mi n,...) step 10ms, (1min...1hr, ...) step 1min,...	The frequency with which the Node B shall send measurement reports.

Condition	Explanation
C-Periodic	Valid if <i>Report Characteristics Type</i> IE indicates "periodic"
C-Event A	Valid if <i>Report Characteristics Type</i> IE indicates "Event A"
C-Event B	Valid if <i>Report Characteristics Type</i> IE indicates "Event B"
C-Event C	Valid if <i>Report Characteristics Type</i> IE indicates "Event C"
C-Event D	Valid if <i>Report Characteristics Type</i> IE indicates "Event D"
C-Event E	Valid if <i>Report Characteristics Type</i> IE indicates "Event E"
C-Event F	Valid if <i>Report Characteristics Type</i> IE indicates "Event F"

9.2.1.52 Resource Operational State

The resource operational state is used to indicate the current operational state of the associated resource following a Node B failure.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Resource Operational State			ENUMERATED(Enabled, Disabled)	When a resource is marked as disabled, then its child resources are implicitly disabled. Cell Resource hierarchy can be referred to [6].

9.2.1.52A Retention Priority

Void.

9.2.1.53 RL ID

The RL ID is the unique identifier for one RL associated with a UE.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RL ID			INTEGER (0..31)	

9.2.1.53A SFN

System Frame Number of the cell, see ref. [17].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SFN			Integer (0..4095)	

9.2.1.53B Segment type

Segment type as defined in [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Segment type			Enumerated(First segment, First segment short, Subsequent segment, Last segment, Last segment short, Complete SIB, Complete SIB short,...)	

9.2.1.54 SIB Deletion Indicator

Void.

9.2.1.55 SIB Originator

Indicates if the Node B shall fill in the SIB information or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SIB Originator			Enumerated(Node B, CRNC,...)	

9.2.1.56 Shutdown Timer

The shutdown timer shall indicate the length of time available to the CRNC to perform the block of a resource when a Normal priority block is requested.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Shutdown Timer			INTEGER(1..3600)	Value in seconds

9.2.1.56A T_RLFAILURE

The Radio Link Failure procedure shall be triggered after a period of time T_RLFAILURE has elapsed with a persisting out-of-sync indication (see also [10] and [21]).

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
T_RLFAILURE			ENUMERATED (0, 0.1, 0.2, .., 25.5)	In seconds

9.2.1.56B Start Of Audit Sequence Indicator

Indicates if the AUDIT REQUEST message initiates a new audit sequence or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Start Of Audit Sequence Indicator			ENUMERATED (start of audit sequence, not start of audit sequence)	

9.2.1.57 TFCI Presence

The TFCI Presence parameter indicates whether the TFCI shall be included. In TDD if it is present in the timeslot, it will be included within the first Channelization code listed.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI presence			ENUMERATED (Present, not present)	

9.2.1.58 TFCS (Transport Format Combination Set)

The Transport Format Combination Set is defined as a set of Transport Format Combinations on a Coded Composite Transport Channel. It is the allowed Transport Format Combinations of the corresponding Transport Channels. The DL Transport Format Combination Set is applicable for DL Transport Channels.

[FDD - Where the UE is assigned access to one or more DSCH transport channels then the UTRAN has the choice of two methods for signalling the mapping between TFCI(field 2) values and the corresponding TFC:

Method #1 - TFCI range

The mapping is described in terms of a number of groups, each group corresponding to a given transport format combination (value of CTFC(field2)). The CTFC(field2) value specified in the first group applies for all values of TFCI(field 2) between 0 and the specified 'Max TFCI(field2) value'. The CTFC(field2) value specified in the second group applies for all values of TFCI(field 2) between the 'Max TFCI(field2) value' specified in the last group plus one and the specified 'Max TFCI(field2) value' in the second group. The process continues in the same way for the following groups with the TFCI(field 2) value used by the UE in constructing its mapping table starting at the largest value reached in the previous group plus one.

Method #2 - Explicit

The mapping between TFCI(field 2) value and CTFC(field2) is spelt out explicitly for each value of TFCI (field2)]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE <i>DSCH</i> > <i>No split in TFCI</i>				This choice is made if : a) The TFCS refers to the uplink OR b) The mode is FDD and none of the Node B communication contexts are assigned any DSCH transport channels OR c) The mode is TDD
>>TFCS		1 to <maxnoofTFCs>		The first instance of the parameter corresponds to TFC zero, the second to 1 and so on.
>>>CTFC	M		INTEGER(0..MaxCTFC)	Integer number calculated according to [18]
>>>CHOICE Gain Factors	C-PhysChan			
>>>>Signalled Gain Factors				
>>>>CHOICE mode				
>>>>>FDD				
>>>>>>Gain Factor β_c	M		Integer (0..15)	For UL DPCCCH or control part of PRACH or control part of PCPCH in FDD; mapping in accordance to [9]
>>>>>>Gain Factor β_d	M		Integer (0..15)	For UL DPDCCH or data part of PRACH or data part of PCPCH in FDD; mapping in accordance to [9]
>>>>>TDD				
>>>>>>Gain Factor β	M		Integer (0..15)	For UL DPCH in TDD; mapping in accordance to [20]
>>>>>Reference TFC nr	O		Integer (0..3)	If this TFC is a reference TFC, this IE indicates the reference number
>>>>Computed Gain Factors				
>>>>>Reference TFC nr	M		Integer (0..3)	Indicates the reference TFC to be used to calculate the gain factors for this TFC
> <i>There is a split in the TFCI</i>				This choice is made if : a) The TFCS refers to the downlink AND b) The mode is FDD and one of the Node B communication contexts is assigned one or more DSCH transport channels
>>Transport format combination_DCH		1 to <MaxTFCI_1_Comb>		The first instance of the parameter <i>Transport format combination_DCH</i> corresponds to TFCI (field 1) = 0, the second to TFCI (field 1) = 1 and so on.
>>>CTFC(field1)	M		Integer(0..MaxCTFC)	Integer number calculated according to [18]. The calculation of CTFC ignores any DSCH transport channels which may be assigned
>>Choice Signalling method				
>>>TFCI range				
>>>>TFC mapping on DSCH		1 to <MaxNoTFCIGroups>		

>>>>Max TFCl(field2) value	M		Integer(1..10 23)	This is the Maximum value in the range of TFCl(field2) values for which the specified CTFC(field2) applies
>>>>>CTFC(field 2)	M		Integer(0..M axCTFC)	Integer number calculated according to [18]. The calculation of CTFC ignores any DCH transport channels which may be assigned
>>>Explicit				
>>>>Transport format combination_DSCH		1 to <MaxTFCl_2_Co mbs>		The first instance of the parameter <i>Transport format combination_DSCH</i> corresponds to TFCl (field2) = 0, the second to TFCl (field 2) = 1 and so on.
>>>>>CTFC(field2)	M		Integer(0..M axCTFC)	Integer number calculated according to [18]. The calculation of CTFC ignores any DCH transport channels which may be assigned

Condition	Explanation
PhysChan	The choice shall be present if the TFCS concerns a UL DPCH or PRACH channel or PCPCH channel in FDD, not when the TFCS is used for other physical channels.

Range bound	Explanation
MaxnoofTFCs	The maximum number of Transport Format Combinations.
MaxTFCl_1_Combs	Maximum number of TFCl (field 1) combinations (given by 2 raised to the power of the length of the TFCl (field 1))
MaxTFCl_2_Combs	Maximum number of TFCl (field 2) combinations (given by 2 raised to the power of the length of the TFCl (field 2))
MaxNoTFCIGroups	Maximum number of groups, each group described in terms of a range of TFCl(field 2) values for which a single value of CTFC(field2) applies
MaxCTFC	Maximum number of the CTFC value is calculated according to the following: $\sum_{i=1}^I (L_i - 1)P_i$ with the notation according to [18]

9.2.1.59 Transport Format Set

The Transport Format Set is defined as the set of Transport Formats associated to a Transport Channel, e.g. DCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transport Format Set				
>Dynamic Transport Format Information		1 to <maxTFcount>		
>>Number of Transport blocks	M		INTEGER (0..512)	
>>Transport Block Size	C – Blocks		INTEGER (0..5000)	Bits
>>CHOICE mode	M			
>>>TDD				
>>>>Transmission Time interval Information	C-TTIdynamic	1 to <maxTTIcount>		
>>>>>Transmission time interval	M		Enumerated(10, 20, 40, 80,...)	ms
>Semi-static Transport Format Information		1		
>>Transmission time interval	M		ENUMERATED (10, 20, 40, 80, dynamic,...)	ms Value “dynamic” for TDD only
>>Type of channel coding	M		ENUMERATED (No coding, Convolutional, Turbo,...)	
>>Coding Rate	C – Coding		ENUMERATED (1/2, 1/3,...)	
>>Rate matching attribute	M		INTEGER (1..maxRM)	
>>CRC size	M		ENUMERATED (0, 8, 12, 16, 24,...)	
>>CHOICE mode	M			
>>>TDD				
>>>>2 nd interleaving mode	M		Enumerated(Frame related, Timeslot related,...)	

Condition	Explanation
Blocks	This IE is only present if "Number of Transport Blocks" is greater than 0.
Coding	This IE is only present if IE "Type of channel coding" is "Convolutional" or "Turbo"
<i>TTIdynamic</i>	This IE is mandatory if the “Transmission Time Interval” of the “Semi-static Transport Format Information” is “dynamic”. Otherwise it is absent.

Range bound	Explanation
MaxTFcount	Maximum number of different transport formats that can be included in the Transport format set for one transport channel.
MaxRM	Maximum number that could be set as rate matching attribute for a transport channel.
<i>MaxTTIcount</i>	The amount of different TTI that are possible for that transport format.

9.2.1.60 ToAWE

TOAWE is the window endpoint. DL data frames are expected to be received before this window endpoint. TOAWE is defined with a positive value relative Latest Time of Arrival (LTOA). A data frame arriving after TOAWS gives a Timing Adjustment Control frame response.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
ToAWE			INTEGER (0..2559)	ms.

9.2.1.61 ToAWS

TOAWS is the window startpoint. DL data frames are expected to be received after this window startpoint. TOAWS is defined with a positive value relative Time of Arrival Window Endpoint (TOAWE). A data frame arriving before TOAWS gives a Timing Adjustment Control frame response.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
ToAWS			INTEGER (0..1279)	ms.

9.2.1.62 Transaction ID

The transaction ID is used to associate all the messages belonging to the same procedure. Messages belonging to the same procedure shall use the same transaction ID.

The transaction ID is determined by the initiating peer of a procedure. For common procedures the transaction ID shall uniquely identify a procedure within all ongoing parallel procedures initiated by one protocol peer, using the same procedure code and signalled over the same Node B control port. For dedicated procedures the transaction ID shall uniquely identify a procedure within all ongoing parallel procedures initiated by one protocol peer, using the same procedure code and initiated towards the same Node B/CRNC context.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transaction ID			CHOICE INTEGER (0..127) or INTEGER (0..32767)	

9.2.1.62A Transport Bearer Request Indicator

Indicates whether a new transport bearer needs to be established for carrying the concerning transport channel.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transport Bearer Request Indicator			ENUMERATED(Bearer Requested, Bearer not Requested, ...)	

9.2.1.63 Transport Layer Address

Transport Layer Address defines the transport address of the Node B. For details on the Transport Address used see [2].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transport Layer Address			Bit string(1... 160, ...)	

9.2.1.64 TSTD Indicator

Indicates if TSTD shall be active or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TSTD Indicator			ENUMERATED(active, inactive)	

9.2.1.65 UARFCN

Designate the central frequency of the channel number.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
UARFCN			INTEGER (0..16383, ...)	corresponds to 0.0Hz.. 3276.6MHz ([15] section 5.4 and [15])

[Editor's Note: in RRC they have additional attributes such as the "raster" included in the IE]

9.2.1.65A UL Capacity Credit

The capacity credit indicates to the CRNC the Uplink capacity of a Local Cell or a Local Cell Group.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL Capacity Credit			INTEGER (0..65535)	

9.2.1.66 UL FP Mode

This parameter defines if normal or silent mode of the Frame Protocol shall be used for the UL.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL FP Mode			ENUMERATED (Normal, Silent,...)	

9.2.1.67 UL interference level

Void.

9.2.2 FDD specific parameters

9.2.2.A Active Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence activation. For details see [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CM Configuration Change CFN	M		CFN 9.2.1.7	Defines when the old Active pattern sequences, if active, shall be terminated. From this moment on, the new sequences are activated at the given TGCFN .
Transmission Gap Pattern Sequence Status		0 to <MaxTGPS>		
>TGPSI Identifier	M		Integer(1..<MaxTGPS>)	If the group is not present, none of the pattern sequences are activated. References an already defined sequence.
>TGPRC	M		Integer (0..63)	The number of transmission gap patterns within the Transmission Gap Pattern Sequence. 0=Infinity
>TGCFN	M		CFN 9.2.1.7	Connection Frame Number of the first frame of the first pattern within the Transmission Gap Pattern Sequence.

Range bound	Explanation
MaxTGPS	Maximum number of active pattern sequences. Value 6.

9.2.2.B Adjustment Period

Adjustment Period IE defines the period to be used for power balancing.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Adjustment Period			INTEGER (1 .. 256)	Frames

9.2.2.C Adjustment Ratio

Adjustment Ratio IE (*Radj*) defines the convergence rate used for the associated Adjustment Period.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Adjustment Ratio			INTEGER (0 .. 100)	The Adjustment Ratio is given with a granularity of 0.01 0 -> 0.00 1 -> 0.01 ... 100 -> 1.00

9.2.2.D AICH Power

The AICH Power IE indicates a power level relative to the primary CPICH power configured in a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
AICH Power			Integer(-22..+5)	Offset in dB

9.2.2.1 AICH Transmission Timing

IE/Group Name	Presence	Range	IE type and reference	Semantics description
AICH Transmission Timing			ENUMERATED (0, 1)	See parameter AICH_Transmission_Timing in ref. [7].

9.2.2.1A AP Preamble Signature

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
AP Preamble Signature			INTEGER (0..15)	Described in [9]

9.2.2.1B AP Sub Channel Number

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
AP Sub Channel Number			INTEGER (0..11)	Described in [10]

9.2.2.1C CD Sub Channel Numbers

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
CD Sub Channel Numbers			BIT STRING (12)	Bit 0=Sub Channel Number 0 Bit 1=Sub Channel Number 1 ... Bit 11=Sub Channel Number 11 [10]

9.2.2.1D Channel Assignment Indication

The Channel Assignment Indication indicates whether CA is active or inactive. When CA is active, CPCH is in Versatile Channel Assignment Method (VCAM) mode and when CA is inactive, CPCH is in UE Channel Selection Method (UCSM) mode. In VCAM mode (CA active), CA message in CD/CA-ICH shall be sent.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Channel Assignment Indication			ENUMERATED (CA Active, CA Inactive)	

9.2.2.2 Chip Offset

The Chip Offset is defined as the radio timing offset inside a radio frame. The Chip offset is used as offset for the DL DPCH relative to the Primary CPICH timing.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Chip Offset			INTEGER (0..38399)	Chips

9.2.2.2A Closed Loop Timing Adjustment Mode

Indicates when the phase/amplitude adjustment is performed in the DL in relation to the receipt of the UL feedback command in case of closed loop mode transmit diversity on DPCH.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Closed Loop Timing Adjustment Mode			ENUMERATED (Offset1, Offset2,...)	According to [10] chapter 7.1: Offset1 = slot(j+1)mod15 Offset2 = slot(j+2)mod15

9.2.2.3 Common Channels Capacity Consumption Law

Void

9.2.2.3A Compressed Mode Deactivation Flag

Compressed Mode Deactivation Flag indicates whether Compressed Mode shall be deactivated or not in the new RL.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Compressed Mode Deactivation flag			ENUMERATED (On, Off)	On = deactivate.

9.2.2.4 Compressed Mode Method

Void.

9.2.2.4A CPCH Allowed Total Rate

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CPCH Allowed Total Rate			ENUMERATED (15, 30, 60, 120, 240, 480, 960, 1920, 2880, 3840, 4800, 5760,...)	Channel Symbol Rate (ksps)

9.2.2.4B CPCH Scrambling Code Number

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
CPCH Scrambling Code Number			INTEGER (0..79)	Described in [9]

9.2.2.4C CPCH UL DPCH Slot Format

Indicates the slot format used in UL CPCH message control part, accordingly to [7]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CPCH UL DPCCH slot format			INTEGER (0..2,...)	

9.2.2.4D DCH FDD Information

The *DCH FDD Information* IE provides information for DCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DCH FDD Information		1 to <maxnoof DCHs>			–	
>Payload CRC Presence Indicator	M		9.2.1.49		–	
>UL FP mode	M		9.2.1.66		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	
>DCH Specific Info		1..<maxno ofDCHs>			–	
>>DCH ID	M		9.2.1.20		–	
>>Transport Format Set	M		9.2.1.59	For UL	–	
>>Transport Format Set	M		9.2.1.59	For DL	–	
>>Allocation/Retention Priority	M		9.2.1.1A		–	
>>Frame Handling Priority	M		9.2.1.30		–	
>>QE-Selector	M		9.2.1.50A		–	

Range bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs for one UE.

9.2.2.4E DCHs FDD to Modify

The *DCHs FDD to Modify* IE provides information for DCHs to be modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DCHs FDD to Modify		1..<max noofDC Hs>			–	
>UL FP Mode	O		9.2.1.66		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
>DCH Specific Info		1..<max noofDC Hs>			–	
>>DCH ID	M		9.2.1.20		–	
>>Transport Format Set	O		9.2.1.59	For the UL.	–	
>>Transport Format Set	O		9.2.1.59	For the DL.	–	
>>Allocation/Retention Priority	O		9.2.1.1A		–	
>>Frame Handling Priority	O		9.2.1.20		–	

Range bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs for one UE.

9.2.2.5 D-Field Length

Void.

9.2.2.6 Dedicated Channels Capacity Consumption Law

Void

9.2.2.7 Diversity Control Field

Void.

9.2.2.8 Diversity Indication

Void.

9.2.2.9 Diversity mode

Define the diversity mode to be applied.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Diversity Mode			ENUMERATED(None, STTD, Closed loop mode 1, Closed loop mode2,...)	

9.2.2.10 DL DPCH Slot Format

Indicates the slot format used in DPCH in DL, accordingly to [7].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL DPCH slot format			INTEGER (0..16,...)	

9.2.2.11 DL frame type

Void.

9.2.2.12 DL or Global Capacity Credit

Void

9.2.2.12A DL_power_averaging_window_size

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL_power_averaging_window_size			INTEGER (1..60)	1-60 time slots, step size 1 slot

9.2.2.13 DL Scrambling Code

DL scrambling code to be used by the RL. One cell may have multiple DL scrambling codes available.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL Scrambling Code			INTEGER (0..15)	0= Primary scrambling code of the cell 1...15= Secondary scrambling code

9.2.2.13A DL TPC pattern 01 count

The *DL TPC pattern 01 count* IE contains the value of the parameter n, which is used for determining the DL TPC pattern on Radio Links marked with "first RLS" by the *First RLS indicator* IE before UL synchronisation is achieved.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL TPC pattern 01 count			INTEGER(0..30,...)	

9.2.2.13B DSCH FDD Information

The *DSCH FDD Information* IE provides information for DSCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DSCH FDD Information		1 to <maxnoof DSCHs>			–	
>DSCH ID	M		9.2.1.27		–	
>Transport Format Set	M		9.2.1.59	For DSCH	–	
>Allocation/Retention Priority	M		9.2.1.1A		–	
>Frame Handling Priority	M		9.2.1.30		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	

Range bound	Explanation
<i>MaxnoofDSCHs</i>	Maximum number of DSCHs for one UE.

9.2.2.14 FDD DL Channelisation Code Number

The DL Channelisation Code Number indicates the DL Channelisation Code number for a specific DL physical channel.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FDD DL ChannelisationCode Number			INTEGER(0.. 511)	According to the mapping in [9]. The maximum value is equal to the DL spreading factor –1

9.2.2.14A FDD DL Code Information

The *FDD DL Code Information* IE provides DL Code information for the RL.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
FDD DL Code Information		1 to <maxnoof-DLCodes>			–	
>DL Scrambling Code	M		9.2.2.13		–	
>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>Transmission Gap Pattern Sequence Code Information	O		9.2.2.53B		–	

Range bound	Explanation
<i>MaxnoofDLCodes</i>	Maximum number of DL code information.

9.2.2.15 FDD S-CCPCH Offset

The Secondary CCPCH offset is defined as the time offset towards the Primary CCPCH in the cell. The offset is a multiple of 256 chips.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FDD S-CCPCH Offset			INTEGER(0..149)	0: 0 chip 1: 256 chip 2: 512 chip .. 149: 38144 chip [7]

9.2.2.16 FDD TPC DL step size

This parameter indicates step size for the DL power adjustment.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FDD TPC Downlink step size			ENUMERATED (0.5, 1, 1.5, 2,...)	

9.2.2.16A First RLS Indicator

The First *RLS Indicator* IE indicates if a specific Radio Link and all Radio Links which are part of the same Radio Link Set, shall be considered as the first radio links established towards the UE or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
First RLS Indicator			ENUMERATED (first RLS, not first RLS)	

9.2.2.17 Gap Period

Void.

9.2.2.18 Gap Position Mode

Void.

9.2.2.18A Limited Power Increase

The parameter is used for a more efficient use of the inner loop DL power control for non real time data.

If the limited power increase is used, Node B shall use the limited power increase algorithm as specified in [10], Chapter 5.2.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Limited Power Increase			ENUMERATED (Used, Not used)	

9.2.2.18B Inner Loop DL PC Status

The *Inner Loop DL PC Status* IE indicates whether inner loop DL control shall be active or inactive for all radio links associated with the context identified by the *Node B Communication Context Id* IE.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Inner Loop DL PC Status			ENUMERATED(Active, Inactive)	

9.2.2.19 Max Adjustment Period

Void.

9.2.2.20 Max Adjustment Step

Defines the maximum allowed value for the change of DL power level during a certain number of slots that can be utilised by the downlink power balancing algorithm. *Max Adjustment Step* IE defines a time period, in terms of number of slots, in which the accumulated power adjustment shall be maximum 1dB. This value does not include the DL inner loop PC adjustment.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max Adjustment Step			INTEGER (1 .. 10)	Slots

9.2.2.20A Max Number of PCPCHes

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max Number of PCPCHes			INTEGER(1..64, ...)	

9.2.2.21 Maximum Number of UL DPDCHs

This parameter is an UE Radio Access Capability parameter which is needed in rate matching algorithm.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max Number of UL DPDCHs			INTEGER (1..6)	

9.2.2.22 Minimum UL Channelisation Code Length

Minimum UL channelisation code length (spreading factor) of a DPDCH which is supported by UE. Needed by rate matching algorithm.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Min UL Channelisation Code length			ENUMERATED(4,8,16, 32,64,128, 256)	

9.2.2.23 Multiplexing Position

Multiplexing Position specifies whether fixed or flexible positions of transport channels shall be used in the physical channel.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Multiplexing Position			ENUMERATED(Fixed, Flexible)	

9.2.2.23A N_EOT

The N_EOT is defined as number of End of Transmission for release of PCPCH transmission.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
N_EOT			INTEGER (0..8)	TTI

9.2.2.23B NF_max

The NF_max is defined as maximum number of Frame in a PCPCH message data part.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
NF_max			INTEGER (1..64,...)	

9.2.2.23C N_Start_Message

The N_Start_Message is defined as number of Frames for start message of DL DPDCHes for a CPCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
N_Start_Message			INTEGER (1..8)	

9.2.2.24 Pattern Duration (PD)

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PD			INTEGER(0..2047, ...)	Frames If the value is set to '0', the Pattern Duration shall be interpreted as 'infinite'

9.2.2.24A PCP Length

Indicates CPCH power control preamble length.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PCP Length			ENUMERATED(0,8)	

9.2.2.25 PDSCH code mapping

This IE indicates the association between each possible value of TFCI(field 2) and the corresponding PDSCH channelisation code(s). There are three fundamentally different ways that the UTRAN must choose between in order to signal the mapping information, these are described below. The signalling capacity consumed by the different methods will vary depending on the way in which the UTRAN configures usage of the DSCH. A fourth option is also provided

which allows the UTRAN to replace individual entries in the TFCI(field 2) to PDSCH code mapping table with new PDSCH code values.

Method #1 - Using code range

The mapping is described in terms of a number of groups, each group associated with a given spreading factor. The UE maps TFCI(field2) values to PDSCH codes in the following way. The PDSCH code used for TFCI(field 2) = 0, is given by the SF and code number = 'PDSCH code start' of Group = 1. The PDSCH code used for TFCI(field 2) = 1, is given by the SF and code number = 'PDSCH code start' + 1. This continues, with unit increments in the value of TFC mapping to unit increments in code number up until the point that code number = 'PDSCH code stop'. The process continues in the same way for the next group with the TFCI(field 2) value used by the UE when constructing its mapping table starting at the largest value reached in the previous group plus one. In the event that 'PDSCH code start' = 'PDSCH code stop' (as may occur when mapping the PDSCH root code to a TFCI (field 2) value) then this is to be interpreted as defining the mapping between the channelisation code and a single TFCI (ie. TFCI(field 2) should not be incremented twice).

Note that each value of TFCI (field 2) maps to a given code number and when the 'multi-code info' parameter is greater than 1, then each value of TFCI (field 2) actually maps to a set of PDSCH codes. In this case contiguous codes are assigned, starting at the channelisation code denoted by the 'code number' parameter and including all codes with code numbers up to and including 'code number' - 1 + the value given in the parameter 'multi-code info'.

Method #2 - Using TFCI range

The mapping is described in terms of a number of groups, each group corresponding to a given PDSCH channelisation code or codes for multicode. The PDSCH code specified in the first group applies for all values of TFCI(field 2) between 0 and the specified 'Max TFCI(field2)'. The PDSCH code specified in the second group applies for all values of TFCI(field 2) between the 'Max TFCI(field2) value' specified in the last group plus one and the specified 'Max TFCI(field2)' in the second group. The process continues in the same way for the following groups with the TFCI(field 2) value starting at the largest value reached in the previous group plus one.

Method #3 - Explicit

The mapping between TFCI(field 2) value and PDSCH channelisation code is spelt out explicitly for each value of TFCI (field2)

Information Element/Group name	Presence	Range	IE type and reference	Semantics description
DL Scrambling Code	M		INTEGER (0..15)	Scrambling code on which PDSCH is transmitted. 0= Primary scrambling code of the cell 1...15 = Secondary scrambling code

<i>Choice signalling method</i>				
<i>>code range</i>				
>>PDSCH code mapping		1 to <MaxNoCodeGroups>		
>>Spreading factor	M		Enumerated(4, 8, 16, 32, 64, 128, 256)	
>>multi-code info	M		Integer(1..16)	This parameter indicates the number of PDSCH transmitted to the UE. The PDSCH codes all have the same SF as denoted by the Spreading factor parameter. Contiguous codes are assigned, starting at the channelisation code denoted by the spreading factor and code number parameter and including all codes, with code numbers up to and including 'code number' - 1 + 'multi-code info'. Note that 'code number'-1+'multi-code info' will not be allowed to exceed 'maxCodeNumComp'-1
>>Code number	M		Integer(0..maxCodeNumComp-1)	PDSCH code start, Numbering as described in [18]
>>Code number	M		Integer(0..maxCodeNumComp-1)	PDSCH code stop, Numbering as described in [18]
<i>>TFCI range</i>				
>>DSCH mapping		1 to <MaxNoTFCIGroups>		
>>>Max TFCI(field2) value	M		Integer(1..1023)	This is the maximum value in the range of TFCI(field 2) values for which the specified PDSCH code applies
>>>Spreading factor	M		Enumerated(4, 8, 16, 32, 64, 128, 256)	SF of PDSCH code
>>>multi-code info	M		Integer(1..16)	Semantics as described for this parameter above
>>>Code number	M		Integer(0..maxCodeNumComp-1)	Code number of PDSCH code. Numbering as described in [18]
<i>>Explicit</i>				
>>PDSCH code		1 to MaxTFCI_2_Combs		The first instance of the parameter PDSCH code corresponds to TFCI (field2) = 0, the second to TFCI(field 2) = 1 and so on.
>>>Spreading factor	M		Enumerated(4, 8, 16, 32, 64, 128, 256)	SF of PDSCH code
>>>multi-code info	M		Integer(1..16)	Semantics as described for this parameter above
>>>Code number	M		Integer(0..maxCodeNumComp-1)	Code number of PDSCH code. Numbering as described in [18]

Range Bound	Explanation
MaxCodeNumComp	Maximum number of codes at the defined spreading factor, within the complete code tree.
MaxTFCI_2_Combs	Maximum number of TFCI (field 2) combinations (given by 2 raised to the power of the length of the TFCI field 2)
MaxNoTFCIGroups	Maximum number of groups, each group described in terms of a range of TFCI(field 2) values for which a single PDSCH code applies.
MaxNoCodeGroups	Maximum number of groups, each group described in terms of a range of PDSCH channelisation code values for which a single spreading factor applies.

9.2.2.26 PICH Mode

The number of paging indicators (PIs) in a PICH frame.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PICH Mode			Enumerated(18, 36, 72, 144)	Number of PI per frame

9.2.2.27 Power Adjustment Type

Defines the characteristic of the power adjustment.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Adjustment Type			ENUMERATED (None, Common, Individual)	

9.2.2.28 Power Control Mode

Void.

9.2.2.29 Power Offset

This IE defines a power offset relative to the Downlink transmission power of a DPCH or a Secondary CCPCCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Offset			INTEGER (0...24)	Step 0.25 dB, range 0-6 dB

9.2.2.29A Power_Raise_Limit

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power_Raise_Limit			INTEGER (0..10)	0-10 dB, step size 1 dB

9.2.2.30 Power Resume Mode

Void.

9.2.2.31 Preamble Signature

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Preamble Signatures			BIT STRING (16)	Bit 0=P0 Bit 1=P1 .. Bit 15=P15 [9]

9.2.2.32 Preamble Threshold

The IE sets the threshold for preamble detection. The ratio between received preamble power during the preamble period and interference level shall be above this threshold in order to be acknowledged.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Preamble Threshold			INTEGER (0 , 1, ...,72)	0: - 36.0 dB 1: - 35.5 dB 2: - 35.0 dB .. 72: 0.0 dB

9.2.2.33 Primary CPICH Power

Primary CPICH power is the power that shall be used for transmitting the P-CPICH in a cell. The reference point is the antenna connector.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Primary CPICH power			Enumerated (-10, ..., 50)	Unit dBm Granularity 0.1 dB

9.2.2.34 Primary Scrambling code

The Primary scrambling code to be used in the cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Primary Scrambling Code			Integer (0 .. 511)	

9.2.2.35 Propagation Delay

Propagation delay is the one-way propagation delay of the radio signal from the MS to the Node B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Propagation Delay			INTEGER (0..255)	Chips. Step size is 3 chips. 0=0 chips, 1=3 chips, ...

9.2.2.36 QE-Selector

Void.

9.2.2.37 RACH Slot Format

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RACH Slot Format			ENUMERATED(0..3, ...)	See [7].

9.2.2.38 RACH sub Channel numbers

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RACH Sub Channel Numbers			BIT STRING (12)	Bit 0=Sub Channel Number 0 Bit 1=Sub Channel Number 1 ... Bit 11=Sub Channel Number 11

9.2.2.39 RL Set ID

The RL Set ID uniquely identifies one RL Set within a Node B Communication Context.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RL Set ID			INTEGER (0..31)	

9.2.2.39A Received total wide band power

The Received total wide band power indicates the UL interference at a certain cell under CRNC, see ref. [4].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Received total wide band power			INTEGER(0..621)	According to mapping in [22].

9.2.2.40 S-Field Length

The UE uses the S Field of the UL DPCCH slot to send the SSDT Cell ID to the network.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
S Field Length			ENUMERATED (1, 2,...)	

9.2.2.41 Scrambling Code Change

Void.

9.2.2.42 Scrambling Code Number

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Scrambling Code Word Number			INTEGER (0..15)	Identification of scrambling code see Ref. [9].

9.2.2.43 Secondary CCPCH Slot Format

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Secondary CCPCH Slot Format			INTEGER(0..17,...)	

9.2.2.44 SSDT Cell Identity

The SSDT Cell ID is a temporary ID for SSDT assigned to a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SSDT Cell Identity			ENUMERATED (a, b.., h)	

9.2.2.45 SSDT Cell ID Length

The SSDT Cell ID Length parameter shows the length of the SSDT Cell ID.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell ID Length			ENUMERATED (Short, Medium, Long)	

9.2.2.46 SSDT Support Indicator

The SSDT Support Indicator indicates whether a RL supports SSDT or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SSDT Support Indicator			ENUMERATED (SSDT Supported, SSDT not supported).	

9.2.2.47 SSDT Indication

The SSDT Indication indicates whether SSDT is in use by the UE or not.

IE/Group name	Presence	Range	IE type and reference	Semantics description
SSDT Indication			ENUMERATED(SSDT Active in the UE, SSDT not Active in the UE)	

9.2.2.48 STTD Indicator

Indicates if STTD shall be active or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
STTD Indicator			ENUMERATED(active, inactive)	

9.2.2.49 T_Cell

Timing delay used for defining start of SCH, CPICH and the DL scrambling code(s) in a cell relative BFN. Resolution 256 chips.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
T Cell			Enumerated (0 , 1, ...,9)	0: 0 chip 1: 256 chip .. 9: 2304 chip [17]

9.2.2.49A TFCI2 Bearer Information Response

The *TFCI2 Bearer Information Response* IE provides information for TFCI2 bearer that have been established or modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
TFCI2 Bearer Information Response		4				
>Binding ID	M		9.2.1.4		-	
>Transport Layer Address	M		9.2.1.63		-	

9.2.2.50 TFCI signalling mode

This parameter indicates if the normal or split mode is used for the TFCI. In the event that the split mode is to be used then the IE indicates whether the split is 'Hard' or 'Logical', and in the event that the split is 'Logical' the IE indicates the number of bits in TFCI (field 2).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI signalling option	M		ENUMERATED (Normal, Split)	'Normal' : meaning no split in the TFCI field (either 'Logical' or 'Hard') 'Split' : meaning there is a split in the TFCI field (either 'Logical' or 'Hard')
Split type	C-IfSplit		Enumerated (Hard, Logical)	'Hard' : meaning that TFCI (field 1) and TFCI (field 2) are each 5 bits long and each field is block coded separately. 'Logical' : meaning that on the physical layer TFCI (field 1) and TFCI (field 2) are concatenated, field 1 taking the most significant bits and field 2 taking the least significant bits). The whole is then encoded with a single block code.
Length of TFCI2	C-SplitType		Integer (1..10)	This IE indicates the length measured in number of bits of TFCI (field2).

Condition	Explanation
IfSplit	This IE is only present if 'TFCI signalling option' = 'split'
SplitType	This IE is only present if 'Split type' = 'Logical'

9.2.2.51 TGD

Void.

9.2.2.52 TGL

Void.

9.2.2.53 Transmit Diversity Indicator

The Transmit Diversity Indicator indicates whether transmit diversity shall be active or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transmit Diversity Indicator			ENUMERATED(active, inactive)	

9.2.2.53A Transmission Gap Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence. For details see [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transmission gap pattern Sequence Information		1 to <MaxTGPS>		
>TGPSI Identifier	M		Integer(1..<MaxTGPS>)	Transmission Gap Pattern Sequence Identifier Establish a reference to the compressed mode pattern sequence. Up to <MaxTGPS> simultaneous compressed mode pattern sequences can be used.
>TGSN	M		Integer (0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.
>TGL1	M		Integer(1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots.
>TGL2	O		Integer (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.
>TGD	M		Integer (0, 15.. 269)	Transmission gap distance indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to 0 (0 =undefined).
>TGPL1	M		Integer (1..144,...)	The duration of transmission gap pattern 1 in frames.
>TGPL2	O		Integer (1..144,...)	The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1.
>UL/DL mode	M		Enumerated (UL only, DL only, UL/DL)	Defines whether only DL, only UL, or combined UL/DL compressed mode is used.
>Downlink compressed mode method	C-DL		Enumerated (puncturing, SF/2, higher layer scheduling, ...)	Method for generating downlink compressed mode gap None means that compressed mode pattern is stopped.
>Uplink compressed mode method	C-UL		Enumerated (SF/2, higher layer scheduling, ...)	Method for generating uplink compressed mode gap.
>Downlink frame type	M		Enumerated (A, B,...)	Defines if frame structure type 'A' or 'B' shall be used in downlink compressed mode.
>DeltaSIR1	M		Integer (0..30)	Delta in UL SIR target value to be set in the Node B during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) Step 0.1 dB, Range 0-3dB
>DeltaSIRafter1	M		Integer	Delta in UL SIR target value to

			(0..30)	be set in the Node B one frame after the frame containing the start of the first transmission gap in the transmission gap pattern, Step 0.1 dB, Range 0-3dB
>DeltaSIR2	O		Integer (0..30)	Delta in UL SIR target value to be set in the Node B during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1. Step 0.1 dB, Range 0-3dB
>DeltaSIRafter2	O		Integer (0..30)	Delta in UL SIR target value to be set in the Node B one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1. Step 0.1 dB, Range 0-3dB

Condition	Explanation
C-UL	This information element is only sent when the value of the "UL/DL mode" IE is "UL only" or "UL/DL".
C-DL	This information element is only sent when the value of the "UL/DL mode" IE is "DL only" or "UL/DL".

Range bound	Explanation
MaxTGPS	Maximum number of transmission gap pattern sequences.

9.2.2.53B Transmission Gap Pattern Sequence Code Information

This IE indicates whether the alternative scrambling code shall be used for the Downlink compressed mode method or not in the Transmission Gap Pattern Sequence. For details see [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Scrambling code change			Enumerated (code change, no code change)	Indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'.

9.2.2.54 UL/DL compressed mode selection:

Void.

9.2.2.55 UL delta SIR

Void.

9.2.2.56 UL delta SIR after

Void.

9.2.2.57 UL DPCCH Slot Format

Indicates the slot format used in DPCCH in UL, accordingly to 25.211

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL DPCCH slot format			INTEGER (0..5,...)	

9.2.2.58 UL SIR

The UL SIR indicates a received UL SIR.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL SIR			ENUMERATED (-8.2 .. 17.3)	Step 0.1 dB

9.2.2.59 UL Scrambling Code

The UL Scrambling Code is the scrambling code used by UE. Every UE has its specific UL Scrambling Code.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL scrambling code				
➤UL scrambling code number	M		INTEGER (0.. $2^{24}-1$)	
➤UL scrambling code length	M		ENUMERATED(Short, Long)	

9.2.2.60 UL Capacity Credit

Void

9.2.3 TDD specific Parameters

9.2.3.1 Block STTD Indicator

Indicates if Block STTD antenna diversity is applied or not to the PCCPCH.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Block STTD Indicator			ENUMERATED(active, inactive)	

9.2.3.2 Burst Type

Void.

9.2.3.3 CCTrCH ID

The CCTrCH ID identifies unambiguously a CCTrCH inside a Radio Link.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CCTrCH ID			INTEGER (0..15)	

9.2.3.4 Cell Parameter ID

The Cell Parameter ID identifies unambiguously the Code Groups, Scrambling Codes, Midambles and Toffset (see [20]).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell Parameter ID			INTEGER (0..127,...)	

9.2.3.4A Constant Value

The Constant Value is the power margin used by a UE to set the proper uplink power for a DCH, USCH, or a RACH .

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Constant Value			INTEGER (-10...10,...)	Unit dB Granularity 1 dB.

9.2.3.4B DL Timeslot ISCP

DL Timeslot ISCP is the measured interference in a downlink timeslot at the UE, see ref. [5].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL Timeslot ISCP			INTEGER (0..91)	According to mapping in [5].

9.2.3.4C DCH TDD Information

The *DCH TDD Information* IE provides information for DCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DCH TDD Information		1 to <maxnoof DCHs>			–	
>Payload CRC Presence Indicator	M		9.2.1.49		–	
>UL FP mode	M		9.2.1.66		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	
>DCH Specific Info		1..<maxno ofDCHs>			–	
>>DCH ID	M		9.2.1.20		–	
>>CCTrCH ID	M		9.2.3.3	UL CCTrCH in which the DCH is mapped	–	
>>CCTrCH ID	M		9.2.3.3	DL CCTrCH in which the DCH is mapped	–	
>>Transport Format Set	M		9.2.1.59	For UL	–	
>>Transport Format Set	M		9.2.1.59	For DL	–	
>>Allocation/Retention Priority	M		9.2.1.1A		–	
>>Frame Handling Priority	O		9.2.1.30		–	
>>QE-Selector	C-CoordDCH		9.2.1.50A		–	

Condition	Explanation
CoordDCH	This IE is present only this DCH is part of a set of coordinated DCHs (number of instances of DCH Specific Info is greater than 1)

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for one UE

9.2.3.4D DCHs TDD to Modify

The *DCHs TDD to Modify* IE provides information for DCHs to be modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DCHs TDD to Modify		1..<maxnoofDCHs>			GLOBAL	reject
>UL FP Mode	O		9.2.1.66		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
>DCH Specific Info		1..<maxnoofDCHs>			–	
>>DCH ID	M		9.2.1.20		–	
>>CCTrCH ID	O		9.2.3.3	UL CCTrCH in which the DCH is mapped.	–	
>>CCTrCH ID	O		9.2.3.3	DL CCTrCH in which the DCH is mapped	–	
>>Transport Format Set	O		9.2.1.59	For the UL.	–	
>>Transport Format Set	O		9.2.1.59	For the DL.	–	
>>Allocation/Retention Priority	O		9.2.1.1A		–	
>>Frame Handling Priority	O		9.2.1.30		–	

Range bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs for one UE

9.2.3.4E DL Timeslot Information

The *DL Timeslot Information* IE provides information for DL Time slot to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DL Timeslot Information		1 .. <maxnoofDLts>			–	
>Time Slot	M		9.2.3.23		–	
>Midamble Shift and Burst Type	M		9.2.3.7		–	
>TFCI Presence	M		9.2.1.57		–	
>DL Code Information	M		TDD DL Code Information 9.2.3.x		–	

Range bound	Explanation
<i>MaxnoofDLts</i>	Maximum number of Downlink time slots per Radio Link

9.2.3.4F DL Time Slot ISCP Info

The *DL Time Slot ISCP Info* IE provides information for DL Interference level for each time slot within the Radio Link.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DL Time Slot ISCP Info		1 .. <maxnoofDLts>			–	
>Time Slot	M		9.2.3.23		–	
>DL Timeslot ISCP	M		9.2.3.4B		–	

Range bound	Explanation
<i>MaxnoofDLts</i>	Maximum number of Downlink time slots per Radio Link

9.2.3.5 DPCH ID

The DPCH ID identifies unambiguously a DPCH inside a Radio Link.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DPCH ID	M		INTEGER (0..239)	

9.2.3.5A DSCH TDD Information

The *DSCH TDD Information* IE provides information for DSCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DSCH TDD Information		1 to <MaxnoofDSCHs>			–	
>DSCH ID	M		9.2.1.27		–	
>CCTrCH ID	M		9.2.3.2	DL CCTrCH in which the DSCH is mapped	–	
>Transport Format Set	M		9.2.1.59	For DSCH	–	
>Allocation/Retention Priority	M		9.2.1.1A		–	
>Frame handling Priority	M		9.2.1.30		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	

Range bound	Explanation
<i>MaxnoofDSCHs</i>	Maximum number of DSCH for one UE

9.2.3.6 Max PRACH Midamble shift

Indicates the maximum number of Midamble shifts to be used in a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max PRACH Midamble Shifts			ENUMERATED (4, 8,...)	

9.2.3.7 Midamble shift and burst type

This information element indicates burst type and midamble allocation.

The 256 chip midamble supports 3 different time shifts, the 512 chips midamble may support 8 or even 16 time shifts.

Three different midamble allocation schemes exist:

Default midamble: the midamble shift is selected by layer 1 depending on the associated channelisation code (DL and UL)

Common midamble: the midamble shift is chosen by layer 1 depending on the number of channelisation codes (possible in DL only)

UE specific midamble: a UE specific midamble is explicitly assigned (DL and UL)

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE Burst Type				
>"Type 1"				
>>Midamble Allocation Mode	M		Enumerated (Default midamble, Common midamble, UE specific midamble)	
>>Midamble Shift	C-UE		Integer(0..15)	
>"Type 2"				
>>Midamble Allocation Mode	M		Enumerated (Default midamble, Common midamble, UE specific midamble)	
>>Midamble Shift	C-UE		INTEGER (0..5)	
>"Type 3"				UL only
>>Midamble Allocation Mode	M		Enumerated (Default midamble, UE specific midamble)	
>>Midamble Shift	C-UE		Integer(0..15)	
> "..."				

Condition	Explanation
<i>C-UE</i>	This information element is only sent when the value of the "Midamble Allocation Mode" IE is "UE-specific midamble".

9.2.3.8 Paging Indicator Length

The Paging Indicator Length indicates the number of symbols for Page Indication transmitted in one timeslot (see [19]).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Paging Indicator Length			ENUMERATED (2, 4, 8,...)	

9.2.3.9 PCCPCH Power

Primary CCPCH power is the power that shall be used for transmitting the P CCPCH in a cell. The P CCPCH power is the reference power in a TDD-cell. The reference point is the antenna connector.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PCCPCH Power			INTEGER(-15..+40,...)	Unit dBm Granularity 0.1 dB

9.2.3.10 PDSCH ID

The PDSCH ID identifies unambiguously a PDSCH inside a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PDSCH ID			INTEGER (0..255)	

9.2.3.11 PDSCH Set ID

The PDSCH Set Id identifies unambiguously a PDSCH Set inside a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PDSCH Set ID			INTEGER (0..255)	See [6]

9.2.3.12 PUSCH ID

The PUSCH ID identifies unambiguously a PUSCH inside a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PUSCH ID			INTEGER (0..255)	

9.2.3.13 PUSCH Set ID

The PUSCH Set ID identifies unambiguously a PUSCH Set inside a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PUSCH Set ID			INTEGER (0..255)	See [6]

9.2.3.14 PRACH Midamble

The PRACH Midamble indicates if only the Basic Midamble Sequence or also the time-inverted Midamble Sequence is used.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PRACH Midamble			ENUMERATED (Inverted, Direct)	

9.2.3.15 Repetition Length

The Repetition Length represents the number of consecutive Radio Frames inside a Repetition Period in which the same Time Slot is assigned to the same Physical Channel [see 18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Repetition Length			INTEGER(1..63)	

9.2.3.16 Repetition Period

The Repetition Period represents the number of consecutive Radio Frames after which the same assignment scheme of Time Slots to a Physical Channel is repeated. This means that if the Time Slot K is assigned to a physical channel in the Radio Frame J , it is assigned to the same physical channel also in all the Radio Frames $J+n*Repetition\ Period$ (where n is an integer) [see 18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Repetition Period			ENUMERATED(1, 2, 4, 8, 16, 32, 64)	

9.2.3.17 SCH Time Slot

The SCH Time Slot is only applicable if the value of Sync Case IE is Case 2.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SCH Time Slot			INTEGER(0..6)	

9.2.3.18 Sync case

The SCH and PCCPCH are mapped on one or two downlink slots per frame. There are two cases of SCH and PCCPCH allocation as follows:

- Case 1) SCH and PCCPCH allocated in a single TS#k
- Case 2) SCH allocated in two TS: TS#k and TS#k+8
PCCPCH allocated in TS#k

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Sync Case			Integer (1..2,...)	

9.2.3.19 TDD Channelisation Code

The Channelisation Code Number indicates which Channelisation Code is used for a given Physical Channel. In TDD the Channelisation Code is an Orthogonal Variable Spreading Factor code, that can have a spreading factor of 1, 2, 4, 8 or 16.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TDD Channelisation Code			ENUMERATED ((1/1), (2/1), (2/2), (4/1),... (4/4), (8/1), (8/8), (16/1)... (16/16),)	

9.2.3.19A TDD DPCH Offset

The Offset represents the phase information for the allocation of a group of dedicated physical channels. The first range is used when a starting offset is not required and the TDD Physical channel offset for each DPCH in the CCTrCH shall be directly determined from the TDD DPCH Offset. The second range is used when a starting offset is required. The TDD DPCH Offset shall map to the CFN and the TDD Physical Channel Offset for each DPCH in this CCTrCH shall be calculated by TDD DPCH Offset *mod* Repetition period, see [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TDD DPCH Offset			CHOICE INTEGER (0..63) or INTEGER (0..255)	

9.2.3.19B TDD DL Code Information

The *TDD DL Code Information* IE provides DL Code information for the RL.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
TDD DL Code Information		1 .. <maxnoOf DPCH>			–	
>DPCH ID	M		9.2.3.5		–	
>TDD Channelisation Code	M		9.2.3.19		–	

Range bound	Explanation
<i>maxnoOfDPCH</i>	Maximum number of DPCH in one CCTrCH

9.2.3.20 TDD Physical Channel Offset

The Offset represents the phase information for the allocation of a physical channel. (SFN *mod* Repetition Period = Offset) [see 18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TDD Physical Channel Offset			INTEGER (0..63)	

9.2.3.21 TDD TPC DL step size

This parameter indicates step size for the DL power adjustment.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TDD TPC Downlink step size			ENUMERATED (1, 2, 3,...)	

9.2.3.21A TDD UL Code Information

The *TDD UL Code Information* IE provides information for UL Code to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
TDD UL Code Information		1 .. <maxno OfDPCH >			–	
>DPCH ID	M		9.2.3.5		–	
>TDD Channelisation Code	M		9.2.3.19		–	

Range bound	Explanation
<i>MaxnoOfDPCH</i>	Maximum number of DPCH in one CCTrCH

9.2.3.22 TFCI Coding

The TFCI Coding describes the way how the TFCI bits are coded. By default 1 TFCI bit is coded with 4 bits, 2 TFCI bits are coded with 8 bits, 3-5 TFCI bits are coded with 16 bits and 6-10 TFCI bits are coded with 32 bits.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI Coding			Enumerated (4, 8, 16, 32,...)	

9.2.3.22A Timing Advance Applied

Defines the need for Rx Timing Deviation measurement results to be reported in a particular cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Timing Advance Applied			ENUMERATED (Yes, No)	

9.2.3.23 Time Slot

The Time Slot represents the minimum time interval inside a Radio Frame that can be assigned to a Physical Channel.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Time Slot			INTEGER (0..14)	

9.2.3.24 Time Slot Direction

This parameter indicates whether the TS in the cell is used in Uplink or Downlink direction.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Time Slot Direction			Enumerated (UL, DL,...)	

9.2.3.25 Time Slot Status

This parameter indicates whether the TS in the cell is active or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Time Slot Status			Enumerated (active, notActive,...)	

9.2.3.26 Transmission Diversity Applied

Defines if Transmission Diversity on DCHs to be applied in a cell (see[19]).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transmission Diversity Applied			Boolean	

9.2.3.26A UL Timeslot ISCP

UL Timeslot ISCP is the measured interference in a uplink timeslot at the Node B, see ref. [5].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL Timeslot ISCP			INTEGER (0..81)	According to mapping in [23].

9.2.3.26B UL PhysCH SF Variation

Indicates whether variation of SF in UL is supported by Radio Link or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL PhysCH SF Variation			ENUMERATED (SF_Variation_supported, SF_Variation_NOT_supported)	

9.2.3.26C UL Timeslot Information

The *UL Timeslot Information* IE provides information on the time slot allocation for an UL DPCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
UL Timeslot Information		1 .. <maxnoofULts>			–	
>Time Slot	M		9.2.3.23		–	
>Midamble Shift and Burst Type	M		9.2.3.7		–	
>TFCI Presence	M		9.2.1.57		–	
> UL Code Information	M		TDD UL Code Information 9.2.3.x			

Range bound	Explanation
<i>MaxnoofULts</i>	Maximum number of Uplink time slots per Radio Link

9.2.3.26D UL Time Slot ISCP Info

The *UL Time Slot ISCP Info* IE provides information for UL Interference level for each time slot within the Radio Link.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
UL Time Slot ISCP Info		1 .. <maxnoofULts>				
>Time Slot	M		9.2.3.23			
>UL Timeslot ISCP	M		9.2.3.26A			

Range bound	Explanation
<i>MaxnoofULts</i>	Maximum number of Uplink time slots per Radio Link

9.2.3.27 USCH ID

The USCH ID uniquely identifies a USCH within a Node B Communication Context.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
USCH ID			INTEGER (0..255)	

9.2.3.28 USCH Information

The *USCH Information* IE provides information for USCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
USCH Information		1 to <Maxnoof USCHs>			–	
>USCH ID	M		9.2.3.27		–	
>CCTrCH ID	M		9.2.3.3	UL CCTrCH in which the USCH is mapped	–	
>Transport Format Set	M		9.2.1.59	For USCH	–	
>Allocation/Retention Priority	M		9.2.1.1A		–	

Range bound	Explanation
MaxnoofUSCHs	Maximum number of USCH for one UE

9.2.3.29 USCH Information Response

The *USCH Information Response* IE provides information for USCHs that have been established or modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
USCH Information Response		1 .. <Maxnoof USCHs>			–	
>USCH ID	M		9.2.3.27		–	
>Binding ID	O		9.2.1.4		–	
>Transport Layer Address	O		9.2.1.63		–	

Range bound	Explanation
MaxnoofUSCHs	Maximum number of USCHs for one UE

CHANGE REQUEST

⌘ **25.433 CR 378** ⌘ rev **1** ⌘ Current version: **3.4.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Correction based on NBAP detailed review		
Source:	⌘ <u>R-WG3</u>		
Work item code:	⌘	Date:	⌘ Feb 2001
Category:	⌘ F	Release:	⌘ R99
<p>Use <u>one</u> of the following categories:</p> <p>F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>	

Reason for change:	⌘ During the NBAP review ad-hoc in WG3, unclarity in the current NBAP specification was identified.
Summary of change:	⌘

1 Scope: Should be aligned with RNSAP/RANAP type of scope + indicating that this is Control Plane

2. Reference: Should be period after all references

2. Reference: Spaces everywhere between TS and 25.xxx

3.1: Class 1 EP: succesfull case: successfully completed should be replace by "has been succefully completed"

3.1.: Class 1 EP unsuccessfull case: remove second bullet

3.3: Missing are: CPICH, SSdT, SCH, ISCP, STTD, TSTD, AP-AICH, AICH, PCH, CSICH?, P-CCPCH, RACH, FACH, S-CCPCH, UTRA, UMTS,

3.3: Reshuffle in alphabetic order

3.3: O&M = Operations and Maintanace

3.3: ATM should be removed

3.3.: Change definition if UTRAN to Univeral.....

4.2: First sentence: "future the message" shall be replaced by "future messages"

4.1: "explicitely" should be "explicitly" (two times)

5: Remove first sentence (hanging sentence)

5.1: Paragraph format alignment

5.1: Rephrase to: "one protocol peer shall have a maximum of one ongoing"

6: Should have heading 1 format

7: Radio Link Supervision: replace CRNC by Node-B

7: Configuration alignment: replace "has" by "have"

7: First sentence: "The NBAP protocol provides the following functions"

8.1: Timer column should be removed

8.2.1.2: First bullets: remove "at the time" (two cases)

8.2.1.2: Remove two remarks on handling of option STTD IE being FFS

General: accept chapter 10 We should not talk about IE-groups (e.g. in procedure text), but just about IE's (which could consist of other IE's).

8.2.2.2: Before TDD-SCCPCH: remove "at the time"

8.2.3.1: remove last part of sentence "setup by the common.... in a cell"

8.2.3.2: Last paragraph: change "new value of the CGID" to "received value of the CGID"

8.2.4.1: Second sentence: add "a": "the logical resource that can be blocked is a cell"

8.2.5.1: Second sentence: add "a": "the logical resource that can be unblocked is a cell"

8.2.8: Event C and D: replace "rises more" by "rises by an amount greater than". Replace "falls more" by "falls by an amount greater than"

8.2.8.2: In all cases where it is stated: "shall initiate a measurement reporting procedure" shall be replaced by " shall initiate the common measurement reporting procedure". In general a reference to a measurement procedure should always identify the common or dedicated procedure.

8.2.9.2: Last line: refer to specifications stating the accuracy requirements for the different measurements: [22] and [23]

8.2.9.2: First paragraph: remove last line "Unless specified....."

8.2.15.1: Bullets 1 and 2: remove part after last comma ("it shall be made available to the RNC" and "the local cell shall.... CRNC")

8.2.16.2: SIB SG REP IE and SIB SG POS IE should be replaced by IB SG REP IE and IB SG POS IE (2 cases)

8.2.16.2: Paragraph under Information Block update should preferably be split

8.2.17.2: Of 3 almost identical paragraphs in 8.2.17.2, only the first one should be kept stating: [FDD - If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity* IE, the Node B shall activate SSDT, if supported, using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE.]

8.2.17.2: Paragraphs on UL FP mode, TOAWS and TOAWE should not talk about a new value or a new configuration.

General In those procedures where we talk about obtaining synchronisation in relation to the radio interface, we should explicitly refer to the Uu interface e.g. "obtaining Uu synchronisation"

8.3.1.2 Fifth paragraph from bottom should be tagged "TDD" as a whole since FDD DSCH is not addressed in RL-addition

General UARCFN should be replaced by UARFCN

8.3.12.2 Last paragraph, FDD tagged sentence should be replaced by: "[FDD - The Node B shall indicate the affected Radio Link Set(s) using the RL Set Information IE].

8.4.1.1 Replace "an appropriate failure message" by "an appropriate response message"

General "unspecified" should only be listed as a typical cause value in the ERROR-Indication procedure => should be removed from other procedures.

8.3.7.1 Replace RRC connection by UE-UTRAN connection

9.2.1.50 In semantics behind 100%: add no puncturing

9.2.3.5 Presence indicator should be removed since a single IE

ASN.1 PCCPCH power definition: in comments, Step should be "0.1dB"

.2.3.17 "9" is missing in chapter heading

ASN.1 Definition of IB-Type: sib1, sib2 and sib12 should have capitalised "IB"

9.2.1.12 Remove indentation of IE's

9.2.1.4 Remove last sentence of the definition (The length of this parameter is variable) since already clear from definition

Consequences if not approved:

⌘ If this CR is not approved the above described unclarity will remain in the specification.

Backward compatibility:

This CR is backward compatible with the previous version of NBAP.

Clauses affected:

⌘ 1, 2, 3.1, 3.3, 4.1, 4.2, 5, 5.1, 6, 7, 8.1, 8.2.1.2, 8.2.2.2, 8.2.3.1, 8.2.3.2, 8.2.4.1, 8.2.5.1, 8.2.8, 8.2.8.2, 8.2.9.2, 8.2.15.1, 8.2.16.2, 8.2.17.2, 8.3.1.2, 8.3.12.2, 8.4.1.1, 8.3.7.1, 9.2.1.50, 9.2.3.5, 9.2.3.4.C, 2.3.17, 9.2.1.12, 9.2.1.4, 9.1.67 , 9.3

Other specs affected:

⌘ Other core specifications ⌘

Test specifications

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/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

1 Scope

The present document specifies the radio network layer signalling protocol called Node B Application Part standards for (NBAP) specification to be used for Control Plane over Iub Interface.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

- [1] 3GPP TS 25.401: "UTRAN Overall Description".
- [2] 3GPP TS 25.426: "UTRAN I_{ur} and I_{ub} Interface Data Transport & Transport Signalling for DCH Data Streams".
- [3] CCITT Recommendation X.731 (01/92): "Information Technology – Open Systems Interconnection – Systems Management: State Management function".
- [4] 3GPP TS 25.215: "Physical layer – Measurements (FDD)".
- [5] 3GPP TS 25.225: "Physical layer – Measurements (TDD)".
- [6] 3GPP TS 25.430: "UTRAN Iub General Aspect and Principle".
- [7] 3GPP TS 25.211: "Physical channels and mapping of transport channels onto physical channels (FDD)".
- [8] 3GPP TS 25.212: "Multiplexing and channel coding (FDD)".
- [9] 3GPP TS 25.213: "Spreading and modulation (FDD)".
- [10] 3GPP TS 25.214: "Physical layer procedures (FDD)".
- [11] X.691, (12/97) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)".
- [12] X.680, (12/97) "Information Technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation".
- [13] X.681, (12/97) "Information Technology - Abstract Syntax Notation One (ASN.1): Information object specification".
- [14] 3GPP TS 25.104: "UTRA (BS) FDD; Radio Transmission and Reception".
- [15] 3GPP TS 25.105: "UTRA (BS) TDD; Radio Transmission and Reception".
- [16] 3GPP TS_25.427: "UTRAN Iur/Iub Interface User Plane Protocol for DCH Data Stream".
- [17] 3GPP TS_25.402: "Synchronisation in UTRAN Stage2".
- [18] 3GPP TS_25.331: "RRC Protocol Specification".
- [19] 3GPP TS_25.221: "Physical channels and mapping of transport channels onto physical channels[TDD]".

- [20] 3GPP TS_25.223: "Spreading and modulation (TDD)"
- [21] 3GPP TS_25.224: "Physical Layer Procedures (TDD)"
- [22] 3GPP TS 25.133 (V3.3): "Requirements for support of Radio Resource management (FDD)"
- [23] 3GPP TS 25.123 (V3.3): "Requirements for support of Radio Resource management (TDD)"
- [24] 3GPP TS 25.435: "UTRAN Iub Interface: User Plane Protocols for Common Transport Channel Data Streams".
- [25] 3GPP TS 25.302: "Services Provided by the Physical Layer".
- [26] 3GPP TR 25.921: "Guidelines and Principles for Protocol Description and Error Handling".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply.

CRNC Communication Context: The CRNC Communication Context contains the necessary information for the CRNC for communication with a specific UE. The CRNC Communication Context is identified by the CRNC Communication Context ID.

Elementary Procedure: The NBAP protocol consists of Elementary Procedures (EPs). An Elementary Procedure is a unit of interaction between the CRNC and the Node B.

An EP consists of an initiating message and possibly a response message.

Two kinds of EPs are used:

- **Class 1:** Elementary Procedures with response (success or failure).
- **Class 2:** Elementary Procedures without response.

For **Class 1** EPs, the types of responses can be as follows:

Successful

- A signalling message explicitly indicates that the elementary procedure has been successfully completed with the receipt of the response.

Unsuccessful

- A signalling message explicitly indicates that the EP failed.
- ~~On time supervision expiry (i.e. absence of expected response). Whether or not any Class 1 procedure will have a timer on NBAP is FFS. To be sorted out when discussing the details of the error cases.~~

Class 2 EPs are considered always successful.

Node B Communication Context: The Node B Communication Context contains the necessary information for the Node B for communication with a specific UE. The Node B Communication Context is created by the Radio Link Setup procedure and deleted by the Radio Link Deletion procedure when deleting the last Radio Link within the Node B Communication Context. The Node B Communication Context is identified by the Node B Communication Context ID.

Prepared Reconfiguration: A Prepared Reconfiguration exists when the Synchronised Radio Link Reconfiguration Preparation procedure has been completed successfully. The Prepared Reconfiguration does not exist any more after either of the procedures Synchronised Radio Link Reconfiguration Commit or Synchronised Radio Link Reconfiguration Cancellation has been completed.

3.2 Symbols

Void.

3.3 Abbreviations

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

<u>AICH</u>	<u>Acquisition Indicator Channel</u>
<u>AP-AICH</u>	<u>Access Preamble Acquisition Indicator Channel</u>
ASN.1	Abstract Syntax Notation One
ATM	Asynchronous Transfer Mode
BCCH	Broadcast Control Channel
CCPCH	Common Control Physical Channel
CFN	Connection Frame Number
CM	Compressed Mode
CPCH	Common Packet Channel
<u>CPICH</u>	<u>Common Pilot Channel</u>
CRNC	Controlling Radio Network Controller
<u>CSICH</u>	<u>CPCH Status Indicator Channel</u>
DCH	Dedicated Channel
DL	Downlink
DPCCCH	Dedicated Physical Control Channel
DPCH	Dedicated Physical Channel
DPDCH	Dedicated Physical Data Channel
DSCH	Downlink Shared Channel
<u>FACH</u>	<u>Forward Access Channel</u>
FDD	Frequency Division Duplex
FP	Frame Protocol
<u>ISCP</u>	<u>Interference Signal Code Power</u>
L1	Layer 1
MIB	Master Information Block
L2	Layer 2
<u>MIB</u>	<u>Master Information Block</u>
NBAP	Node B Application Part
O&M	Operation and Maintenance Management
<u>PCCPCH</u>	<u>Primary Common Control Physical Channel</u>
<u>PCH</u>	<u>Paging Channel</u>
PCPCH	Physical Common Packet Channel
PDSCH	Physical Downlink Shared Channel
PUSCH	Physical Uplink Shared Channel
<u>RACH</u>	<u>Random Access Channel</u>
RL	Radio Link
RLS	Radio Link Set
RNC	Radio Network Controller
RRC	Radio Resource Control
SB	Scheduling Block
<u>SCCPCH</u>	<u>Secondary Common Control Physical Channel</u>
<u>SCH</u>	<u>Synchronisation Channel</u>
SIB	System Information Block
SRNC	Serving Radio Network Controller
<u>SSDT</u>	<u>Site Selection Diversity Transmission</u>
<u>STTD</u>	<u>Space Time Transmit Diversity</u>
TDD	Time Division Duplex
TFC	Transport Format Combination
TFCI	Transport Format Combination Indicator
TFCS	Transport Format Combination Set
TFS	Transport Format Set
TPC	Transmit Power Control
<u>TSTD</u>	<u>Time Switched Transmit Diversity</u>
UARFCN	UTRA Absolute Radio Frequency Channel Number

UE	User Equipment
UL	Uplink
UMTS	Universal Mobile Telecommunications System
USCH	Uplink Shared Channel
UTRA	Universal Terrestrial Radio Access
UTRAN	Universal UMTS Terrestrial Radio Access Network

4 General

4.1 Procedure Specification Principles

The principle for specifying the procedure logic is to specify the functional behaviour of the Node B exactly and completely. The CRNC functional behaviour is left unspecified. The Reset procedure is an exception from this principle.

The following specification principles have been applied for the procedure text in chapter 8:

- The procedure text discriminates between:

1) Functionality which "shall" be executed

The procedure text indicates that the receiving node "shall" perform a certain function Y under a certain condition. If the receiving node supports procedure X but cannot perform functionality Y requested in the REQUEST message of a Class 1 EP, the receiving node shall respond with the message used to report unsuccessful outcome for this procedure, containing an appropriate cause value.

2) Functionality which "shall, if supported" be executed

The procedure text indicates that the receiving node "shall, if supported," perform a certain function Y under a certain condition. If the receiving node supports procedure X, but does not support functionality Y, the receiving node shall proceed with the execution of the EP, possibly informing the requesting node about the not supported functionality.

- Any required inclusion of an optional IE in a response message is ~~explicitly~~ explicitly indicated in the procedure text. If the procedure text does not ~~explicitly~~ explicitly indicate that an optional IE shall be included in a response message, the optional IE shall not be included.

4.2 Forwards and Backwards Compatibility

The forwards and backwards compatibility of the protocol is assured by a mechanism where all current and future ~~the~~ messages, and IEs or groups of related IEs, include Id and criticality fields that are coded in a standard format that will not be changed in the future. These parts can always be decoded regardless of the standard version.

4.3 Specification Notations

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

- | | |
|-------------|--|
| [FDD] | This tagging of a word indicates that the word preceding the tag "[FDD]" applies only to FDD. This tagging of a heading indicates that the heading preceding the tag "[FDD]" and the section following the heading applies only to FDD. |
| [TDD] | This tagging of a word indicates that the word preceding the tag "[TDD]" applies only to TDD. This tagging of a heading indicates that the heading preceding the tag "[TDD]" and the section following the heading applies only to TDD. |
| [FDD - ...] | This tagging indicates that the enclosed text following the "[FDD - " applies only to FDD. Multiple sequential paragraphs applying only to FDD are enclosed separately to enable insertion of TDD specific (or common) paragraphs between the FDD specific paragraphs. |

[TDD - ...]	This tagging indicates that the enclosed text following the "[TDD - " applies only to TDD. Multiple sequential paragraphs applying only to TDD are enclosed separately to enable insertion of FDD specific (or common) paragraphs between the TDD specific paragraphs.
Procedure	When referring to an elementary procedure in the specification the Procedure Name is written with the first letters in each word in upper case characters followed by the word "procedure", e.g. Radio Link Setup procedure.
Message	When referring to a message in the specification the MESSAGE NAME is written with all letters in upper case characters followed by the word "message", e.g. RADIO LINK SETUP REQUEST message.
IE	When referring to an information element (IE) in the specification the <i>Information Element Name</i> is written with the first letters in each word in upper case characters and all letters in Italic font followed by the abbreviation "IE", e.g. <i>Transport Format Set IE</i> .
Value of an IE	When referring to the value of an information element (IE) in the specification the "Value" is written as it is specified in subclause 9.2 enclosed by quotation marks, e.g. "Abstract Syntax Error (Reject)" or "SSDT Active in the UE".

5 NBAP Services

The NBAP offers the following services:

5.1 Parallel Transactions

~~Unless explicitly indicated in the procedure description, at any instance in time one protocol peer shall have initiated maximum one ongoing dedicated NBAP procedure related to a certain Node B communication context.~~

Unless explicitly indicated in the procedure description, at any instance in time one protocol peer shall have a maximum of one ongoing dedicated NBAP procedure related to a certain Node B communication context.

~~6 Services Expected from Signalling Transport~~

6 Services Expected from Signalling Transport

(void)

7 Functions of NBAP

The NBAP protocol provides~~has~~ the following functions:

- Cell Configuration Management. This function gives the CRNC the possibility to manage the cell configuration information in a Node B.
- Common Transport Channel Management. This function gives the CRNC the possibility to manage the configuration of Common Transport Channels in a Node B.
- System Information Management. This function gives the CRNC the ability to manage the scheduling of System Information to be broadcast in a cell.
- Resource Event Management. This function gives the Node B the ability to inform the CRNC about the status of Node B resources.

- Configuration Alignment. This function gives the CRNC and the Node B the possibility to verify and enforce that both nodes have the same information on the configuration of the radio resources.
- Measurements on Common Resources. This function allows the CRNC to initiate measurements in the Node B. The function also allows the Node B to report the result of the measurements.
- Radio Link Management. This function allows the CRNC to manage radio links using dedicated resources in a Node B.
- Radio Link Supervision. This function allows the Node B CRNC to report failures and restorations of a Radio Link.
- Compressed Mode Control [FDD]. This function allows the CRNC to control the usage of compressed mode in a Node B.
- Measurements on Dedicated Resources. This function allows the CRNC to initiate measurements in the Node B. The function also allows the Node B to report the result of the measurements.
- DL Power Drifting Correction [FDD]. This function allows the CRNC to adjust the DL power level of one or more Radio Links in order to avoid DL power drifting between the Radio Links.
- Reporting of General Error Situations. This function allows reporting of general error situations, for which function specific error messages have not been defined.
- Physical Shared Channel Management [TDD]. This function allows the CRNC to manage physical resources in the Node B belonging to Shared Channels (USCH/DSCH).
- DL Power Timeslot Correction [TDD]. This function enables the Node B to apply an individual offset to the transmission power in each timeslot according to the downlink interference level at the UE.

The mapping between the above functions and NBAP elementary procedures is shown in the table below.

Table 1: Mapping between functions and NBAP elementary procedures

Function	Elementary Procedure(s)
Cell Configuration Management	a) Cell Setup b) Cell Reconfiguration c) Cell Deletion
Common Transport Channel Management	a) Common Transport Channel Setup b) Common Transport Channel Reconfiguration c) Common Transport Channel Deletion
System Information Management	System Information Update
Resource Event Management	a) Block Resource b) Unblock Resource c) Resource Status Indication
Configuration Alignment	a) Audit Required b) Audit c) Reset
Measurements on Common Resources	a) Common Measurement Initiation b) Common Measurement Reporting c) Common Measurement Termination d) Common Measurement Failure
Radio Link Management.	a) RL Setup b) RL Addition c) RL Deletion d) Unsynchronised RL Reconfiguration e) Synchronised RL Reconfiguration Preparation f) Synchronised RL Reconfiguration Commit g) Synchronised RL Reconfiguration Cancellation h) Radio Link Pre-emption
Radio Link Supervision.	a) RL Failure b) RL Restoration
Compressed Mode Control [FDD]	a) Radio Link Setup b) Radio Link Addition c) Compressed Mode Command d) Unsynchronised Radio Link Reconfiguration e) Synchronised Radio Link Reconfiguration Preparation f) Synchronised Radio Link Reconfiguration Commit g) Synchronised Radio Link Reconfiguration Cancellation
Measurements on Dedicated Resources	a) Dedicated Measurement Initiation b) Dedicated Measurement Reporting c) Dedicated Measurement Termination d) Dedicated Measurement Failure
DL Power Drifting Correction [FDD]	Downlink Power Control
Reporting of General Error Situations	Error Indication
Physical Shared Channel Management [TDD]	Physical Shared Channel Reconfiguration
DL Power Timeslot Correction [TDD]	Downlink Power Timeslot Control

8 NBAP Procedures

8.1 Elementary Procedures

NBAP procedures are divided into common procedures and dedicated procedures.

- NBAP common procedures are procedures that request initiation of a UE context for a specific UE in Node B or are not related to a specific UE. NBAP common procedures also incorporate logical O&M [1] procedures.

- NBAP dedicated procedures are procedures that are related to a specific UE context in Node B. This UE context is identified by a UE context identity.

The two types of procedures may be carried on separate signalling links.

In the following tables, all EPs are divided into Class 1 and Class 2 EPs:

Table 1: Class 1

Elementary Procedure	Message	Successful Outcome	Unsuccessful Outcome	
		Response message	Response message	Timer
Cell Setup	CELL SETUP REQUEST	CELL SETUP RESPONSE	CELL SETUP FAILURE	
Cell Reconfiguration	CELL RECONFIGURATION REQUEST	CELL RECONFIGURATION RESPONSE	CELL RECONFIGURATION FAILURE	
Cell Deletion	CELL DELETION REQUEST	CELL DELETION RESPONSE		
Common Transport Channel Setup	COMMON TRANSPORT CHANNEL SETUP REQUEST	COMMON TRANSPORT CHANNEL SETUP RESPONSE	COMMON TRANSPORT CHANNEL SETUP FAILURE	
Common Transport Channel Reconfiguration	COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST	COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE	COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE	
Common Transport Channel Deletion	COMMON TRANSPORT CHANNEL DELETION REQUEST	COMMON TRANSPORT CHANNEL DELETION RESPONSE		
Physical Shared Channel Reconfigure [TDD]	PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST	PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE	PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE	
Audit	AUDIT REQUEST	AUDIT RESPONSE	AUDIT FAILURE	
Block Resource	BLOCK RESOURCE REQUEST	BLOCK RESOURCE RESPONSE	BLOCK RESOURCE FAILURE	
Radio Link Setup	RADIO LINK SETUP REQUEST	RADIO LINK SETUP RESPONSE	RADIO LINK SETUP FAILURE	
System Information Update	SYSTEM INFORMATION UPDATE REQUEST	SYSTEM INFORMATION UPDATE RESPONSE	SYSTEM INFORMATION UPDATE FAILURE	
Common Measurement Initiation	COMMON MEASUREMENT INITIATION REQUEST	COMMON MEASUREMENT INITIATION RESPONSE	COMMON MEASUREMENT INITIATION FAILURE	
Radio Link Addition	RADIO LINK ADDITION REQUEST	RADIO LINK ADDITION RESPONSE	RADIO LINK ADDITION FAILURE	
Radio Link Deletion	RADIO LINK DELETION REQUEST	RADIO LINK DELETION RESPONSE		
Synchronised Radio Link Reconfiguration Preparation	RADIO LINK RECONFIGURATION PREPARE	RADIO LINK RECONFIGURATION READY	RADIO LINK RECONFIGURATION FAILURE	
Unsynchronised Radio Link Reconfiguration	RADIO LINK RECONFIGURATION REQUEST	RADIO LINK RECONFIGURATION RESPONSE	RADIO LINK RECONFIGURATION FAILURE	
Dedicated Measurement Initiation	DEDICATED MEASUREMENT INITIATION REQUEST	DEDICATED MEASUREMENT INITIATION RESPONSE	DEDICATED MEASUREMENT INITIATION FAILURE	
Reset	RESET REQUEST	RESET RESPONSE		

Elementary Procedure	Message	Successful Outcome Response message	Unsuccessful Outcome Response message
Cell Setup	CELL SETUP REQUEST	CELL SETUP RESPONSE	CELL SETUP FAILURE
Cell Reconfiguration	CELL RECONFIGURATION REQUEST	CELL RECONFIGURATION RESPONSE	CELL RECONFIGURATION FAILURE

<u>Elementary Procedure</u>	<u>Message</u>	<u>Successful Outcome</u>	<u>Unsuccessful Outcome</u>
		<u>Response message</u>	<u>Response message</u>
<u>Cell Deletion</u>	<u>CELL DELETION REQUEST</u>	<u>CELL DELETION RESPONSE</u>	
<u>Common Transport Channel Setup</u>	<u>COMMON TRANSPORT CHANNEL SETUP REQUEST</u>	<u>COMMON TRANSPORT CHANNEL SETUP RESPONSE</u>	<u>COMMON TRANSPORT CHANNEL SETUP FAILURE</u>
<u>Common Transport Channel Reconfiguration</u>	<u>COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST</u>	<u>COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE</u>	<u>COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE</u>
<u>Common Transport Channel Deletion</u>	<u>COMMON TRANSPORT CHANNEL DELETION REQUEST</u>	<u>COMMON TRANSPORT CHANNEL DELETION RESPONSE</u>	
<u>Physical Shared Channel Reconfigure [TDD]</u>	<u>PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST</u>	<u>PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE</u>	<u>PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE</u>
<u>Audit</u>	<u>AUDIT REQUEST</u>	<u>AUDIT RESPONSE</u>	<u>AUDIT FAILURE</u>
<u>Block Resource</u>	<u>BLOCK RESOURCE REQUEST</u>	<u>BLOCK RESOURCE RESPONSE</u>	<u>BLOCK RESOURCE FAILURE</u>
<u>Radio Link Setup</u>	<u>RADIO LINK SETUP REQUEST</u>	<u>RADIO LINK SETUP RESPONSE</u>	<u>RADIO LINK SETUP FAILURE</u>
<u>System Information Update</u>	<u>SYSTEM INFORMATION UPDATE REQUEST</u>	<u>SYSTEM INFORMATION UPDATE RESPONSE</u>	<u>SYSTEM INFORMATION UPDATE FAILURE</u>
<u>Common Measurement Initiation</u>	<u>COMMON MEASUREMENT INITIATION REQUEST</u>	<u>COMMON MEASUREMENT INITIATION RESPONSE</u>	<u>COMMON MEASUREMENT INITIATION FAILURE</u>
<u>Radio Link Addition</u>	<u>RADIO LINK ADDITION REQUEST</u>	<u>RADIO LINK ADDITION RESPONSE</u>	<u>RADIO LINK ADDITION FAILURE</u>
<u>Radio Link Deletion</u>	<u>RADIO LINK DELETION REQUEST</u>	<u>RADIO LINK DELETION RESPONSE</u>	
<u>Synchronised Radio Link Reconfiguration Preparation</u>	<u>RADIO LINK RECONFIGURATION PREPARE</u>	<u>RADIO LINK RECONFIGURATION READY</u>	<u>RADIO LINK RECONFIGURATION FAILURE</u>
<u>Unsynchroised Radio Link Reconfiguration</u>	<u>RADIO LINK RECONFIGURATION REQUEST</u>	<u>RADIO LINK RECONFIGURATION RESPONSE</u>	<u>RADIO LINK RECONFIGURATION FAILURE</u>
<u>Dedicated Measurement Initiation</u>	<u>DEDICATED MEASUREMENT INITIATION REQUEST</u>	<u>DEDICATED MEASUREMENT INITIATION RESPONSE</u>	<u>DEDICATED MEASUREMENT INITIATION FAILURE</u>
<u>Reset</u>	<u>RESET REQUEST</u>	<u>RESET RESPONSE</u>	

Table 2: Class 2

Elementary Procedure	Message
Resource Status Indication	RESOURCE STATUS INDICATION
Audit Required	AUDIT REQUIRED INDICATION
Common Measurement Reporting	COMMON MEASUREMENT REPORT
Common Measurement Termination	COMMON MEASUREMENT TERMINATION REQUEST
Common Measurement Failure	COMMON MEASUREMENT FAILURE INDICATION
Synchronised Radio Link Reconfiguration Commit	RADIO LINK RECONFIGURATION COMMIT
Synchronised Radio Link Reconfiguration Cancellation	RADIO LINK RECONFIGURATION CANCELLATION
Radio Link Failure	RADIO LINK FAILURE INDICATION
Radio Link Restoration	RADIO LINK RESTORE INDICATION
Dedicated Measurement Reporting	DEDICATED MEASUREMENT REPORT
Dedicated Measurement Termination	DEDICATED MEASUREMENT TERMINATION REQUEST
Dedicated Measurement Failure	DEDICATED MEASUREMENT FAILURE INDICATION
Downlink Power Control [FDD]	DL POWER CONTROL REQUEST
Compressed Mode Command [FDD]	COMPRESSED MODE COMMAND
Unblock Resource	UNBLOCK RESOURCE INDICATION
Error Indication	ERROR INDICATION
Downlink Power Timeslot Control [TDD]	DL POWER TIMESLOT CONTROL REQUEST
Radio Link Pre-emption	RADIO LINK PREEMPTION REQUIRED INDICATION

8.2 NBAP Common Procedures

8.2.1 Common Transport Channel Setup

8.2.1.1 General

This procedure is used for establishing the necessary resources in Node B, regarding Secondary CCPCH, PICH, PRACH, PCPCH[FDD], AICH [FDD], AP_AICH[FDD], CD/CA-ICH[FDD], FACH, PCH, RACH and CPCH[FDD].

8.2.1.2 Successful Operation

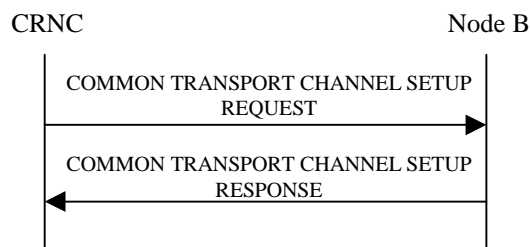


Figure 1: Common Transport Channel Setup procedure, Successful Operation

The procedure is initiated with a COMMON TRANSPORT CHANNEL SETUP REQUEST message sent from the CRNC to the Node B.

One message can configure only one of the following combinations:

- [FDD-one Secondary CCPCH, and FACHes, PCH and PICH related to that Secondary CCPCH], or
- [TDD- Secondary CCPCHes and FACHes, PCH with the corresponding PICH related to that group of Secondary CCPCHes], or
- one PRACH, and one RACH and one AICH(FDD) related to that PRACH-at the time.
- [FDD-PCPCHes, one CPCH, one AP_AICH and one CD/CA-ICH related to that group of PCPCHes-at the time.]

Secondary CCPCH:

[FDD - When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains a Secondary CCPCH, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message. ~~The handling of the optional STTD IE is FFS.~~]

[TDD - When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains one or more Secondary CCPCHs, the Node B shall configure and activate them according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.]

[TDD- FACHs and PCH may be mapped onto a CCTrCH which may consist of several Secondary CCPCHs]

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains one or several FACHs, the Node B shall configure and activate them according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains a PCH and a PICH, the Node B shall configure and activate them according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message. ~~[FDD- The handling of the optional STTD IE for PICH is FFS.]~~

PRACH:

When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains a PRACH, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

[FDD-PCPCHes]:

When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains PCPCHes, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes *CD Signatures* IE, the Node B may use only the given CD signatures on CD/CA-ICH.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes Channel Request Parameters IE ~~group~~, the Node B shall use the parameters to distinguish the PCPCHs.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes *AP Sub Channel Number* IE in Channel Request Parameters IE ~~group~~, the Node B shall use AP sub channel number to distinguish the PCPCHs.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes *AP Sub Channel Number* IE in SF Request Parameters IE ~~group~~, the Node B shall use AP sub channel number to distinguish the requested Spreading Factors.

After a successful procedure, the defined common transport channels and the common physical channels shall adopt the state Enabled [6] in Node B and the common transport channels exist on the Uu interface. The Node B shall store the value of *Configuration Generation ID* IE and it shall respond with the COMMON TRANSPORT CHANNEL SETUP RESPONSE message with the *Common Transport Channel ID* IE, the *Binding ID* IE and the *Transport Layer address* IE for the configured common transport channels.

8.2.1.3 Unsuccessful Operation

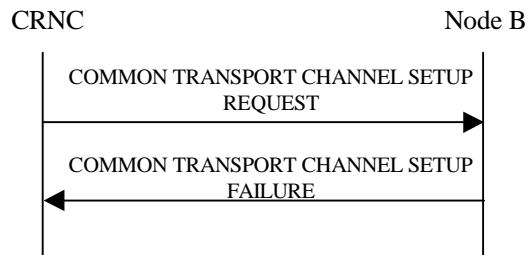


Figure 2: Common Transport Channel Setup procedure, Unsuccessful Operation

If the state already is Enabled or Disabled [6] for at least one channel in the COMMON TRANSPORT CHANNEL SETUP REQUEST message is received, the Node B shall reject the configuration of all channels with the *Cause* IE set to "Message not compatible with receiver state".

If the Node B is not able to support all part of the configuration, it shall reject the configuration of all the channels in the COMMON TRANSPORT CHANNEL SETUP REQUEST message. The channels in the COMMON TRANSPORT CHANNEL SETUP REQUEST message shall remain in the same state as prior to the procedure. The *Cause* IE shall be set to an appropriate value. The value of *Configuration Generation ID* IE from the COMMON TRANSPORT CHANNEL SETUP REQUEST message shall not be stored.

If the configuration was unsuccessful, the Node B shall respond with a COMMON TRANSPORT CHANNEL SETUP FAILURE message.

Typical cause values are as follows:

Radio Network Layer Cause

- Cell not available
- Unknown C-ID
- Power level not supported
- Node B Resources unavailable
- Requested Tx Diversity Mode not supported
- UL SF not supported
- DL SF not supported
- Common Transport Channel Type not supported

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error
- Message not compatible with receiver state

Miscellaneous Cause

- O&M Intervention
- Unspecified
- Control processing overload
- HW failure

8.2.1.4 Abnormal Conditions

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8.2.2 Common Transport Channel Reconfiguration

8.2.2.1 General

This procedure is used for reconfiguring common transport channels and/or common physical channels, while they still might be in operation.

8.2.2.2 Successful Operation

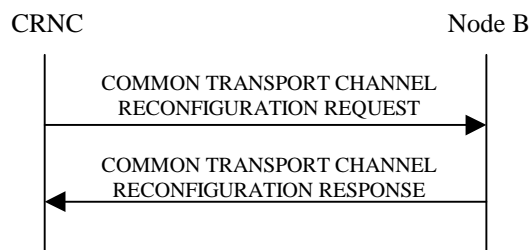


Figure 3: Common Transport Channel Reconfiguration, Successful Operation

The procedure is initiated with a COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message sent from the CRNC to the Node B.

One message can configure only one of the following combinations:

- [FDD- FACHes, one PCH and/or one PICH related to one Secondary CCPCH], or
- [TDD- Secondary CCPCHes and FACHes, PCH with the corresponding PICH related to that group of Secondary CCPCHes], or
- one RACH and/or one AICH(FDD) related to one PRACH, or
- [FDD- one CPCH and/or one AP-AICH and/or one CD/CA-ICH related to one CPCH

at the time.

[TDD S-CCPCH: If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *S-CCPCH Power* IE, the Node B shall reconfigure the power that the indicated S-CCPCH shall use.]

FACH: When one or several FACHs are present Node B reconfigures the indicated FACHs.

[FDD - If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *Max FACH Power* IE, the Node B shall reconfigure the maximum power that the FACH may use.]

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWS* IE, the Node B shall reconfigure the time of arrival window startpoint that the FACH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWE* IE, the Node B shall reconfigure the time of arrival window endpoint that the FACH shall use.

PCH: When the PCH is present Node B reconfigures the indicated PCH.

[FDD - If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *PCH Power* IE, the Node B shall reconfigure the power that the PCH shall use.]

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWS* IE, the Node B shall reconfigure the time of arrival window startpoint that the PCH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWE* IE, the Node B shall reconfigure the time of arrival window endpoint that the PCH shall use.

PICH: When a PICH is present Node B reconfigures the indicated PICH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *PICH Power* IE, the Node B shall reconfigure the power that the PICH shall use.

[FDD- PRACH]: When a PRACH is present Node B reconfigures the indicated PRACH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the Allowed Preamble Signatures Information, the Node B shall reconfigure the preamble signatures that the PRACH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the Allowed Slot Format Information, the Node B shall reconfigure the slot formats that the PRACH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the Allowed Sub Channel Information, the Node B shall reconfigure the sub channel numbers that the PRACH shall use.

[FDD- AICH]: When a AICH is present Node B reconfigures the indicated AICH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *AICH Power* IE, the Node B shall reconfigure the power that the AICH shall use.

[FDD- CPCH]: When a CPCH is present Node B reconfigures the indicated CPCH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes UL SIR Information, the Node B shall reconfigure the UL SIR for the UL power control for the CPCH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes Initial DL transmission Power Information, the Node B shall reconfigure the Initial DL transmission Power for the CPCH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes Maximum DL Power Information, the Node B shall apply this value to the new configuration and never transmit with a higher power on any DL PCPCHes once the new configuration is being used.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes Minimum DL Power Information, the Node B shall apply this value to the new configuration and never transmit with a lower power on any DL PCPCHes once the new configuration is being used.

[FDD- AP-AICH]: When a AP-AICH is present Node B reconfigures the indicated AP-AICH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *AP-AICH Power* IE, the Node B shall reconfigure the power that the AP-AICH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *CSICH Power* IE, the Node B shall reconfigure the power that the CSICH shall use.

[FDD-CD/CA-ICH]:When a CD/CA-ICH is present Node B reconfigures the indicated CD/CA-ICH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *CD/CA-AICH Power* IE, the Node B shall reconfigure the power that the CD/CA-AICH shall use.

After a successful procedure, the channels have adopted the new configuration in Node B. The channels in the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message shall remain in the same state as prior to the procedure. Node B shall store the value of *Configuration Generation ID* IE, and the Node B shall respond with the COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE message.

8.2.2.3 Unsuccessful Operation

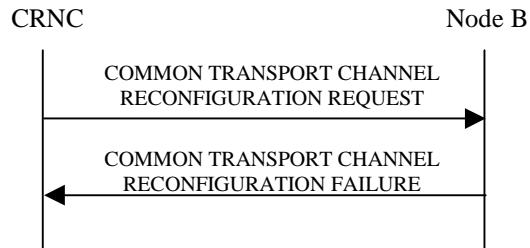


Figure 4: Common Transport Channel Reconfiguration procedure, Unsuccessful Operation

If the Node B is not able to support all parts of the configuration, it shall reject the configuration of all the channels in the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message. The channels in the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message shall remain in the same state as prior to the procedure. The *Cause* IE shall be set to an appropriate value. The value of *Configuration Generation ID* IE from the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message shall not be stored.

If the configuration was unsuccessful, the Node B shall respond with the COMMON TRANSPORT CHANNEL RECONGURATION FAILURE message.

Typical cause values are as follows:

Radio Network Layer Cause

- Cell not available
- Unknown C-ID
- Power level not supported
- Node B Resources unavailable

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention
- Unspecified
- Control processing overload
- HW failure

8.2.2.4 Abnormal Conditions

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8.2.3 Common Transport Channel Deletion

8.2.3.1 General

This procedure is used for deleting common physical channels and common transport channels setup by the Common Transport Channel Setup procedure in a cell.

8.2.3.2 Successful Operation

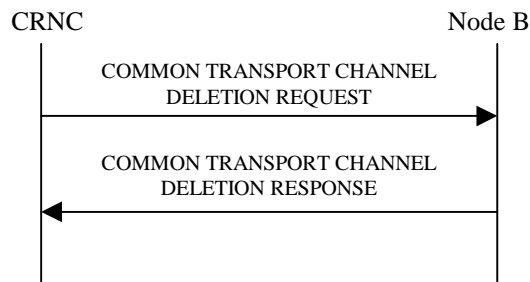


Figure 5: Common Transport Channel Deletion procedure, Successful Operation

The procedure is initiated with a COMMON TRANSPORT CHANNEL DELETION REQUEST message sent from the CRNC to the Node B.

- Secondary CCPCH:** When the COMMON TRANSPORT CHANNEL DELETION REQUEST message contains a Secondary CCPCH, Node B shall delete the indicated channel and the FACHes and PCH supported by that Secondary CCPCH. If there is a PCH that is deleted, the PICH associated with that PCH shall also be deleted.
- PRACH:** When the COMMON TRANSPORT CHANNEL DELETION REQUEST message contains a PRACH, Node B shall delete the indicated channel and the RACH supported by the PRACH. [FDD- The AICH associated with the PCH shall also be deleted.]
- [FDD – PCPCHes]:** When the COMMON TRANSPORT CHANNEL DELETION REQUEST message contains one of PCPCHes for a CPCH, Node B shall delete all PCPCHes associated with the indicated channel and the CPCH supported by the PCPCHes. The AP-AICH and CD/CA-ICH associated with the PCH shall also be deleted.]
- [TDD- If the requested common physical channel is a part of a CCTrCH, all common transport channels and all common physical channels associated with this CCTrCH shall be deleted.]

After a successful procedure, the channels are deleted in Node B. The channels in the COMMON TRANSPORT CHANNEL DELETION REQUEST message shall be set to state Not Existing [6]. Node B shall store the new received value of the *Configuration Generation ID* IE, and respond with the COMMON TRANSPORT CHANNEL DELETION RESPONSE message.

8.2.3.3 Unsuccessful Operation

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8.2.3.4 Abnormal Conditions

If the C-ID in the COMMON TRANSPORT CHANNEL DELETION REQUEST message is not existing in the Node B or the Common Physical Channel ID does not exist in the Cell, the Node B shall respond with the COMMON TRANSPORT CHANNEL DELETION RESPONSE message.

8.2.4 Block Resource

8.2.4.1 General

The Node B initiates this procedure to request the CRNC to prohibit the usage of the specified logical resources.

The logical resource that can be blocked is a cell.

8.2.4.2 Successful Operation

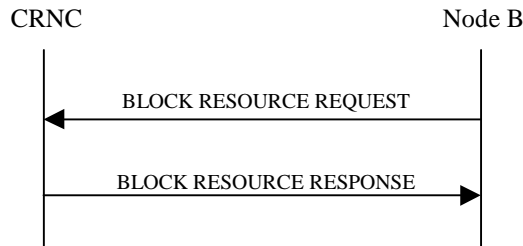


Figure 6: Block Resource procedure, Successful Operation

The procedure is initiated with a BLOCK RESOURCE REQUEST message sent from the Node B to the CRNC.

Upon reception of the BLOCK RESOURCE REQUEST message, the CRNC shall prohibit the use of the indicated logical resources according to the *Blocking Priority Indicator* IE.

If the *Blocking Priority Indicator* IE in the BLOCK RESOURCE REQUEST message indicates 'High Priority', the CRNC shall prohibit the use of the logical resources immediately.

The BLOCK RESOURCE REQUEST message shall include the *Shutdown Timer* IE when the *Blocking Priority Indicator* IE indicates 'Normal Priority'. The CRNC shall prohibit the use of the logical resources if the resources are idle or immediately upon expiry of the shutdown timer specified in the message. New traffic shall not be allowed to use the logical resources while the CRNC waits for the resources to become idle and once the resources are blocked.

If the *Blocking Priority Indicator* IE in the BLOCK RESOURCE REQUEST message indicates 'Low Priority', the CRNC shall prohibit the use of the logical resources when the resources become idle. New traffic shall not be allowed to use the logical resources while the CRNC waits for the resources to become idle and once the resources are blocked.

If the resources are successfully blocked, the CRNC shall respond with a BLOCK RESOURCE RESPONSE message. Upon reception of the BLOCK RESOURCE RESPONSE message, the Node B may disable [TDD - SCH], [FDD - the Primary SCH, the Secondary SCH, the Primary CPICH, if present the Secondary CPICH(s)] and the Primary CCPCH. The other logical resources in the cell shall be considered as blocked.

Reconfiguration of logical resources and change of System Information can be done, even when the logical resources are blocked.

Interactions with the Unblock Resource procedure:

If the UNBLOCK RESOURCE INDICATION message is received by the CRNC while a Block Resource procedure on the same logical resources is in progress, the CRNC shall cancel the Block Resource procedure and proceed with the Unblock Resource procedure.

If the BLOCK RESOURCE RESPONSE message or the BLOCK RESOURCE FAILURE message is received by the Node B after the Node B has initiated an Unblock Resource procedure on the same logical resources as the ongoing Block Resource procedure, the Node B shall ignore the response to the Block Resource procedure.

8.2.4.3 Unsuccessful Operation

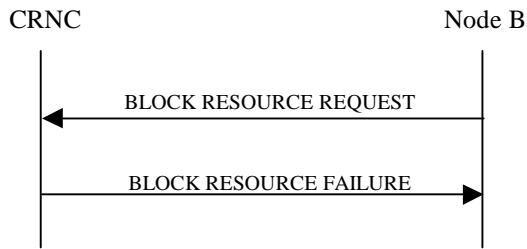


Figure 7: Block Resource procedure, Unsuccessful Operation

The CRNC may reject the request to block the logical resources, in which case the logical resources will remain unaffected and the CRNC shall respond to the Node B with the BLOCK RESOURCE FAILURE message. Upon reception of the BLOCK RESOURCE FAILURE message, the Node B shall leave the logical resources in the state that they were in prior to the start of the Block Resource procedure.

Typical cause values are as follows:

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention
- Control processing overload
- HW failure

Radio Network Layer Cause

- Priority transport channel established

8.2.4.4 Abnormal Conditions

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8.2.5 Unblock Resource

8.2.5.1 General

The Node B initiates this procedure to indicate to the CRNC that logical resources are now unblocked.

The logical resource that can be unblocked is a cell.

8.2.5.2 Successful Operation

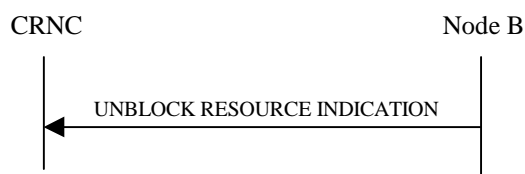


Figure 8: Unblock Resource procedure, Successful Operation

The procedure is initiated with an UNBLOCK RESOURCE INDICATION message sent from the Node B to the CRNC. Node B shall enable [TDD - SCH], [FDD - the Primary SCH, the Secondary SCH, the Primary CPICH, the Secondary CPICH(s) (if present)] and the Primary CCPCH that had been disabled due to the preceding Block Resource procedure before sending the UNBLOCK RESOURCE INDICATION message. Upon reception of the UNBLOCK RESOURCE INDICATION message, the CRNC may permit the use of the logical resources.

When the logical resource indicated is a cell, all associated physical channels and transport channels are unblocked.

8.2.5.3 Abnormal Conditions

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8.2.6 Audit Required

8.2.6.1 General

The Node B initiates this procedure to request the CRNC to perform an audit of the logical resources at the Node B. This procedure is used to indicate a possible misalignment of state or configuration information

8.2.6.2 Successful Operation

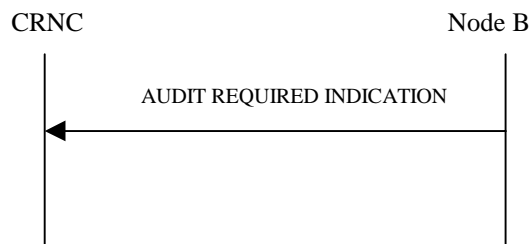


Figure 9: Audit Required procedure, Successful Operation

The procedure is initiated with an AUDIT REQUIRED INDICATION message sent from the Node B to the CRNC.

If the Node B cannot ensure alignment of the state or configuration information, it should initiate the Audit required indication procedure.

Upon receipt of the AUDIT REQUIRED INDICATION message, the CRNC should initiate the Audit procedure.

8.2.6.3 Abnormal Conditions

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8.2.7 Audit

8.2.7.1 General

This procedure is executed by the CRNC to perform an audit of the configuration and status of the logical resources in the Node B. A complete audit of a Node B is performed by one or more Audit procedures, together performing an audit sequence. The audit may cause the CRNC to re-sync the Node B to the status of logical resources known by the CRNC, that the Node B can support.

8.2.7.2 Successful Operation

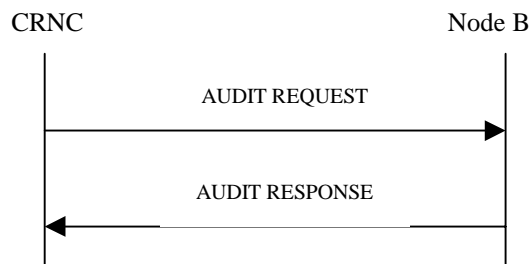


Figure 10: Audit procedure, Successful Operation

The procedure is initiated with an AUDIT REQUEST message sent from the CRNC to the Node B.

If the *Start of Audit Sequence* IE in the AUDIT REQUEST message is set to “start of audit sequence” a new audit sequence is started, any ongoing audit sequence shall be aborted and the Node B shall provide (part of the) audit information. If the *Start of Audit Sequence* IE is set to “not start of audit sequence”, the Node B shall provide (part of) the remaining audit information not already provided during this audit sequence.

If the information provided in the AUDIT RESPONSE message completes the audit sequence, the Node B shall set the *End Of AuditSequence Indicator* IE in the AUDIT RESPONSE message to “End of Audit Sequence”. If not all audit information has been provided yet as part of the ongoing audit sequence, the Node B shall set the *End Of AuditSequence Indicator* IE in the AUDIT RESPONSE message to “Not End of Audit Sequence”.

Information Provided In One Audit Sequence.

The Node B shall include one *Local Cell Information IE-group* for each local cell present in the Node B. The Node B shall include the *Maximum DL Power Capability* IE and the *Minimum DL Power Capability* IE when any of those values are known by the Node B.

If Node B internal resources are pooled for a group of cells, the Node B shall include one *Local Cell Group Information* IE containing Node B internal resource capacity and consumption laws per group of cells. If the “UL Capacity Credit” IE is not present, then the internal resource capabilities of the Node B are modelled as shared resources between Uplink and Downlink.

The Node B shall include for each local cell present in the node B the Node B internal resource capability and consumption laws within the “Local Cell Information IE-group”. If the “UL Capacity Credit” IE is not present, then the internal resource capabilities of the local cell are modelled as shared resources between Uplink and Downlink. If the Local Cell utilises Node B internal resource capabilities that are pooled for several Local Cell(s), the *Local Cell Group ID* IE shall contain the identity of the used Local Cell Group.

The Node B shall include one *Cell Information IE-group* for each cell in the Node B and information about all common transport channels and all common physical channels for each cell. If a *Configuration Generation ID* IE for a cell can not be trusted, the Node B shall set this *Configuration Generation ID* IE = ‘0’.

The Node B shall also include one *Communication Control Port Information IE-group* for each communication control port in the Node B.

8.2.7.3 Unsuccessful Operation

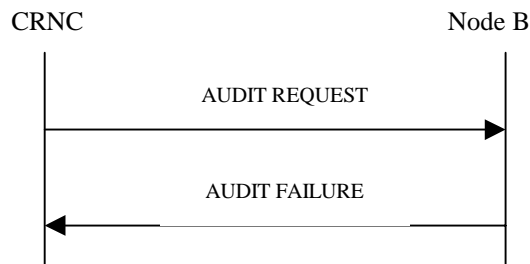


Figure 10A: Audit procedure, Unsuccessful Operation

If the Node B receives the AUDIT REQUEST message with the *Start of Audit Sequence* IE set to "not start of audit sequence" and there is no ongoing audit sequence, the Node B shall send the AUDIT FAILURE message with the appropriate cause value.

Typical cause values for the AUDIT FAILURE message are:

Protocol Causes:

- Message not Compatible with Receiver State

8.2.7.4 Abnormal Conditions

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8.2.8 Common Measurement Initiation

8.2.8.1 General

This procedure is used by a CRNC to request the initiation of measurements on common resources in a Node B.

8.2.8.2 Successful Operation

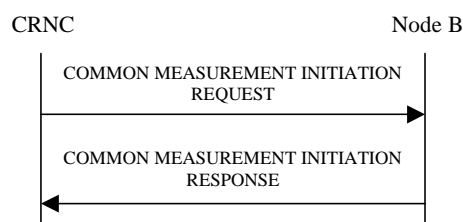


Figure 11: Common Measurement Initiation procedure: Successful Operation

The procedure is initiated with a COMMON MEASUREMENT INITIATION REQUEST message sent from the CRNC to the Node B using the Node B control port.

Upon reception, the Node B shall initiate the requested measurement according to the parameters given in the request. Unless specified below, the meaning of the parameters are given in other specifications.

[TDD- If the Time Slot Information is provided in the *Common Measurement Object Type* IE , the measurement request shall apply to the requested time slot individually.]

[FDD- If the Spreading Factor Information is provided in the *Common Measurement Object Type* IE, measurement request shall apply to the PCPCHes whose minimum allowed spreading factor (Min UL Channelisation Code Length) is equal to the value of Spreading Factor Information.

If the *SFN Reporting Indicator* IE is set to "FN Reporting Required", the *SFN* IE shall be included in the measurement report or in the measurement response, the latter only in the case the *Report Characteristics* IE is set to 'On-Demand'. The reported SFN shall be the SFN at the time when the measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [25].

If the *SFN* IE is provided, it indicates the frame for which the first measurement shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [25].

Report characteristics

The *Report Characteristics* IE indicates how the reporting of the measurement shall be performed.

If the *Report Characteristics* IE is set to 'On-Demand', the Node B shall report the result of the requested measurement immediately.

If the *Report Characteristics* IE is set to 'Periodic', the Node B shall periodically initiate the Common Measurement Reporting procedure for this measurement, with the requested report frequency.

If the *Report Characteristics* IE is set to 'Event A', the Node B shall initiate the Common Measurement Reporting procedure when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the Node B shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event B', the Node B shall initiate the Common Measurement Reporting procedure when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the Node B shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event C', the Node B shall initiate the Common Measurement Reporting procedure when the measured entity rises by an amount greater than the requested threshold within the requested time.

If the *Report Characteristics* IE is set to 'Event D', the Node B shall initiate the Common Measurement Reporting procedure when the measured entity falls by an amount greater than the requested threshold within the requested time.

If the *Report Characteristics* IE is set to 'Event E', the Node B shall initiate the Common Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The Node B shall also initiate the Common Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Periodicity* IE is provided, the Node B shall initiate the Common Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. If 'Measurement Threshold 2' is not present, the Node B shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the Node B shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to 'Event F', the Node B shall initiate the Common Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The Node B shall also initiate the Common Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Periodicity* IE is provided, the Node B shall initiate the Common Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. If 'Measurement Threshold 2' is not present, the Node B shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the Node B shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is not set to 'On-Demand', the Node B is required to perform reporting for a common measurement object, in accordance with the conditions provided in the COMMON MEASUREMENT INITIATION REQUEST message, as long as the object exists. If no common measurement object(s) for which a measurement is defined exists any more the Node B shall terminate the measurement locally without reporting this to the CRNC.

If at the start of the measurement, the reporting criteria are fulfilled for any of Event A, Event B, Event E or Event F, the Node B shall initiate the Common Measurement Reporting procedure immediately, and then continue with the measurements as specified in the COMMON MEASUREMENT INITIATION REQUEST message.

Higher layer filtering

The *Measurement Filter Coefficient* IE indicates how filtering of the measurement values shall be performed before measurement event evaluation and reporting.

The averaging shall be performed according to the following formula.

$$F_n = (1 - a) \cdot F_{n-1} + a \cdot M_n$$

The variables in the formula are defined as follows

F_n is the updated filtered measurement result

F_{n-1} is the old filtered measurement result

M_n is the latest received measurement result from physical layer measurements

$a = 1/2^{(k/2)}$, where k is the parameter received in the *Measurement Filter Coefficient* IE. If the *Measurement Filter Coefficient* IE is not present, a shall be set to 1 (no filtering)

In order to initialise the averaging filter, F_0 is set to M_1 when the first measurement result from the physical layer measurement is received.

Response message

If the Node B was able to initiate the measurement requested by the CRNC it shall respond with the COMMON MEASUREMENT INITIATION RESPONSE message sent over the Node B control port. The message shall include the same Measurement ID that was used in the measurement request. Only in the case when the *Report Characteristics* IE is set to "On-Demand", the COMMON MEASUREMENT INITIATION RESPONSE message shall contain the measurement result.

8.2.8.3 Unsuccessful Operation

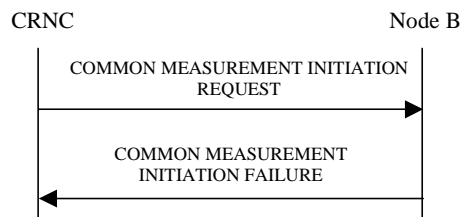


Figure 12: Common Measurement Initiation procedure: Unsuccessful Operation

If the Common Measurement Type received in the *Common Measurement Type* IE is not defined in ref. [4] or [5] to be measured on the Common Measurement Object Type received in the *Common Measurement Object Type* IE in the COMMON MEASUREMENT INITIATION REQUEST message the Node B shall regard the Common Measurement Initiation procedure as failed.

If the requested measurement cannot be initiated, the Node B shall send a COMMON MEASUREMENT INITIATION FAILURE message sent over the Node B control port. The message shall include the same Measurement ID that was used in the COMMON MEASUREMENT INITIATION REQUEST message and the *Cause* IE set to an appropriate value.

Typical cause values are as follows:

Radio Network Layer Cause

- Measurement not supported for the object.
- Measurement Temporarily not Available

8.2.8.4 Abnormal Conditions

-

8.2.9 Common Measurement Reporting

8.2.9.1 General

This procedure is used by a Node B to report the result of measurements requested by the CRNC with the Common Measurement Initiation procedure.

8.2.9.2 Successful Operation

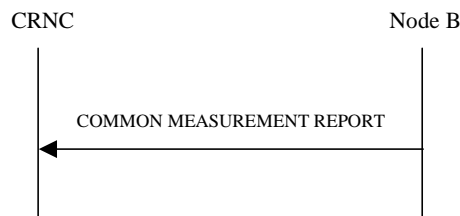


Figure 13: Common Measurement Reporting procedure: Successful Operation

If the requested measurement reporting criteria are met, the Node B shall initiate the Common Measurement Reporting procedure. The COMMON MEASUREMENT REPORT message shall use the Node B control port. Unless specified below, the meaning of the parameters are given in other specifications.

The *Common Measurement ID* IE shall be set to the Common Measurement ID provided by the CRNC when initiating the measurement with the Common Measurement Initiation procedure.

If the achieved measurement accuracy does not fulfil the given accuracy requirement (see ref.[22] and [23]), the Measurement not available shall be reported.

8.2.9.3 Abnormal Conditions

-

8.2.10 Common Measurement Termination

8.2.10.1 General

This procedure is used by the CRNC to terminate a measurement previously requested by the Common Measurement Initiation procedure.

8.2.10.2 Successful Operation



Figure 14: Common Measurement Termination procedure: Successful Operation

This procedure is initiated with a COMMON MEASUREMENT TERMINATION REQUEST message, sent from the CRNC to the Node B using the Node B control port.

Upon reception, the Node B shall terminate reporting of measurements corresponding to the Common Measurement ID.

8.2.10.3 Abnormal Conditions

-

8.2.11 Common Measurement Failure

8.2.11.1 General

This procedure is used by the Node B to notify the CRNC that a measurement previously requested by the Common Measurement Initiation procedure can no longer be reported.

8.2.11.2 Successful Operation



Figure 15: Common Measurement Failure procedure: Successful Operation

This procedure is initiated with a COMMON MEASUREMENT FAILURE INDICATION message, sent from the Node B to the CRNC using the Node B control port, to inform the CRNC that a previously requested measurement can no longer be reported. The Node B has locally terminated the indicated measurement.

8.2.11.3 Abnormal Conditions

-

8.2.12 Cell Setup

8.2.12.1 General

This procedure is used to set up a cell in Node B. The CRNC takes the cell, identified via the *C-ID* IE, into service and uses the resources in Node B identified via the *Local Cell ID* IE.

8.2.12.2 Successful Operation

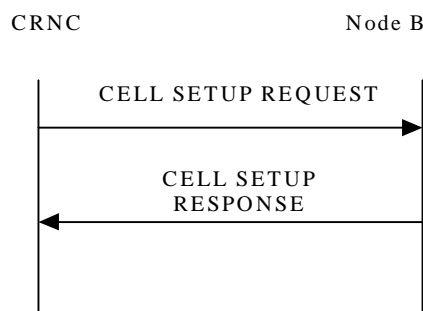


Figure 16: Cell Setup procedure: Successful Operation

The procedure is initiated with a CELL SETUP REQUEST message sent from CRNC to Node B. Upon Reception, the Node B shall reserve the necessary resources and configure the new cell according to the parameters given in the message.

[FDD - If the CELL SETUP REQUEST message includes one or more *Secondary CPICH Information IE* group the Node B shall configure and activate the Secondary CPICH(s) in the cell according to received configuration data.]

The *Maximum Transmission Power* IE value shall be stored in the Node B and at any instance of time the total maximum output power in the cell shall not be above this value.

[FDD - If the *Closed Loop Timing Adjustment Mode* IE is included in the CELL SETUP REQUEST message, the value shall be stored in the Node B and applied when closed loop Feed-Back mode diversity is used on DPCH.]

When the cell is successfully configured the Node B shall store the *Configuration Generation ID* IE value and send a CELL SETUP RESPONSE message as a response.

[FDD- When the cell is successfully configured CPICH(s), Primary SCH, Secondary SCH, Primary CCPCH and BCH exist.][TDD- When the cell is successfully configured SCH, Primary CCPCH and BCH exist and the switching-points for the TDD frame structure are defined.] The cell and the channels shall be set to state Enabled [6].

8.2.12.3 Unsuccessful Operation

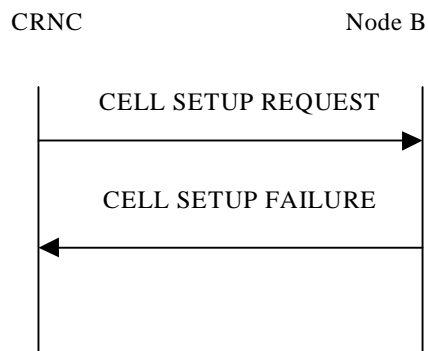


Figure 17: Cell Setup procedure: Unsuccessful Operation

If the state of the cell already is Enabled or Disabled [6] when the CELL SETUP REQUEST message is received in Node B, it shall reject the configuration of the cell and all channels in the CELL SETUP REQUEST message with the *Cause* IE set to "Message not compatible with receiver state".

If the Node B cannot set up the cell according to the information given in CELL SETUP REQUEST message the CELL SETUP FAILURE message shall be sent to CRNC.

In this case the cell is Non Existing in Node B. The Configuration Generation ID shall not be changed in Node B.

The *Cause* IE shall be set to an appropriate value.

Typical cause values are as follows:

Radio Network Layer Cause

- S-CPICH not supported
- Requested Tx Diversity Mode not supported
- Unknown Local Cell ID
- Power level not supported
- Node B Resources unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention
- Unspecified

- Control processing overload
- HW failure

8.2.12.4 Abnormal Conditions

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8.2.13 Cell Reconfiguration

8.2.13.1 General

This procedure is used to reconfigure a cell in Node B.

8.2.13.2 Successful Operation

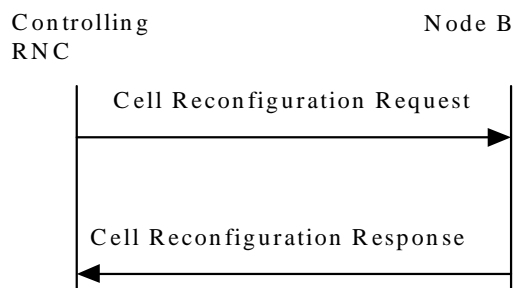


Figure 18: Cell Reconfiguration procedure: Successful Operation

The procedure is initiated with a CELL RECONFIGURATION REQUEST message sent from CRNC to Node B. Upon Reception, the Node B shall reconfigure the cell according to the parameters given in the message.

[FDD - If the CELL RECONFIGURATION REQUEST message includes the *Primary SCH Information IE-group* the Node B shall reconfigure Primary SCH power in the cell according to *Primary SCH Power IE* value.]

[FDD - If the CELL RECONFIGURATION REQUEST message includes the *Secondary SCH Information IE-group* the Node B shall reconfigure Secondary SCH power in the cell according to the *Secondary SCH Power IE* value.]

[FDD - If the CELL RECONFIGURATION REQUEST message includes the *Primary CPICH Information IE-group* the Node B shall reconfigure Primary CPICH power in the cell according to the *Primary CPICH Power IE* value. Node B shall adjust all the transmitted power levels relative to the Primary CPICH power according to the new value]

[FDD - If the CELL RECONFIGURATION REQUEST message includes one or more *Secondary CPICH Information IE-groups* the Node B shall reconfigure the power for each Secondary CPICH in the cell according to their *Secondary CPICH Power IE* value.]

[TDD - If the CELL RECONFIGURATION REQUEST message includes the *SCH Information IE-group* the Node B shall reconfigure SCH power in the cell according to the *SCH Power IE* value.]

[TDD - If the CELL RECONFIGURATION REQUEST message includes the *Timing Advance Applied IE* the Node B shall apply the necessary functions for Timing Advance in that cell including reporting of the Rx Timing Deviation measurement, according to the *Timing Advance Applied IE* value.]

[FDD - If the CELL RECONFIGURATION REQUEST message includes the *Primary CCPCH Information IE-group* the Node B shall reconfigure BCH power in the cell according to the *BCH Power IE* value.]

[TDD - If the CELL RECONFIGURATION REQUEST message includes the *Primary CCPCH Information IE-group* the Node B shall reconfigure P-CCPCH power in the cell according to the *P-CCPCH Power IE* value. Node B shall adjust all the transmitted power levels relative to the Primary CPPCH power according to the new value.]

If the CELL RECONFIGURATION REQUEST message includes the *Maximum Transmission Power* IE the value shall be stored in the Node B and at any instance of time the total maximum output power in the cell shall not be above this value.

[TDD - If the CELL RECONFIGURATION REQUEST message includes the *Timeslot Information* IE-group the Node B shall reconfigure switching-point structure in the cell according to the *Timeslot* IE value.]

[TDD - If the CELL RECONFIGURATION REQUEST message includes any of the *Constant Value* IE's, the Node B shall use these values when generating the appropriate SIB.]

When the cell is successfully reconfigured the Node B shall store the new *Configuration Generation ID* IE value and send a CELL RECONFIGURATION RESPONSE message as a response.

If the CELL RECONFIGURATION REQUEST message includes the *Synchronisation Configuration* IE the Node B shall reconfigure the indicated parameters in the cell according to the IE value. When the parameters in the *Synchronisation Configuration* IE group affect the thresholds applied to a RL set, the Node B shall immediately apply the new thresholds. When applying the new thresholds the Node B shall not change the state or value of any of the timers and counters for which the new thresholds apply.

8.2.13.3 Unsuccessful Operation

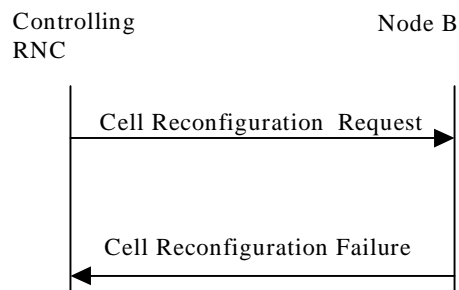


Figure 19: Cell Reconfiguration procedure: Unsuccessful Operation

If the Node B cannot reconfigure the cell according to the information given in CELL RECONFIGURATION REQUEST message the CELL RECONFIGURATION FAILURE message shall be sent to CRNC.

In this case, the Node B shall keep the old configuration of the cell and the Configuration Generation ID shall not be changed in Node B.

The Cause IE shall be set to an appropriate value.

Typical cause values are as follows:

Radio Network Layer Cause

- Unknown C-ID
- Power level not supported
- Node B Resources unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention
- Unspecified

- Control processing overload
- HW failure

8.2.13.4 Abnormal Conditions

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8.2.14 Cell Deletion

8.2.14.1 General

This procedure is used to delete a cell in Node B.

8.2.14.2 Successful Operation

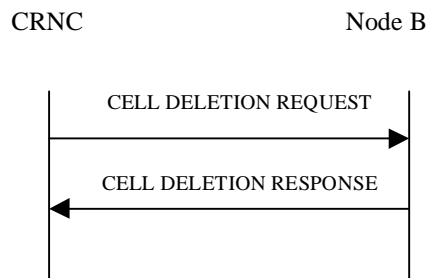


Figure 10: Cell Deletion procedure: Successful Operation

The procedure is initiated with a CELL DELETION REQUEST message sent from CRNC to Node B. Upon Reception, the Node B shall remove the cell and any remaining common and dedicated channels within the cell. The states for the cell and the deleted common channels shall be set to Not Existing [6]. The Node B shall remove all Radio Links from the Cell and all Node B Communication Contexts that as a result do not have a Radio Link. The Node B shall also initiate release of the user plane transport bearers for the removed common and dedicated channels.

When the cell is deleted, the Node B shall send a CELL DELETION RESPONSE message as a response.

8.2.14.3 Unsuccessful Operation

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8.2.14.4 Abnormal Conditions

If the CELL DELETION REQUEST message includes a *C-ID* IE value that is not existing in Node B the Node B shall respond with the CELL DELETION RESPONSE message.

8.2.15 Resource Status Indication

8.2.15.1 General

This procedure is used in the following cases:

1. When a Local Cell becomes Existing at the Node B, it shall be made available to the RNC
2. When a Local Cell is to be deleted in Node B, i.e. become Not Existing, the Local Cell shall be withdrawn from the CRNC
3. When the capabilities of the Local Cell change at the Node B
4. When a cell has changed its capability and/or its resource operational state at Node B

5. When common physical channels and/or common transport channels have changed their capabilities at a Node B
6. When a communication control port changed its resource operational state at the Node B
7. When a Local Cell Group has changed its resource capability at the Node B

Each of the above cases shall trigger a Resource Status Indication procedure and the RESOURCE STATUS INDICATION message shall contain the logical resources affected for that case and the cause value when applicable.

8.2.15.2 Successful Operation



Figure 21: Resource Status Indication procedure: Successful Operation

The procedure is initiated with a RESOURCE STATUS INDICATION message sent from the Node B to CRNC.

Local Cell Becomes Existing:

When a Local Cell becomes Existing at the Node B, the Node B shall make it available to the CRNC by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to “No Failure”, the *Local Cell ID* IE and the *Add/Delete Indicator* IE set equal to 'Add'.

When the capacity credits and consumption laws are shared between several Local Cells, the Node B includes the *Local Cell Group ID* IE for the Local Cell. If the Local Cell Group is not already reported in a previous RESOURCE STATUS INDICATION message, the Node B shall include the capacity credits and the consumption laws in the *Local Cell Group Information* IE.

If the *Local Cell* IE contains both the "DL or Global Capacity Credit" and the "UL Capacity Credit" then the internal resource capabilities of the Local Cell are modelled independently in the Uplink and Downlink direction. If the "UL Capacity Credit" IE is not present, then the internal resource capabilities of the Local Cell are modelled as shared resources between Uplink and Downlink. If the *Local Cell Group Information* IE contains both the "DL or Global Capacity Credit" and the "UL Capacity Credit" then the internal resource capabilities of the Local Cell Group are modelled independently in the Uplink and Downlink direction. If the "UL Capacity Credit" IE is not present, then the internal resource capabilities of the Local Cell Group are modelled as shared resources between Uplink and Downlink.

Local Cell Deletion:

When a Local Cell is to be deleted in Node B, i.e. become Not Existing, the Node B shall withdraw the Local Cell from the CRNC by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to “No Failure”, the *Local Cell ID* IE and the *Add/Delete Indicator* IE set equal to 'Delete'. The Node B shall not withdraw a previously configured cell at the Node B that the CRNC had configured using the Cell Setup procedure, until the CRNC has deleted that cell at the Node B using the Cell Delete procedure.

Capability Change of a Local Cell:

When the capabilities of a Local Cell changes at the Node B, the Node B shall report the new capability by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to “Service Impacting” and the Local Cell ID. The Node B shall include the *Minimum DL Power Capability* IE when it is known by the Node B. If the DL power capability has changed, the new capability shall be indicated in the *DL Power Capability* IE. If the DL capability for supporting the minimum spreading factor has changed, the new capability shall be indicated in the *Minimum Spreading Factor* IE. The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value. If the internal resource capabilities of the Local Cell are affected, it shall be reported in the following way: If the internal resource capabilities of the Local Cell are modelled as shared resources between Uplink and Downlink, the new capacity shall be reported in the DL or Global Capacity Credit IE. If the internal resource capabilities of the Local Cell are modelled independently in the Uplink and Downlink direction, then the DL or Global Capacity Credit IE and the UL Capacity Credit IE shall be present in the RESOURCE STATUS INDICATION. If the

maximum DL power capability of the Local Cell is affected, this shall be reported using the *Maximum DL Power Capability* IE.

Capability Change of a Cell:

When the capabilities and/or resource operational state of a cell changes at the Node B, the Node B shall report the new capability and/or resource operational state by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "Service Impacting", the *C-ID* IE, the *Resource Operational State* IE and the *Availability Status* IE. The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value.

Capability Change of a Common Physical Channel and/or Common Transport Channel:

The Node B shall not delete any common or dedicated channels, due to the cell being "Disabled". For all affected common and dedicated channels, the Node B shall report the impact to the CRNC with the relevant procedures.

When the capabilities and/or resource operational state of common physical channels and/or common transport channels have changed, the Node B shall report the new capability and/or resource operational state by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "Service Impacting", the *Resource Operational State* IE and the *Availability Status* IE set to appropriate values for the affected channel(s). The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value.

When a power value for a common physical channel and/or a common transport channel becomes beyond the supported power value range due to a change in capability in Node Bs, it shall be reported to the CRNC in the RESOURCE STATUS INDICATION message, with the *Resource Operational State* IE set to "Enabled", the *Availability Status* IE set to "Degraded" and the *Cause* IE set to "Power level not supported". Affected channels shall use the nearest power value that is supported.

Capability Change of a Communication Control Port:

When the resource operational state of a communication control port has changed, the Node B shall report the new resource operational state by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "Service Impacting" and the *Communication Control Port ID* IE. The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value.

Capability Change of a Local Cell Group:

When the resource capabilities of a Local Cell Group change at the Node B, the Node B shall report the new capability by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "Service Impacting" and the *Local Cell Group Information* IE reporting the change. The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to an appropriate value. If the RESOURCE STATUS INDICATION message contains both the "DL or Global Capacity Credit" and the "UL Capacity Credit" then the internal resource capabilities of the Node B are modelled independently in the Uplink and Downlink direction. If the "UL Capacity Credit" IE is not present, then the internal resource capabilities of the Node B are modelled as shared resources between Uplink and Downlink.

General:

When the RESOURCE STATUS INDICATION is used to report an error, only one cause value for all reported objects can be sent in one message. When the RESOURCE STATUS INDICATION is used to clear errors, only all errors for one object can be cleared per message. It is not possible to clear one out of several errors for one object.

8.2.15.3 Abnormal Conditions

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8.2.16 System Information Update

8.2.16.1 General

The System Information Update procedure performs the scheduling and provision of system information segments broadcast on the BCCH, to the Node B.

8.2.16.2 Successful Operation

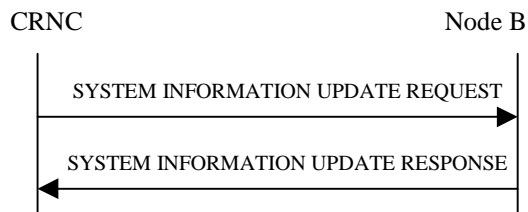


Figure 22: System Information Update procedure: Successful Operation

The procedure is initiated with a SYSTEM INFORMATION UPDATE REQUEST message sent from the CRNC to the Node B.

The Node B shall consider the requested updates to the BCCH schedule in the same order as the MIB/SB/SIB information is included in the SYSTEM INFORMATION UPDATE REQUEST message.

If the SYSTEM INFORMATION UPDATE message includes the *BCCH Modification Time IE*, the updates to the BCCH schedule (possibly consisting of IB occurrence additions, IB occurrence deletions and IB occurrence content updates) indicated in the SYSTEM INFORMATION UPDATE REQUEST message shall be applied by Node B at the first time instance starting from the SFN value set by the *BCCH Modification Time IE*. If no *BCCH Modification Time IE* is included, the updates to the BCCH schedule shall be applied as soon as possible.

Information Block addition

If the SYSTEM INFORMATION UPDATE REQUEST message includes segments of a certain MIB/SB/SIB, the Node-B shall assume that all segments for that Information Block are included in the message and ordered with increasing Segment Index (starting from 0). For each included segment, segment type information is also given in the SYSTEM INFORMATION UPDATE REQUEST message.

The Node B shall determine the correct cell system frame number(s) (SFN) for transmission of the segments of system information, from the scheduling parameters provided in the SYSTEM INFORMATION UPDATE REQUEST message. The SFN for transmitting the segments shall be determined by the *SIB SG REP IE* and *SIB SG POS IE* such that:

$$- \text{SFN mod IB_SG_REP} = \text{IB_SG_POS}$$

If the SYSTEM INFORMATION UPDATE REQUEST message contains Master Information Block (MIB) segments in addition to SIB or SB segments, the MIB segments shall first be sent in the physical channel by the Node B. Once these MIB segments have been sent in the physical channel, the updated SB/SIB segments shall then be sent in the physical channel.

Only if the inclusion of each new IB segment in the BCCH schedule leads to a valid segment combination according to [18], the Node B shall accept the system information update.

If the *SIB Originator IE* value is set to 'Node B' the Node B shall create the SIB segment of the SIB type given by the *IB Type IE* and autonomously update the SIB segment and apply the scheduling and repetition as given by the *IB SG REP IE* and *IB SG POS IE*.

SIBs originating from the Node B can only be SIBs containing information that the Node B can obtain on its own.

Information Block deletion

If the *IB Deletion Indicator IE* value is set to 'Deletion' the Node B shall delete the IB indicated by the *IB Type IE* and *IB OC ID IE* from the transmission schedule on BCCH.

Information Block update

If the SYSTEM INFORMATION UPDATE REQUEST message contains segments for an IB without *IB SG REP IE* and *IB SG POS IE* and there is already an IB in the BCCH schedule with the same IB Type and IB OC ID which is not requested to be deleted from the BCCH schedule by an IB deletion indicated in a *MIB/SB/SIB information IE-group* repetition present in the SYSTEM INFORMATION UPDATE REQUEST message before the IB segments are included, then the Node B shall only update the contents of the IB segments without any modification in segment scheduling.

If the Node B successfully completes the updating of the physical channel scheduling cycle according to the parameters given in the SYSTEM INFORMATION UPDATE REQUEST message, it shall respond to the CRNC with a SYSTEM INFORMATION UPDATE RESPONSE message.

8.2.16.3 Unsuccessful Operation

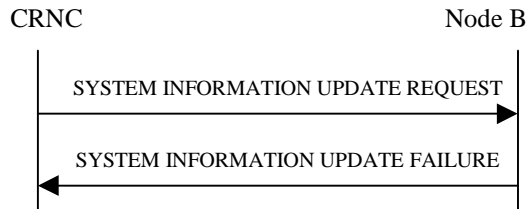


Figure 23: System Information Update procedure: Unsuccessful Operation

If the Node B is unable to update the physical channel scheduling cycle according to all the parameters given in the SYSTEM INFORMATION UPDATE REQUEST message, it shall respond with a SYSTEM INFORMATION UPDATE FAILURE message with an appropriate cause value. No changes to the BCCH schedule are made in this case.

Node B shall reject, with cause value ‘SIB origination in Node B not supported’, requests for Node B originated system information blocks that make use of a value tag.

Node B shall reject the requested update with cause value “BCCH scheduling error” if:

- after having handled a certain *MIB/SB/SIB information IE-group* repetition, an illegal BCCH schedule results;
- if a *MIB/SB/SIB information IE-group* repetition includes an *IB SG REP IE* or an *IB SG POS IE* and there is already an IB in the BCCH schedule with the same IB Type and IB OC ID which is not requested to be deleted from the BCCH schedule by an IB deletion indicated in a *MIB/SB/SIB information IE-group* repetition present in the SYSTEM INFORMATION UPDATE REQUEST message before the IB addition is indicated. This rule shall apply even if the scheduling instructions in *IB SG REP IE* and *IB SG POS IE* were the same as the current scheduling instructions for the concerned IB;
- if a *MIB/SB/SIB information IE-group* repetition includes no *IB SG REP IE* and *IB SG POS IE* and there is no IB in the BCCH schedule with the same IB Type and IB OC ID;
- if a *MIB/SB/SIB information IE-group* repetition includes no *IB SG REP IE* and *IB SG POS IE* and there is already an IB in the BCCH schedule with the same IB Type and IB OC ID but it is requested to be deleted from the BCCH schedule by an IB deletion indicated in a *MIB/SB/SIB information IE-group* repetition present in the SYSTEM INFORMATION UPDATE REQUEST message before the IB addition is indicated;

Possible cause values are:

Radio Network Layer Cause

- Unknown C-ID
- SIB Origination in Node B not Supported
- BCCH scheduling error

Miscellaneous Cause

- Hardware failure
- Control Processing overload
- O&M Intervention
- Unspecified

In the case of failure, the Node B shall not incorporate any of the requested changes into the physical channel scheduling cycle, and the previous system information configuration shall remain intact.

8.2.16.4 Abnormal Conditions

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8.2.17 Radio Link Setup

8.2.17.1 General

This procedure is used for establishing the necessary resources for a new Node B Communication Context in the Node B.

8.2.17.2 Successful Operation

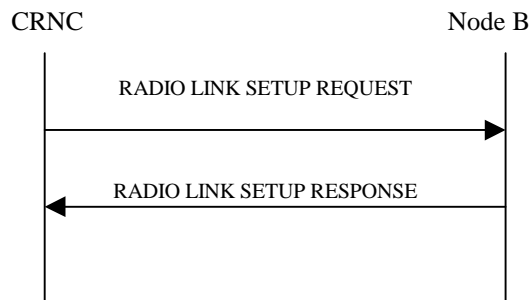


Figure 24: Radio Link Setup procedure: Successful Operation

The procedure is initiated with a RADIO LINK SETUP REQUEST message sent from the CRNC to Node B.

Upon reception of RADIO LINK SETUP REQUEST message, the Node B shall reserve necessary resources and configure the new Radio Link(s) according to the parameters given in the message.

[FDD – The RL Setup procedure can be used to setup one or more radio links. The procedure shall include the establishment of one or more DCHs on all radio links, and in addition, it can include the establishment of one or more DSCHs on one radio link.]

[TDD – The RL Setup procedure is used for setup of one radio link including one or more transport channels. The transport channels can be a mix of DCHs, DSCHs, and USCHs, including also combinations where one or more transport channel types are not present.]

[FDD - The *First RLS Indicator* IE indicates if the concerning RL shall be considered part of the first RLS established towards this UE. If the *First RLS indicator* IE is set to "first RLS", the Node B shall use a TPC pattern of $n \cdot "01" + "1"$ in the DL of the concerning RL and all RLs which are part of the same RLS, until UL synchronisation is achieved on the Uu. The parameter n shall be set equal to the value received in the *DL TPC pattern 01 count* IE in the Cell Setup procedure. The TPC pattern shall continuously be repeated but shall be restarted at the beginning of every frame with $CFN \bmod 4 = 0$. For all other RLs, the Node B shall use a TPC pattern of all "1"s in the DL until UL synchronisation is achieved on the Uu.]

[FDD - The *Diversity Control Field* IE indicates for each RL (except the first RL in the message) whether the Node B shall combine the concerned RL or not. If the *Diversity Control Field* IE indicates, "may be combined with already existing RLs", then Node B shall decide for either of the alternatives. If the *Diversity Control Field* IE is set to "Must", the Node B shall combine the RL with one of the other RL. Diversity combining is applied to Dedicated Transport Channels (DCH), i.e. it is not applied to the DSCHs. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.]

[FDD – If the received *Limited Power Increase* IE is set to 'Used', the DRNS shall, if supported, use Limited Power Increase according to ref. [10] section 5.2.1 for the inner loop DL power control.]

[FDD – If the received *Inner Loop DL PC Status* IE is set to "Active", the Node B shall activate the inner loop DL power control for all RLs. If *Inner Loop DL PC Status* IE is set to "Inactive", the Node B shall deactivate the inner loop DL power control for all RLs according to ref. [10]]

the IE's. The *Binding ID* IE and *Transport Layer Address* IE for the new bearer to be set up for this purpose shall be returned in the RADIO LINK SETUP RESPONSE message.]

[FDD - If the *TFCI Signaling Mode* IE within the RADIO LINK SETUP message indicates that there shall be a hard split on the TFCI field but the *TFCI2 Bearer Information* IE is not included in the message then the Node B shall transmit the TFCI2 field with zero power.]

[FDD - If the *TFCI Signaling Mode* IE within the RADIO LINK SETUP message indicates that there shall be a hard split on the TFCI and the *TFCI2 Bearer Information* IE is included in the message then the Node B shall transmit the TFCI2 field with zero power until Synchronization is achieved on the TFCI2 transport bearer and the first valid DSCH TFCI Signaling control frame is received on this bearer (see ref.[24]).]

~~[FDD - If the RADIO LINK SETUP REQUEST message contains an *SSTD Cell Identity* IE the Node B shall activate SSTD, if supported, for the concerned new RL, with the indicated cell identity used for that RL.]~~

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, the Node B shall store the information about the Transmission Gap Pattern Sequences to be used in the Compressed Mode Configuration. This Compressed Mode Configuration shall be valid in the Node B until the next Compressed Mode Configuration is configured in the Node B or Node B Communication Context is deleted.]

[FDD- If the *Downlink compressed mode method* in one or more Transmission Gap Pattern Sequence is set to 'SF/2' in the RADIO LINK SETUP REQUEST message, the Node B shall use or not the alternate scrambling code as indicated for each DL Channelisation Code in the *Transmission Gap Pattern Sequence Code Information* IE.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE and the *Active Pattern Sequence Information* IE, the Node B shall immediately activate the indicated Transmission Gap Pattern Sequences. For each sequence the *TGCFN* refers to the latest passed CFN with that value. If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the Node B shall behave as specified in subclause 8.3.12.]

[FDD – For each RL not having a common generation of the TPC commands in the DL with another RL, the Node B shall assign the *RL Set ID* IE included in the RADIO LINK SETUP RESPONSE message a value that uniquely identifies the RL Set within the Node B Communication context.]

[FDD – For all RLs having a common generation of the TPC commands in the DL with another RL, the Node B shall assign the *RL Set ID* IE included in the RADIO LINK SETUP RESPONSE message the same value. This value shall uniquely identify the RL Set within the Node B Communication context.]

[TDD -If the *USCH Information* IE is present, the Node B shall configure the new USCH(s) according to the parameters given in the message.]

[TDD – If the *DL Timeslot ISCP* IE is present, the Node B shall use the indicated value when deciding the initial DL TX Power for each timeslot as specified in [21], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged].

If the RLs are successfully setup, the Node B shall start reception on the new RL(s) and respond with a RADIO LINK SETUP RESPONSE message.

[FDD - The Node B shall indicate with the *Diversity Indication* IE whether the RL is combined or not. In case of combining, only the *Reference RL ID* IE shall be included to indicate one of the existing RLs that the concerned RL is combined with. In case of not combining the Node B shall include in the RL SETUP RESPONSE the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DCH of this RL.]

[TDD – The Node B shall include in the RADIO LINK SETUP RESPONSE the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DCH of this RL.]

The Node B shall include in the RADIO LINK SETUP RESPONSE the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DSCH of this RL.

[TDD – In case the *USCH Information* IE is present, the Node B shall include in the RADIO LINK SETUP RESPONSE the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each USCH of this RL.]

In case of coordinated DCH, the *Binding ID IE* and the *Transport Layer Address IE* shall be specify for only one of the coordinated DCHs.

After sending of the RADIO LINK SETUP RESPONSE message the Node B shall continuously attempt to obtain UL synchronisation on the *Uu* and start reception on the new RL. The Node B shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in [16].

[FDD – When *Diversity Mode IE* is “*STTD*”, “*Closedloop mode1*”, or “*Closedloop mode2*”, the DRNC shall activate/deactivate the Transmit Diversity to each Radio Link in accordance with *Transmit Diversity Indication IE*]

~~[FDD – If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity IE*, the Node B may activate SSDT using the *SSDT Cell Identity IE* and *SSDT Cell Identity Length IE*.]~~

[FDD - Irrespective of SSDT activation, the Node B shall include in the RADIO LINK SETUP RESPONSE message an indication concerning the capability to support SSDT on this RL. Only if the RADIO LINK SETUP REQUEST message requested SSDT activation and the RADIO LINK SETUP RESPONSE message indicates that the SSDT capability is supported for this RL, SSDT is activated in the Node B.]

[FDD –The UL out-of-sync algorithm defined in [10] shall for each of the established RL Set(s) use the maximum value of the parameters *N_OUTSYNC_IND* and *T_RLFAILURE*, and the minimum value of the parameters *N_INSYNC_IND*, that are configured in the cells supporting the radio links of the RL Set].

8.2.17.3 Unsuccessful Operation

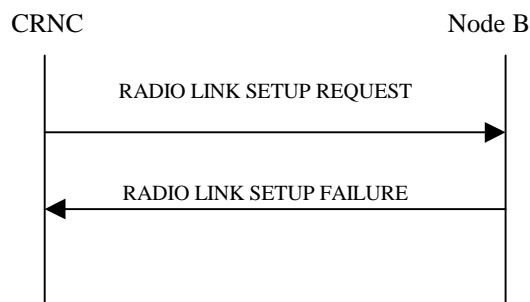


Figure 25: Radio Link Setup procedure: Unsuccessful Operation

If the establishment of at least one radio link is unsuccessful, the Node B shall respond with a RADIO LINK SETUP FAILURE message. The message contains the failure cause in the *Cause IE*.

[FDD - If some radio links were established successfully, the Node B shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message.]

If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector IE* set to “selected” [TDD – or no DCH of a set of co-ordinated DCHs has the *QE-Selector IE* set to “selected”] the Node B shall regard the Radio Link Setup procedure as failed and shall respond with a RADIO LINK SETUP FAILURE message

Typical cause values are as follows:

Radio Network Layer Cause

- RL Already Activated/allocated
- Combining not supported
- Combining Resources not available
- Requested Tx Diversity Mode not supported
- Invalid CM Settings
- Number of DL codes not supported
- UL SF not supported

- DL SF not supported
- Dedicated Transport Channel Type not supported
- Downlink Shared Channel Type not supported
- Uplink Shared Channel Type not supported
- CM not supported

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention
- Unspecified
- Control processing overload
- HW failure

8.2.17.4 Abnormal Conditions

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8.2.18 Physical Shared Channel Reconfiguration [TDD]

8.2.18.1 General

This procedure is used for handling PDSCH Sets and PUSCH Sets in the Node B, i.e.

- Adding new PDSCH Sets and/or PUSCH Sets,
- Modifying these, and
- Deleting them.

8.2.18.2 Successful Operation

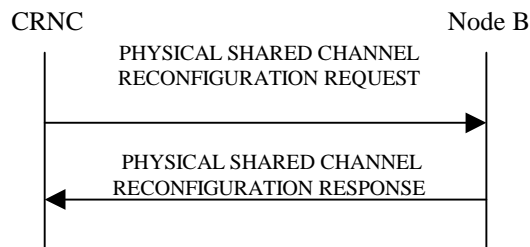


Figure 26: Physical Shared Channel Reconfiguration: Successful Operation

The procedure is initiated with a PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message sent from the CRNC to the Node B.

If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes an *SFN* IE the Node B will activate the new configuration on that specified SFN.

PDSCH/PUSCH Addition

If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any PDSCH sets or PUSCH sets to be added the Node B shall add these new sets to its PDSCH/PUSCH configuration.

PDSCH/PUSCH Modification

If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any PDSCH sets or PUSCH sets to be modified, and includes any of *TDD Channelisation Code IE*, *Burst Type IE*, *Midamble shift IE*, *Time Slot IE*, *TDD Physical Channel Offset IE*, *Repetition Period IE*, *Repetition Length IE*, or *TFCI presence IE* the Node B shall apply these as the new values, otherwise the old values specified for this set are still applicable.

PDSCH/PUSCH Deletion

If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any PDSCH sets or PUSCH sets to be deleted the Node B shall delete these new sets to its PDSCH/PUSCH configuration.

In the successful case, the Node B shall add, modify and delete the PDSCH Sets and PUSCH Sets in the Common Transport Channel data base, as requested in the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST, and shall make these available to all the current and future DSCH and USCH transport channels; and shall respond with PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE:

8.2.18.3 Unsuccessful Operation

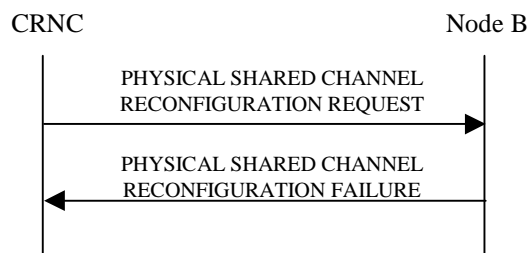


Figure 27: Physical Shared Channel Reconfiguration procedure: Unsuccessful Operation

If the Node B is not able to support all parts of the configuration, it shall reject the configuration of all the channels in the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message. The *Cause Value IE* shall be set to an appropriate value.

If the configuration was unsuccessful, the Node B shall respond with the PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE message:

Typical cause values are as follows:

Radio Network Layer Cause

- Cell not available
- Node B Resources unavailable

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention
- Unspecified Failure
- Control processing overload

- HW failure

8.2.18.4 Abnormal Conditions

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8.2.19 Reset

8.2.19.1 General

The purpose of the reset procedure is to align the resources in the CRNC and Node B in the event of an abnormal failure. The CRNC or Node B may initiate the procedure.

8.2.19.2 Successful Operation

8.2.19.2.1 Reset Initiated by the CRNC

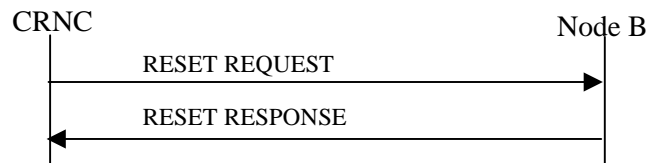


Figure 27A Reset procedure (CRNC to Node B), Successful Operation

The procedure is initiated with a RESET REQUEST message sent from the CRNC to the Node B.

If the *Reset Indicator* IE is set to 'CommunicationContext', the Node B shall remove all the indicated Node B Communication Contexts (typically identified by a *Node B Communication Context ID* IE) and all the radio resources allocated for these Node B Communication Contexts. The Node B shall also initiate release of the user plane transport bearers that were involved in these Contexts. After clearing all related resources, the Node B shall return the RESET RESPONSE message to the CRNC.

If the *Reset Indicator* IE is set to 'CommunicationControlPort', the Node B shall remove all the Node B Communication Contexts controlled via the indicated Communication Control Port(s) and all the radio resources allocated for these Node B Communication Contexts. The Node B shall also initiate release of the user plane transport bearers that were involved in these Contexts. After clearing all related resources, the Node B shall return the RESET RESPONSE message to the CRNC.

If the *Reset Indicator* IE is set to the 'Node B', the Node B shall remove all the Node B Communication Contexts within the Node B and all the radio resources allocated for these Node B Communication Contexts. The Node B shall also initiate release of the user plane transport bearers that were involved in these Contexts. After clearing all related resources, the Node B shall return the RESET RESPONSE message to the CRNC.

8.2.19.2.2 Reset Initiated by the Node B

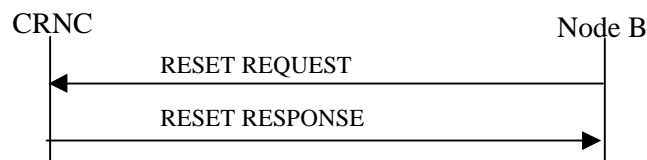


Figure 27B Reset procedure (Node B to CRNC), Successful Operation

The procedure is initiated with a RESET REQUEST message sent from the Node B to the CRNC.

If the *Reset Indicator* IE is set to 'CommunicationContext', for all indicated CRNC Communication Contexts (indicated by a *CRNC Communication Context ID* IE) the CRNC shall remove the information related to this Node B and all the radio resources allocated in the CRNC. The CRNC shall also initiate release of the user plane transport bearers towards

the Node B involved in the indicated CRNC Communication Contexts. After clearing all related resources, the CRNC shall return the RESET RESPONSE message to the Node B.

If the *Reset Indicator* IE is set to 'CommunicationControlPort', for all the CRNC Communication Contexts controlled via the indicated Communication Control Port(s) the CRNC shall remove the information related to this Node B and all the radio resources allocated in the CRNC. The CRNC shall also initiate release of the user plane transport bearers towards the Node B involved in the CRNC Communication Contexts controlled via the indicated Communication Control Port(s). After clearing all related resources, the CRNC shall return the RESET RESPONSE message to Node B.

If the *Reset Indicator* IE is set to the 'Node B', for all the CRNC Communication Contexts related to this Node B the CRNC shall remove the information related to this Node B and all the radio resources allocated in the CRNC. The CRNC shall also initiate release of the user plane transport bearers towards the Node B involved in the CRNC Communication Contexts related to this Node B. After clearing all related resources, the CRNC shall return the RESET RESPONSE message to Node B.

8.2.19.3 Unsuccessful Operation

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8.2.19.4 Abnormal Conditions

If the RESET message is received any ongoing procedure related to a CRNC Communication Context in the CRNC or Node B Communication Context in the Node B indicated (explicitly or implicitly) in the message shall be aborted.

8.3 NBAP Dedicated Procedures

8.3.1 Radio Link Addition

8.3.1.1 General

This procedure is used for establishing the necessary resources in the Node B for one or more additional RLs towards a UE when there is already a Node B communication context for this UE in the Node B.

The Radio Link Addition procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in chapter 3.1.

8.3.1.2 Successful Operation

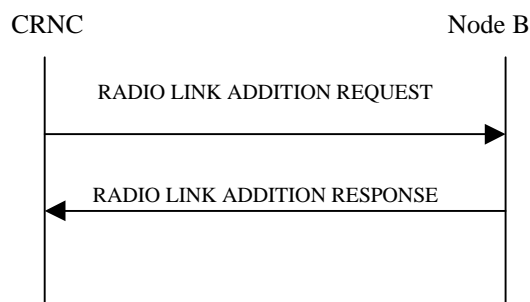


Figure: 28 Radio Link Addition procedure: Successful Operation

The procedure is initiated with a RADIO LINK ADDITION REQUEST message sent from the CRNC to the Node B.

Upon reception, the Node B shall reserve the necessary resources and configure the new RL(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

The Node B shall prioritise resource allocation for the RL(s) to be established according to Annex A.

[TDD - If the *UL CCTrCH Information* IE is present, the Node B shall configure the new UL CCTrCH(s) according to the parameters given in the message.]

[TDD - If the *DL CCH Information* IE is present, the Node B shall configure the new DL CCH(s) according to the parameters given in the message.]

[TDD - If the *UL DPCH Information* IE is present, the Node B shall configure the new UL DPCH(s) according to the parameters given in the message.]

[TDD - If the *DL DPCH Information* IE is present, the Node B shall configure the new DL DPCH(s) according to the parameters given in the message.]

The *Diversity Control Field* IE indicates for each RL whether the Node B shall combine the new RL with existing RL(s) or not. If the *Diversity Control Field* IE indicates, "may be combined with already existing RLs", then Node B shall decide for any of the alternatives. If the *Diversity Control Field* IE is set to "Must", the Node B shall combine the RL with one of the other RL. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Initial DL Transmission Power* IE, the Node B shall apply the given power to the transmission on each DL Channelisation Code of the RL when starting transmission until either UL synchronisation on the Uu is achieved for the RLS or a DL POWER REQUEST message is received. If no *Initial DL Transmission power* IE is included, the Node B shall use any transmission power level currently used on already existing RL's for this UE. No inner loop power control or balancing] shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10], chapter 5.2.1.2) with DPC MODE=0 and the downlink power control procedure (see 8.3.7).]

[TDD – If the RADIO LINK ADDITION REQUEST message includes the *Initial DL Transmission Power* IE, the Node B shall apply the given power to the transmission on each DL Channelisation Code and on each Time Slot of the RL when starting transmission until the UL synchronisation on the Uu is achieved for the RL. If no *Initial DL Transmission power* IE is included, the Node B shall use any transmission power level currently used on already existing RL's for this UE. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22], chapter 4.2.3.3).]

If the RADIO LINK ADDITION REQUEST message includes the *Maximum DL power* IE, the Node B shall store this value and never transmit with a higher power on any DL Channelisation Code of the RL. If no *Maximum DL power* IE is included, any Maximum DL power stored for already existing RLs for this UE shall be applied.

If the RADIO LINK ADDITION REQUEST message includes the *Minimum DL power* IE, the Node B shall store this value and never transmit with a lower power on any DL Channelisation Code of the RL. If no *Minimum DL power* IE is included, any Minimum DL power stored for already existing RLs for this UE shall be applied.

[FDD - If the RADIO LINK ADDITION REQUEST message contains an *SSDT Cell Identity* IE the Node B shall activate SSDT, if supported, for the concerned new RL, with the indicated SSDT cell identity used for that RL.]

[FDD – If the RADIO LINK ADDITION REQUEST includes the *Compressed Mode Deactivation Flag* IE with value "On", the Node B shall not activate any CM pattern sequence in the new RLs. In all the other cases (Flag set to "Off" or not present), the on going CM measurement (if existing) shall be applied also to the added RLs.]

[FDD- If the RADIO LINK ADDITION REQUEST contains the *Transmission Gap Pattern Sequence Code Information* IE Node B shall use or not the alternate scrambling code as indicated for each DL Channelisation Code.]

[TDD – If the RADIO LINK ADDITION REQUEST message includes the *DL Timeslot ISCP* IE, the Node B shall use the indicated value when deciding the DL TX Power for each timeslot as specified in [21], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged].

If all requested RLs are successfully added, the Node B shall respond with a RADIO LINK ADDITION RESPONSE message.

[FDD – When more than one DL DPDCH are assigned per RL, the segmented physical channel shall be mapped on to DL DPDCHs according to [8]. When p number of DL DPDCHs are assigned to each RL, the first pair of DL Scrambling Code and FDD DL Channelisation Code Number corresponds to "PhCH number 1", the second to "PhCH number 2", and so on until the p th to "PhCH number p ".]

[FDD – For each RL not having a common generation of the TPC commands in the DL with another RL, the Node B shall assign the *RL Set ID* IE included in the RADIO LINK ADDITION RESPONSE message a value that uniquely identifies the RL Set within the Node B Communication context.]

[FDD – For all RLs having a common generation of the TPC commands in the DL with another new or existing RL, the Node B shall assign the *RL Set ID* IE included in the RADIO LINK ADDITION RESPONSE message the same value. This value shall uniquely identify the RL Set within the Node B Communication context.]

In the case of combining an RL with existing RL(s) the Node B shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that the RL is combined. In this case the Reference RL ID shall be included to indicate one of the existing RLs that the new RL is combined with.

In the case of not combining an RL with existing RL(s), the Node B shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that no combining is done. In this case the Node B shall include both the Transport Layer Address and the binding ID for the transport bearer to be established for each DCH, [TDD - DSCH, USCH] of the RL in the RADIO LINK ADDITION RESPONSE message.

In case of coordinated DCH, the binding ID and the transport address shall be included for only one of the coordinated DCHs.

[TDD – The Node B shall include in the RADIO LINK ADDITION RESPONSE message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DSCH {and USCH}.

After sending of the RADIO LINK ADDITION RESPONSE message the Node B shall continuously attempt to obtain UL synchronisation on the Uu and start reception on the new RL. The Node B shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in 25.427.

[FDD – When *Diversity Mode* IE is “*STTD*”, “*Closedloop mode1*”, or “*Closedloop mode2*”, the DRNC shall activate/deactivate the Transmit Diversity to each Radio Link in accordance with *Transmit Diversity Indication* IE]

[FDD – When *Transmit Diversity Indicator* IE is present Node B shall activate/deactivate the Transmit Diversity to each new Radio Link in accordance with the *Transmit Diversity Indicator* IE and the already known diversity mode.]

[FDD – After addition of the new RL(s), the UL out-of-sync algorithm defined in [10] shall for each of the previously existing and newly established RL Set(s) use the maximum value of the parameters *N_OUTSYNC_IND* and *T_RLFAILURE*, and the minimum value of the parameters *N_INSYNC_IND*, that are configured in the cells supporting the radio links of the RL Set].

8.3.1.3 Unsuccessful Operation

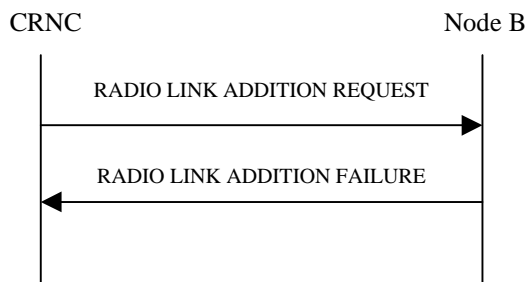


Figure 29: Radio Link Addition procedure: Unsuccessful Operation

If some RL(s) were established successfully, the Node B shall indicate this in the RADIO LINK ADDITION FAILURE message in the same way as in the RADIO LINK ADDITION RESPONSE message.

[FDD - If the RADIO LINK ADDITION REQUEST contains the *CM Deactivation Flag* IE with the value "On", and at least one of the new RL is added in one cell that has the same *UARFCN* of at least one cell with an already existing RL, the Node B shall regard the Radio Link Addition procedure as failed and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Invalid CM settings".]

Typical cause values are as follows:

Radio Network Layer Cause

- RL Already Activated/allocated
- Combining not supported

- Combining Resources not available
- Requested Tx Diversity Mode not supported
- UL SF not supported
- DL SF not supported
- Invalid CM Settings
- Reconfiguration CFN not elapsed
- CM not supported

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention
- Unspecified
- Control processing overload
- HW failure

8.3.1.4 Abnormal conditions

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8.3.2 Synchronised Radio Link Reconfiguration Preparation

8.3.2.1 General

The Synchronised Radio Link Reconfiguration Preparation procedure is used to prepare a new configuration of all Radio Links related to one UE-UTRAN connection within a Node B.

The Synchronised Radio Link Reconfiguration Preparation procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in chapter 3.1.

8.3.2.2 Successful Operation

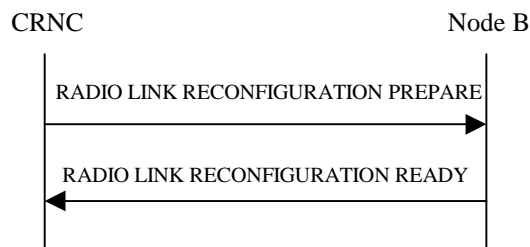


Figure 30: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

The Synchronised Radio Link Reconfiguration Preparation procedure is initiated by the CRNC by sending the message RADIO LINK RECONFIGURATION PREPARE to the Node B. The message shall use the Communication Control Port assigned for this Node B Communication Context.

Upon reception, the Node B shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

The Node B shall prioritise resource allocation for the RL(s) to be modified according to Annex A.

DCH Modification:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs to Modify* IEs then the Node B shall treat them each as follows:

- If the *DCHs to Modify* IE includes the *Frame Handling Priority* IE, the Node B should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new configuration has been activated.
- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the UL of a DCH, the Node B shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.
- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the DL of a DCH, the Node B shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.
- If the *DCHs to Modify* IE includes multiple *DCH Specific Info* IEs then the Node B shall treat the DCHs in the *DCHs to Modify* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- If the *DCHs to Modify* IE includes the *UL FP Mode* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs, the Node B shall apply the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify* IE includes the *ToAWS* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs, the Node B shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify* IE includes the *ToAWE* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs, the Node B shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [TDD – If the *DCHs to Modify* IE includes the *CCTrCH ID* IE for the DL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Downlink of this DCH in the new configuration.]
- [TDD - If the *DCHs to Modify* IE includes the *CCTrCH ID* IE for the UL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

DCH Addition:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs to Add* IEs then the Node B shall treat them each as follows:

- If the *DCHs to Add* IE multiple *DCH specific Info* IEs then, the Node B shall treat the DCHs in the *DCHs to Add* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- [FDD - For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to “selected”, the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [16]. If the *QE-Selector* is set to “non-selected”, the Physical channel BER shall be used for the QE in the UL data frames, ref. [16]].
- For a set of co-ordinated DCHs the Transport channel BER from the DCH with the *QE-Selector* IE set to “selected” shall be used for the QE in the UL data frames, ref. [16]. [FDD - If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [16]. If all DCHs have *QE-Selector* IE set to “non-selected” the Physical channel BER shall be used for the QE, ref. [16]].

- The Node B should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new configuration has been activated.
- The Node B shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The Node B shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The Node B shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [TDD – The Node B shall apply the *CCTrCH ID* IE (for the DL) in the Downlink of this DCH in the new configuration.]
- [TDD – The Node B shall apply the *CCTrCH ID* IE (for the UL) in the Uplink of this DCH in the new configuration.]

DCH Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs to Delete* IEs, the Node B shall not include the referenced DCHs in the new configuration.

If all of the DCHs belonging to a set of coordinated DCHs are requested to be deleted, the Node B shall not include this set of coordinated DCHs in the new configuration.

Physical Channel Modification:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes an *UL DPCH Information* IE then the Node B shall apply the parameters to the new configuration as follows:]

- [FDD - If the *UL DPCH Information* IE includes the *Uplink Scrambling Code* IE, the Node B shall apply this Uplink Scrambling Code to the new configuration.]
- [FDD – If the *UL DPCH Information* IE includes the *Min UL Channelisation Code Length* IE, the Node B shall apply the value in the new configuration. The Node B shall apply the contents of the *Max Number of UL DPDCHs* IE (if it is included) in the new configuration.]
- [FDD – If the *UL DPCH Information* IE includes the *UL SIR Target* IE, the Node B shall use the value for the UL inner loop power control when the new configuration is being used.]
- [FDD – If the *UL DPCH Information* IE includes the *Puncture Limit* IE, the Node B shall apply the value in the uplink of the new configuratio
- [FDD - The Node B shall use the *TFCS* IE for the UL (if present) when reserving resources for the uplink of the new configuration. The Node B shall apply the new TFCS in the Uplink of the new configuration.]
- [FDD - If the *UL DPCH Information* IE includes the *UL DPCCCH Slot Format* IE, group the Node B shall set the new Uplink DPCCCH Structure to the new configuration.]
- [FDD - If the *UL DPCH Information* IE includes the *Diversity Mode* IE, the Node B shall apply diversity according to the given value.]
- [FDD – If the *UL DPCH Information* IE includes an *SSDT Cell Identity Length* IE and/or an *S-Field Length* IE, the Node B shall apply the values in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes a *DL DPCH Information* IE then the Node B shall apply the parameters to the new configuration as follows:]

- [FDD - The Node B shall use the *TFCS* IE for the DL (if it is present) when reserving resources for the downlink of the new configuration. The Node B shall apply the new TFCS in the Downlink of the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE or the *TFCI Presence* IE, the Node B shall use the information when building TFCIs in the new configuration.]
- [FDD - If the *DL DPCH Information* IE includes the *DL DPCCCH Slot Format* IE, group the Node B shall set the new Downlink DPCCCH Structure to the new configuration.]
- [FDD – If the *DL DPCH Information* IE includes the *Multiplexing Position* IE, the Node B shall apply the indicated multiplexing type in the new configuration.]
- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set to 'Used', the Node B shall use Limited Power Increase ref. [10] section 5.2.1 for the inner loop DL power control in the new configuration.]
- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set to 'Not Used', the Node B shall not use Limited Power Increase for the inner loop DL power control in the new configuration.]
- [FDD - If the *DL DPCH Information* IE includes the *PDSCH code mapping* IE then the Node B shall apply the defined mapping between TFCI values and PDSCH channelisation codes.]
- [FDD - If the *DL DPCH Information* IE includes the *PDSCH RL ID* IE then the Node B shall infer that the PDSCH for the specified user will be transmitted on the defined radio link.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern Sequence Information* IE the Node B shall store the new information about the Transmission Gap Pattern Sequences to be used in the new Compressed Mode Configuration. This new Compressed Mode Configuration shall be valid in the Node B until the next Compressed Mode Configuration is configured in the Node B or Node B Communication Context is deleted.]

[TDD - UL/DL CCTrCH Modification]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH to Modify* or *DL CCTrCH to Modify* IEs, then the Node B shall treat them each as follows:]

- [TDD - If the IE includes any of *TFCS* IE, *TFCI coding* IE or *Puncture Limit* IE the Node B shall apply these as the new values, otherwise the old values specified for this CCTrCH are still applicable.]
- [TDD – If the IE includes any *UL DPCH to add* or *DL DPCH to add* IEs, the Node B shall include this DPCH in the new configuration.]
- [TDD – If the IE includes any *UL DPCH to delete* or *DL DPCH to delete* IEs, the Node B shall remove this DPCH in the new configuration.]
- [TDD – If the IE includes any *UL DPCH to modify* or *DL DPCH to modify* IEs, and includes any of *Repetition Period* IE, *Repetition Length* IE, or *TDD DPCH Offset* IE or the message includes UL/DL Timeslot Information and includes any of *Midamble shift and Burst Type* IE, *Time Slot* IE, or *TFCI presence* IE or the message includes UL/DL Code information and includes *TDD Channelisation Code* IE, the Node B shall apply these specified information elements as the new values, otherwise the old values specified for this DPCH configuration are still applicable.]

[TDD – UL/DL CCTrCH Addition]

[TDD -If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH to Add* IE or *DL CCTrCH to Add* IE, the Node B shall include this CCTrCH in the new configuration.]

[TDD - If the *UL/DL CCTrCH to Add* IE includes any *UL/DL DPCH Information* IE, the Node B shall reserve necessary resources for the new configuration of the UL/DL DPCH(s) according to the parameters given in the message.]

[TDD – UL/DL CCTrCH Deletion]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any UL or DL CCTrCH to be deleted , the Node B shall remove this CCTrCH in the new configuration.]

DSCH Addition/Modification/Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH to modify*, *DSCH to add* or *DSCH to delete* IEs, then the Node B shall use this information to add/modify/delete the indicated DSCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs.

The Node B shall include in the RADIO LINK RECONFIGURATION READY message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DSCH.

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *TFCI2 Bearer Information* IE then the Node B shall support the setup of a transport bearer on which the DSCH TFCI Signaling control frames shall be received if one does not already exist or shall apply the new values if such a bearer does already exist. The *Binding ID* IE and *Transport Layer Address* IE of any new bearer to be set up for this purpose shall be returned in the RADIO LINK RECONFIGURATION READY message. If the RADIO LINK RECONFIGURATION PREPARE message specifies that the TFCI2 transport bearer is to be deleted then the Node B shall release the resources associated with that bearer in the new configuration.

[FDD - If the *TFCI Signaling Mode* IE within the RADIO LINK RECONFIGURATION PREPARE message indicates that there shall be a hard split on the TFCI field but a TFCI2 transport bearer has not already been set up and *TFCI2 Bearer Information* IE is not included in the message then the Node B shall transmit the TFCI2 field with zero power in the new configuration.]

[FDD - If the *TFCI Signaling Mode* IE within the RADIO LINK RECONFUGURATION PREPARE message indicates that there shall be a hard split on the TFCI and the *TFCI2 Bearer Information* IE is included in the message then the Node B shall transmit the TFCI2 field with zero power until Synchronization is achieved on the TFCI2 transport bearer and the first valid DSCH TFCI Signaling control frame is received on this bearer in the new configuration (see ref.[24]).]

[TDD - USCH Addition/Modification/Deletion:]

- [TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes USCH information for the USCHs to be added/modified/deleted then the NodeB shall use this information to add/modify/delete the indicated USCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs.]
- [TDD - The Node B shall include in the RADIO LINK RECONFIGURATION READY message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each USCH.]

RL Information:

If the RADIO LINK RECONFIGURATION PREPARE message includes the *RL Information* IE, the Node B shall treat it as follows:

- [FDD – When more than one DL DPDCH are assigned per RL, the segmented physical channel shall be mapped on to DL DPDCHs according to [8]. When p number of DL DPDCHs are assigned to each RL, the first pair of DL Scrambling Code and FDD DL Channelisation Code Number corresponds to “*PhCH number 1*”, the second to “*PhCH number 2*”, and so on until the p th to “*PhCH number p*”.]
- [FDD - If the *RL Information* IE includes the *SSDT Indication* IE set to "SSDT Active in the UE", the Node B may activate SSDT using the *SSDT Cell Identity* IE in the new configuration.]
- [FDD - If the *RL Information* IE includes the *SSDT Indication* IE set to "SSDT not Active in the UE", the Node B shall deactivate SSDT in the new configuration.]
- [FDD – If the *RL Information* IE includes a *DL Code Information* IE containing a *DL Scrambling Code* IE, the Node B shall apply the scrambling code in the new configuration.]
- [FDD – If the *RL Information* IE includes the *DL Code Information* IE containing a *DL Channelisation Code Number* IE, the Node B shall apply the channelisation code in the new configuration.]
- [FDD- If the *RL Information* IE contains the *Transmission Gap Pattern Sequence Code Information* IE for any of the allocated DL Channelisation code, the Node B shall apply the alternate scrambling code as indicated whenever the downlink compressed mode method SF/2 is active in the new configuration.]
- If the *RL Information* IE includes the *Maximum DL Power* and/or the *Minimum DL Power* IEs, the Node B shall apply the values in the new configuration.

General

If the requested modifications are allowed by the Node B and the Node B has successfully reserved the required resources for the new configuration of the Radio Link(s), it shall respond to the CRNC with the RADIO LINK RECONFIGURATION READY message. When this procedure has been completed successfully there exist a Prepared Reconfiguration, as defined in chapter 3.1.

In the RADIO LINK RECONFIGURATION READY message, the Node B shall include the *RL Information Response* IE for each affected Radio Link.

The Node B shall include in the RADIO LINK RECONFIGURATION READY message the Transport Layer Address and the Binding ID for any Transport Channel being added, or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE.

In case of a DCH requiring a new transport bearer on Iur, the *Transport Layer Address* IE and the *Binding ID* shall be included in the IE *DCH Information Response* IE-group.

In case of a set of coordinated DCHs requiring a new transport bearer on Iub, the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE group shall be included only for one of the DCH in the set of coordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the Node B, the *RL Information Response* IE group shall be included only for one of the combined RLs. The *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE-group shall be included only for one of the combined Radio Links.

8.3.2.3 Unsuccessful Operation

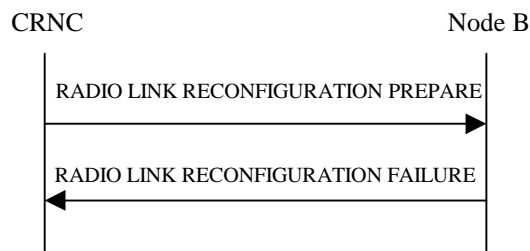


Figure 31: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation

If the Node B cannot reserve the necessary resources for all the new DCHs of one set of coordinated DCHs requested to be added, it shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as having failed.

If the requested Synchronised Radio Link Reconfiguration Preparation procedure fails for one or more RLs the Node B shall send the RADIO LINK RECONFIGURATION FAILURE message to the CRNC, indicating the reason for failure.

If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to “selected” [TDD – or no DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to “selected”] the Node B shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE message.

[FDD - If the *RL Information* IE includes the *SSDT Indication* IE set to "SSDT Active in the UE" and SSDT is not active in the current configuration, the Node B shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as failed if the *UL DPCH Information* IE does not include the *SSDT Cell Identity Length* IE. In this case, it shall respond with a RADIO LINK RECONFIGURATION FAILURE message.]

Typical cause values are as follows:

Radio Network Layer Cause

- UL SF not supported
- DL SF not supported
- Invalid CM Settings

- Downlink Shared Channel Type not supported
- Uplink Shared Channel Type not supported
- CM not supported
- Number of DL codes not supported

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention
- Unspecified
- Control processing overload
- HW failure

8.3.2.4 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of coordinated DCHs is requested to be deleted, the Node B shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as having failed and the Node B shall send the RADIO LINK RECONFIGURATION FAILURE message to the CRNC.

8.3.3 Synchronised Radio Link Reconfiguration Commit

8.3.3.1 General

This procedure is used to order the Node B to switch to the new configuration for the Radio Link(s) within the Node B, previously prepared by the Synchronised Radio Link Preparation procedure.

The message shall use the Communication Control Port assigned for this Node B Communication Context.

8.3.3.2 Successful Operation

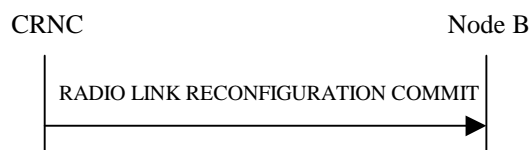


Figure 32: Synchronised Radio Link Reconfiguration Commit procedure, Successful Operation

The Node B shall switch to the new configuration previously prepared by the Synchronised RL Reconfiguration procedure at the CFN requested by the CRNC when receiving the RADIO LINK RECONFIGURATION COMMIT message from the CRNC. [FDD – The CFN shall be ignored by Node B if only Transmission Gap Pattern Sequence Information was included in the RL Reconfiguration.] When this procedure has been completed the Prepared Reconfiguration does not exist any more, see chapter 3.1.

In the case of a transport channel modification for which a new transport bearer was requested and established, the switch to the new transport bearer shall also take place at the indicated CFN.

[FDD - If the RADIO LINK RECONFIGURATION COMMIT includes the *Active Pattern Sequence Information* IE, the Node B shall deactivate all the ongoing Transmission Gap Pattern Sequences at the CM Configuration Change CFN. From that moment on all Transmission Gap Pattern Sequences included in *Transmission Gap Pattern Sequence*

Status IE-group repetitions shall be started when the indicated TGCFN elapses. The *CM Configuration Change CFN* in the *Active Pattern Sequence Information IE* and *TGCFN* for each sequence refers to the next coming CFN with that value. If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the Node B shall behave as specified in subclause 8.3.12.]

8.3.3.3 Abnormal Conditions

If a new transport bearer is required for the new reconfiguration and it is not available at the requested CFN, the Node B shall initiate the Radio Link Failure procedure.

8.3.4 Synchronised Radio Link Reconfiguration Cancellation

8.3.4.1 General

This procedure is used to order the Node B to release the new configuration for the Radio Link(s) within the Node B, previously prepared by the Synchronised Radio Link Preparation procedure.

The message shall use the Communication Control Port assigned for this Node B Communication Context.

8.3.4.2 Successful Operation

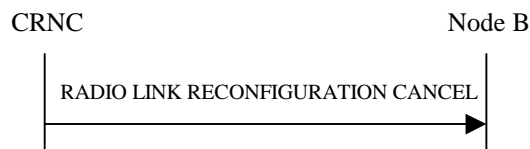


Figure 33: Synchronised Radio Link Reconfiguration Cancellation procedure, Successful Operation

When receiving the RADIO LINK RECONFIGURATION CANCEL message from the CRNC, the Node B shall release the new configuration ([FDD - including the new Transmission Gap Pattern Sequence parameters (if existing)]) previously prepared by the Synchronised RL Reconfiguration Preparation procedure and continue using the old configuration. When this procedure has been completed the Prepared Reconfiguration does not exist any more, see chapter 3.1.

8.3.4.3 Abnormal Conditions

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8.3.5 Unsynchronised Radio Link Reconfiguration

8.3.5.1 General

The Unsynchronised Radio Link Reconfiguration procedure is used to reconfigure Radio Link(s) related to one UE-UTRAN connection within a Node B.

The Unsynchronised RL Reconfiguration procedure is used when there is no need to synchronise the time of the switching from the old to the new configuration in one Node B used for a UE-UTRAN connection with any other Node B also used for the UE –UTRAN connection.

The Unsynchronised Radio Link Reconfiguration procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in chapter 3.1.

8.3.5.2 Successful Operation

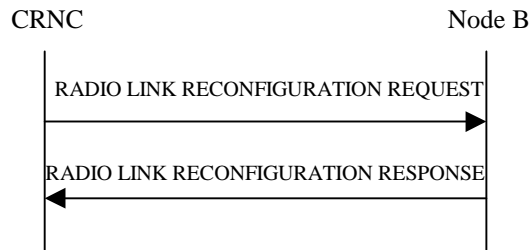


Figure 34: Unsynchronised Radio Link Reconfiguration Procedure, Successful Operation

The Unsynchronised Radio Link Reconfiguration procedure is initiated by the CRNC by sending the message RADIO LINK RECONFIGURATION REQUEST to the Node B. The message shall use the Communication Control Port assigned for this Node B Communication Context.

Upon reception, the Node B shall modify the configuration of the Radio Link(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

The Node B shall prioritise resource allocation for the RL(s) to be modified according to Annex A.

DCH Modification:

If the RADIO LINK RECONFIGURATION REQUEST message includes any *DCHs to Modify* IEs then the Node B shall treat them each as follows:

- If the *DCHs to Modify* IE includes on the *Frame Handling Priority* IE, the Node B should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new configuration has been activated.
- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the UL, the Node B shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.
- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the DL, the Node B shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.
- If the *DCHs to Modify* IE includes multiple *DCH Specific Info* IEs then the Node B shall treat the DCHs in the *DCHs to Modify* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- If the *DCHs to Modify* IE includes the *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs, the Node B shall apply the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify* IE includes the *ToAWS* IE for a DCH or a set of co-ordinated DCHs, the Node B shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify* IE includes the *ToAWE* IE for a DCH or a set of co-ordinated DCHs, the Node B shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the DL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Downlink of this DCH in the new configuration.]
- [TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the UL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

DCH Addition:

If the RADIO LINK RECONFIGURATION REQUEST message includes any *DCH to Add* IEs, the Node B shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCHs in the new configuration. In particular:

- If a *DCHs to Add* IE includes multiple *DCH Specific Info* IEs for a DCH to be added, the Node B shall treat the DCHs in the *DCHs to Add* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- [FDD - For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to “selected”, the Node B shall use the Transport channel BER from that DCH as the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH, the Physical channel BER shall be used for the QE [16]. If the QE-Selector is set to “non-selected”, the Physical channel BER shall be used for the QE in the UL data frames, ref. [16]].
- For a set of co-ordinated DCHs, the Node B shall use the Transport channel BER from the DCH with the *QE-Selector* IE set to “selected” as the QE in the UL data frames [16]. [FDD - If no Transport channel BER is available for the selected DCH, the Physical channel BER shall be used for the QE [16]. If all DCHs have *QE-Selector* IE set to “non-selected” the Physical channel BER shall be used for the QE [16]].
- The Node B should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new configuration has been activated.
- The Node B shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The Node B shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The Node B shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the DL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Downlink of this DCH in the new configuration.]
- [TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the UL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

DCH Deletion:

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be deleted from the Radio Link(s), the Node B shall not include this DCH in the new configuration.

If all of the DCHs belonging to a set of coordinated DCHs are requested to be deleted, the Node B shall not include this set of coordinated DCHs in the new configuration.

[FDD - Physical Channel Modification:]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes an *UL DPCH Information* IE, then the Node B shall apply the parameters to the new configuration as follows:]

- [FDD - If the *UL DPCH Information* IE includes the *TFCS* IE for the UL, the Node B shall apply the new TFCS in the Uplink of the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes a *DL DPCH Information* IE, then the Node B shall apply the parameters to the new configuration as follows:]

- [FDD - If the *DL DPCH Information* IE includes on the *TFCS* IE for the DL, the Node B shall apply the new TFCS in the Downlink of the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE, the Node B shall use the use the information when building TFCIs in the new configuration.
- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set to 'Used', the Node B shall, if supported, use Limited Power Increase according to ref. [10] section 5.2.1 for the inner loop DL power control in the new configuration.]
- [FDD – If the *DL DPCH Information* IE message includes the *Limited Power Increase* IE and the IE is set to 'Not Used', the Node B shall not use Limited Power Increase for the inner loop DL power control in the new configuration.]
- [FDD - If the *DL DPCH Information* IE includes the *PDSCH code mapping* IE then the Node B shall apply the defined mapping between TFCI values and PDSCH channelisation codes.]
- [FDD - If the *DL DPCH Information* IE includes the *PDSCH RL ID* IE then the Node B shall infer that the PDSCH for the specified user will be transmitted on the defined radio link.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE the Node B shall store the new information about the Transmission Gap Pattern Sequences to be used in the new Compressed Mode Configuration. This new Compressed Mode Configuration shall be valid in the Node B until the next Compressed Mode Configuration is configured in the Node B or Node B Communication Context is deleted.]

[TDD - UL/DL CCTrCH Modification]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH to modify* IE or *DL CCTrCH to modify* IE in the Radio Link(s), the Node B shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message.]

[TDD - If the *UL/DL CCTrCH to modify* IE includes *TFCI* IE, and/or *Puncture Limit* IE the Node B shall apply these as the new values, otherwise the old values specified for this CCTrCH are still applicable.]

[TDD – UL/DL CCTrCH Deletion]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH to delete* IE or *DL CCTrCH to delete* IE, the Node B shall not include this CCTrCH in the new configuration.]

RL Information:

If the RADIO LINK RECONFIGURATION REQUEST message includes the *RL Information* IE, the Node B shall treat it as follows:

- If the *RL Information* IE includes the *Maximum DL Power* IE, the Node B shall apply this value to the new configuration and never transmit with a higher power on any Downlink Channelisation Code of the Radio Link once the new configuration is being used.
- If the *RL Information* IE includes the *Minimum DL Power* IE, the Node B shall apply this value to the new configuration and never transmit with a lower power on any Downlink Channelisation Code of the Radio Link once the new configuration is being used.
- [FDD- If the *RL Information* IE contains the *DL Code Information IE-group* for any of the allocated DL Channelisation code, the Node B shall apply the new setting when new compressed mode measurement are activated.]
- [FDD- If the *RL Information* IE contains the *Transmission Gap Pattern Sequence Code Information* IE for any of the allocated DL Channelisation code, the Node B shall apply the alternate scrambling code as indicated whenever the downlink compressed mode method SF/2 is active in the new configuration.]

General

If the requested modifications are allowed by the Node B, the Node B has successfully allocated the required resources, and changed to the new configuration it shall respond to the CRNC with the RADIO LINK RECONFIGURATION RESPONSE message.

In the RADIO LINK RECONFIGURATION RESPONSE message, the Node B shall include the *RL Information Response* IE for each affected Radio Link.

The Node B shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Transport Layer Address IE* and the *Binding ID IE* for any Transport Channel being added, or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator IE*.

In case of a DCH requiring a new transport bearer on Iur, the *Transport Layer Address IE* and the *Binding ID* shall be included in the *IE DCH Information Response IE-group*.

In case of a set of coordinated DCHs requiring a new transport bearer on Iub, the *Transport Layer Address IE* and the *Binding ID IE* in the *DCH Information Response IE* shall be included only for one of the DCH in the set of coordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the Node B, *RL Information Response IE-group* shall be included only for one of the combined Radio Links. The *Transport Layer Address IE* and the *Binding ID IE* in the *DCH Information Response IE-group* shall be included only for one of the combined Radio Links.

8.3.5.3 Unsuccessful Operation

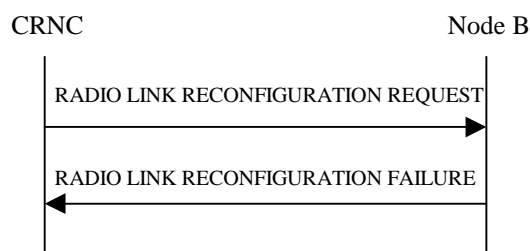


Figure 35: Unsynchronised Radio Link Reconfiguration procedure, Unsuccessful Operation

If the Node B cannot allocate the necessary resources for all the new DCHs of one set of coordinated, DCHs requested to be set-up it shall regard the Unsynchronised Radio Link Reconfiguration procedure as having failed.

If the requested Unsynchronised Radio Link Reconfiguration procedure fails for one or more Radio Link(s) the Node B shall send the RADIO LINK RECONFIGURATION FAILURE message to the CRNC, indicating the reason for failure.

If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector IE* set to “selected” [TDD – or no DCH of a set of co-ordinated DCHs has the *QE-Selector IE* set to “selected”] the Node B shall regard the Unsynchronised Radio Link Reconfiguration Preparation procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE message.

Typical cause values are as follows:

Radio Network Layer Cause

- Invalid CM Settings
- CM not supported

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention
- Unspecified
- Control processing overload
- HW failure

8.3.5.4 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of coordinated DCHs is requested to be deleted, the Node B shall regard the Unsynchronised Radio Link Reconfiguration procedure as having failed and shall send the RADIO LINK RECONFIGURATION FAILURE message to the CRNC.

8.3.6 Radio Link Deletion

8.3.6.1 General

The Radio Link Deletion procedure is used to release the resources in a Node B for one or more established radio links towards a UE.

The Radio Link Deletion procedure may be initiated by the CRNC at any time when the Node B Communication Context exists.

8.3.6.2 Successful Operation

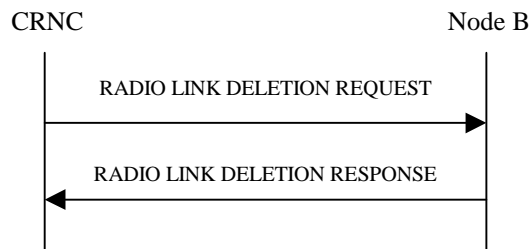


Figure 36: Radio Link Deletion procedure: Successful Operation

The procedure is initiated with a RADIO LINK DELETION REQUEST message sent from the CRNC to the Node B.

Upon receipt of this message, the Node B shall delete the radio link(s) identified by the *RL ID IE, Node B Communication ID IE and CRNC Communication ID IE* and release all associated resources and respond to the CRNC with a RADIO LINK DELETION RESPONSE message.

[FDD – After deletion of the RL(s), the UL out-of-sync algorithm defined in [10] shall for each of the remaining RL Set(s) use the maximum value of the parameters N_OUTSYNC_IND and T_RLFAILURE, and the minimum value of the parameters N_INSYNC_IND, that are configured in the cells supporting the radio links of the RL Set].

8.3.6.3 Unsuccessful Operation

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8.3.6.4 Abnormal Conditions

If the RL indicated by the *RL ID IE, Node B Communication ID IE and CRNC Communication ID IE* does not exist, the Node B shall respond with the RADIO LINK DELETION RESPONSE message and use the *CRNC Communication Context ID IE* received in the RADIO LINK DELETION REQUEST message.

8.3.7 Downlink Power Control [FDD]

8.3.7.1 General

The purpose of this procedure is to balance the DL transmission powers of one or more Radio Links used for the related ~~RRC-UE-UTRAN~~ connection within the Node B. The Downlink Power Control procedure may be initiated by the CRNC at any time when the Node B communication context exists, irrespective of other ongoing CRNC initiated dedicated NBAP procedures towards this Node B communication context. The only exception occurs when the CRNC has requested the deletion of the last RL via this Node B, in which case the Downlink Power Control procedure shall no longer be initiated.

8.3.7.2 Successful Operation



Figure 37: Downlink Power Control procedure: Successful Operation

The procedure is initiated by the CRNC sending a DL POWER CONTROL REQUEST message to the Node B.

The *Power Adjustment Type* IE defines the characteristic of the power adjustment.

If the value of the *Power Adjustment Type* IE is *Common*, the Node B shall perform the power adjustment (see below) for all radio links associated with the context identified by the *Node B Communication Context ID* IE using a common DL reference power level.

If the value of the *Power Adjustment Type* IE is *Individual*, the Node B shall perform the power adjustment (see below) for all radio links addressed in the message using the given DL Reference Powers per RL.

If the value of the *Power Adjustment Type* IE is *None*, the Node B shall suspend on going power adjustments for all radio links for the UE context.

If the *Inner Loop DL PC Status* IE is present and set to *'Active'*, the Node B shall activate inner loop DL power control for all radio links for the Node B communication context. If the *Inner Loop DL PC Status* IE is present and set to *'Inactive'*, the Node B shall deactivate inner loop DL power control for all radio links for the Node B communication context according to ref. [10].

Power Adjustment

The power balancing adjustment shall be superimposed on the inner loop power control adjustment (see Ref. [10]) if activated. The power balancing adjustment shall be such that:

$$\sum P_{bal} = (1 - r)(P_{ref} + P_{P-CPICH} - P_{init}) \text{ with an accuracy of } \pm 0.5 \text{ dB}$$

where the sum is performed over an adjustment period corresponding to a number of frames equal to the value of the *Adjustment Period* IE, P_{ref} is the value of the *DL Reference Power* IE, $P_{P-CPICH}$ is the power used on the primary CPICH, P_{init} is the code power of the last slot of the previous adjustment period and r is given by the *Adjustment Ratio* IE. If the last slot of the previous adjustment period is within a transmission gap due to compressed mode, P_{init} shall be set to the same value as the code power of the slot just before the transmission gap.

The adjustment within one adjustment period shall in any case be performed with the constraints given by the *Max Adjustment Step* IE and the DL TX power range set by the CRNC.

The power adjustments shall be started at the first slot of a frame with CFN modulo the value of *Adjustment Period* IE equal to 0 and shall be repeated for every adjustment period and shall be restarted at the first slot of a frame with CFN=0, until a new DL POWER CONTROL REQUEST message is received or the RL is deleted.

8.3.7.3 Abnormal Conditions

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8.3.8 Dedicated Measurement Initiation

8.3.8.1 General

This procedure is used by a CRNC to request the initiation of measurements on dedicated resources in a Node B.

The Dedicated Measurement Initiation procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in chapter 3.1.

8.3.8.2 Successful Operation

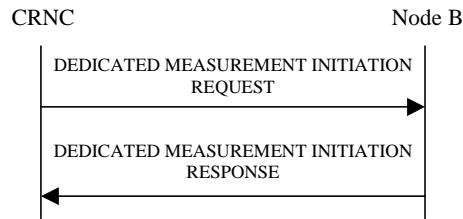


Figure 38: Dedicated Measurement Initiation procedure: Successful Operation

The procedure is initiated with a DEDICATED MEASUREMENT INITIATION REQUEST message sent from the CRNC to the Node B using the communication control port assigned to the Node B communication context.

Upon reception, the Node B shall initiate the requested measurement according to the parameters given in the request. Unless specified below the meaning of the parameters are given in other specifications.

If the *Node B Communication Context ID* IE equals the reserved value 'All NBCC', this measurement request shall apply for all current and future Node B Communication Contexts controlled via the Communication Control Port on which the DEDICATED MEASUREMENT INITIATION REQUEST message was received. Otherwise, this measurement request shall apply for the requested Node B Communication Context ID only.

If the *Dedicated Measurement Object Type* IE is set to "RL", measurement results shall be reported for all indicated Radio Links.

[FDD - If the *Dedicated Measurement Object Type* IE is set to "RLS", measurement results shall be reported for all indicated Radio Link Sets.]

If the *Dedicated Measurement Object Type* IE is set to "ALL RL", measurement results shall be reported for all current and future Radio Links within the Node B Communication Context.

[FDD - If the *Dedicated Measurement Object Type* IE is set to "ALL RLS", measurement results shall be reported for all existing and future Radio Link Sets within the Node B Communication Context.]

[TDD - If DPCH ID is provided within the RL Information the measurement request shall apply for the requested physical channel individually.]

If the *CFN Reporting Indicator* IE is set to "FN Reporting Required", the *CFN* IE shall be included in the measurement report or in the measurement response, the latter only in the case the *Report Characteristics* IE is set to 'On-Demand'. The reported CFN shall be the CFN at the time when the measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [25].

If the *CFN* IE is provided, it indicates the frame for which the first measurement shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [25].

Report characteristics

The *Report Characteristics* IE is set to how the reporting of the measurement shall be performed.

If the *Report Characteristics* IE is set to 'On-Demand', the Node B shall return the result of the measurement immediately.

If the *Report Characteristics* IE is set to 'Periodic', the Node B shall periodically initiate the Dedicated Measurement Report procedure for this measurement, with the requested report frequency.

If the *Report Characteristics* IE is set to 'Event A', the Node B shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the Node B shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event B', the Node B shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the Node B shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event C', the Node B shall initiate ~~the Dedicated~~ Measurement Reporting procedure when the measured entity rises ~~by an amount greater~~ more than the requested threshold within the requested time.

If the *Report Characteristics* IE is set to 'Event D', the Node B shall initiate ~~the Dedicated~~ Measurement Reporting procedure when the measured entity falls ~~by an amount greater~~ more than the requested threshold within the requested time.

If the *Report Characteristics* IE is set to 'Event E', the Node B shall initiate ~~the Dedicated~~ a-Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The Node B shall also initiate ~~the Dedicated~~ a-Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Periodicity* IE is provided, the Node B shall initiate ~~the Dedicated~~ Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. If 'Measurement Threshold 2' is not present, the Node B shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the Node B shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to 'Event F', the Node B shall initiate ~~the Dedicated~~ Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The Node B shall also initiate ~~the Dedicated~~ Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Periodicity* IE is provided, the Node B shall initiate ~~the Dedicated~~ Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. If 'Measurement Threshold 2' is not present, the Node B shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the Node B shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is not set to 'On-Demand', the Node B is required to perform reporting for a dedicated measurement object, in accordance with the conditions provided in the DEDICATED MEASUREMENT INITIATION REQUEST message, as long as the object exists. If no dedicated measurement object(s) for which a measurement is defined exists any more the Node B shall terminate the measurement locally, i.e. without reporting this to the CRNC.

If at the start of the measurement, the reporting criteria are fulfilled for any of Event A, Event B, Event E or Event F, the Node B shall initiate ~~the Dedicated~~ Measurement Reporting procedure immediately, and then continue with the measurements as specified in the DEDICATED MEASUREMENT INITIATION REQUEST message.

Higher layer filtering

The *Measurement Filter Coefficient* IE indicates how filtering of the measurement values shall be performed before measurement event evaluation and reporting.

The averaging shall be performed according to the following formula.

$$F_n = (1 - a) \cdot F_{n-1} + a \cdot M_n$$

The variables in the formula are defined as follows

F_n is the updated filtered measurement result

F_{n-1} is the old filtered measurement result

M_n is the latest received measurement result from physical layer measurements

$a = 1/2^{(k/2)}$, where k is the parameter received in the *Measurement Filter Coefficient* IE. If the *Measurement Filter Coefficient* IE is not present, a shall be set to 1 (no filtering)

In order to initialise the averaging filter, F_0 is set to M_1 when the first measurement result from the physical layer measurement is received.

Response message

If the Node B was able to initiate the measurement requested by the CRNC it shall respond with the DEDICATED MEASUREMENT INITIATION RESPONSE message using the communication control port assigned to the Node B communication context. The message shall include the same Measurement ID that was used in the measurement request.

Only in the case when *Report Characteristics IE* is set to "On-Demand", the DEDICATED MEASUREMENT INITIATION RESPONSE message shall contain the measurement result. In this case also the *Dedicated Measurement Object IE* shall be included if it was included in the request message.

In the case that the *Node B Communication Context ID IE* is set to 'All NBCC' the *CRNC Communication Context ID IE* in the DEDICATED MEASUREMENT INITIATION RESPONSE shall be set to the value 'All CRNCCC', which is reserved for this purpose.

8.3.8.3 Unsuccessful Operation

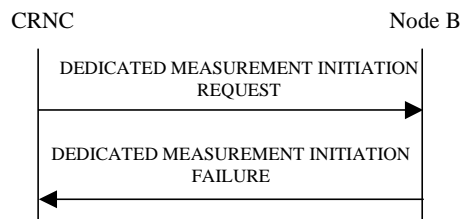


Figure 39: Dedicated Measurement Request procedure: Unsuccessful Operation

If the Dedicated Measurement Type received in the *Dedicated Measurement Type IE* is not defined in ref. [4] or [5] to be measured on the Dedicated Measurement Object Type received in the *Dedicated Measurement Object Type IE* in the DEDICATED MEASUREMENT INITIATION REQUEST message the Node B shall regard the Dedicated Measurement Initiation procedure as failed.

If the requested measurement cannot be initiated, the Node B shall send a DEDICATED MEASUREMENT INITIATION FAILURE message using the communication control port assigned to the Node B communication context. The message shall include the same Measurement ID that was used in the DEDICATED MEASUREMENT INITIATION REQUEST message and the *Cause IE* set to an appropriate value.

In the case that the *Node B Communication Context ID IE* is set to 'All NBCC' the *CRNC Communication Context ID IE* in the DEDICATED MEASUREMENT INITIATION FAILURE shall be set to the value 'All CRNCCC', which is reserved for this purpose.

Typical cause values are as follows:

Radio Network Layer cause

- Measurement not supported for the object
- Measurement Temporarily not Available

Miscellaneous Cause

- O&M Intervention
- Control processing overload
- HW failure

8.3.8.4 Abnormal Conditions

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8.3.9 Dedicated Measurement Reporting

8.3.9.1 General

This procedure is used by the Node B to report the result of measurements requested by the CRNC with the Dedicated Measurement Initiation procedure. The Node B may initiate the Dedicated Measurement Reporting procedure at any time after establishing a Radio Link, as long as the Node B communication context exists.

8.3.9.2 Successful Operation



Figure 40: Dedicated Measurement Reporting procedure: Successful Operation

If the requested measurement reporting criteria are met, the Node B shall initiate the Dedicated Measurement Reporting procedure. The DEDICATED MEASUREMENT REPORT message shall use the communication control port assigned to the Node B communication context. If the measurement was initiated (by the Dedicated Measurement Initiation procedure) for multiple dedicated measurement objects, the Node B may include measurement values for multiple objects in the DEDICATED MEASUREMENT REPORT message. Unless specified below, the meaning of the parameters are given in other specifications.

The *Dedicated Measurement ID* IE shall be set to the Dedicated Measurement ID provided by the CRNC when initiating the measurement with the Dedicated Measurement Initiation procedure.

If the achieved measurement accuracy does not fulfil the given accuracy requirement, the Measurement not available shall be reported.

8.3.9.3 Abnormal Conditions

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8.3.10 Dedicated Measurement Termination

8.3.10.1 General

This procedure is used by the CRNC to terminate a measurement previously requested by the Dedicated Measurement Initiation procedure.

The Dedicated Measurement Termination procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in chapter 3.1.

8.3.10.2 Successful Operation

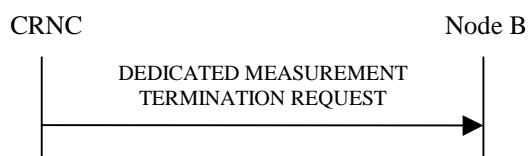


Figure 41: Dedicated Measurement Termination procedure: Successful Operation

This procedure is initiated with a DEDICATED MEASUREMENT TERMINATION REQUEST message, sent from the CRNC to the Node B using the communication control port assigned to the Node B communication context.

Upon reception, the Node B shall terminate reporting of measurements corresponding to the received Dedicated Measurement ID.

8.3.10.3 Abnormal Conditions

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8.3.11 Dedicated Measurement Failure

8.3.11.1 General

This procedure is used by the Node B to notify the CRNC that a measurement previously requested by the Dedicated Measurement Initiation procedure can no longer be reported. The Node B is allowed to initiate the DEDICATED MEASUREMENT FAILURE INDICATION message at any time after having sent the RADIO LINK SETUP RESPONSE message, as long as the Node B communication context exists.

8.3.11.2 Successful Operation



Figure 42: Dedicated Measurement Failure procedure: Successful Operation

This procedure is initiated with a DEDICATED MEASUREMENT FAILURE INDICATION message, sent from the Node B to the CRNC using the communication control port assigned to the Node B communication context, to inform the CRNC that a previously requested measurement can no longer be reported. The Node B has locally terminated the indicated measurement.

If the failed measurement was initiated with the *Node B Communication Context ID* IE set to the reserved value "All NBCC" the Node B has terminated the measurement reporting of the measurement corresponding to the Measurement ID indicated in the DEDICATED MEASUREMENT FAILURE INDICATION message and the *CRNC Communication Context ID* IE shall be set to the value 'All CRNCCC'.

8.3.11.3 Abnormal Conditions

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8.3.12 Radio Link Failure

8.3.12.1 General

This procedure is used by Node B to indicate a failure in one or more Radio Links or Radio Link Sets.

8.3.12.2 Successful Operation

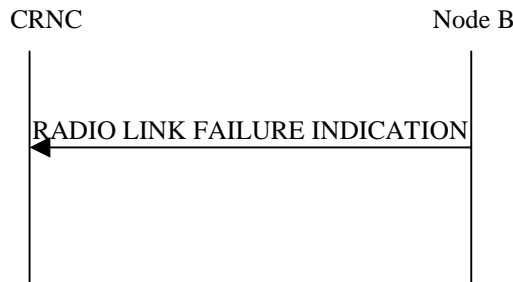


Figure 43: Radio Link Failure procedure: Successful Operation

When Node B detects that one or more Radio Link or Radio Link Sets is no longer available, it sends the RADIO LINK FAILURE INDICATION message to CRNC indicating the failed Radio Links or Radio Link Sets with the most appropriate cause values in the *Cause IE*. If the failure concerns one or more individual Radio Links the Node B shall indicate the affected Radio Link(s) using the *RL Information IE-group*. [FDD - If the failure concerns one or more Radio Link Sets the Node B shall indicate the affected Radio Link Set(s) using the *RL Set Information IE-group*.]

When the Radio Link Failure procedure is used to notify the loss of UL synchronisation on the *Uu*, the message shall be sent, with the cause value 'Synchronisation Failure', when indicated by the UL out-of-sync algorithm defined in [10] and [21]. [FDD – The algorithm in [10] shall use the maximum value of the parameters *N_OUTSYNC_IND* and *T_RLFAILURE*, and the minimum value of the parameters *N_INSYNC_IND*, that are configured in the cells supporting the radio links of the RL Set].

[FDD – When Radio Link Failure procedure is used to indicate permanent failure in one or more Radio Links/Radio Link Sets due the overlapping of two or more pattern sequences during the compressed mode measurement, DL transmission shall be stopped and the RADIO LINK FAILURE INDICATION message shall be sent with the cause value 'Invalid CM Settings'. After sending the RADIO LINK FAILURE INDICATION message to notify the permanent failure, the Node B shall not remove the Radio Link/Radio Link Set from the UE context, or the UE context itself.]

In the other cases Radio Link Failure procedure is used to indicate that one or more Radio Links/Radio Link Sets are permanently unavailable and cannot be restored. After sending the RADIO LINK FAILURE INDICATION message to notify the permanent failure, the Node B shall not remove the Radio Link/Radio Link Set from the UE context, or the UE context itself. When applicable, the retention priorities associated to the transport channels shall be used by the Node B to prioritise which Radio Links/Radio Link Sets to indicate as unavailable to the CRNC.

Typical cause values are:

Radio Network Layer Causes:

- Synchronisation Failure
- Invalid CM settings

Transport Layer Causes:

- Transport Resources Unavailable

Miscellaneous Causes:

- Control Processing Overload
- HW Failure
- O&M Intervention

8.3.12.3 Abnormal Conditions

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8.3.13 Radio Link Restoration

8.3.13.1 General

This procedure is used by the Node B to notify the achievement and re-achievement of uplink synchronisation of one or more Radio Links or Radio Link Sets on the Uu.

8.3.13.2 Successful Operation

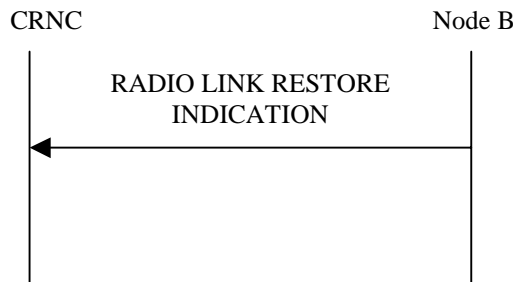


Figure 44: Radio Link Restoration procedure: Successful Operation

The Node B shall send the RADIO LINK RESTORE INDICATION message to the CRNC when indicated by the UL sync detection algorithm defined in [10 and [21]. [FDD – The algorithm in [10] shall use the minimum value of the parameters N_INSYNCH_IND that are configured in the cells supporting the radio links of the RL Set].

[TDD - If the re-established Uu synchronisation concerns one or more individual Radio Links the Node B shall indicate the affected Radio Link(s) using the *RL Information IE-group*.] [FDD - If the re-established Uu synchronisation concerns one or more Radio Link Sets the Node B shall indicate the affected Radio Link Set(s) using the *RL Set Information IE-group*.]

8.3.13.3 Abnormal Condition

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8.3.14 Compressed Mode Command [FDD]

8.3.14.1 General

The Compressed Mode Command procedure is used to activate or deactivate the compressed mode in the Node B for one UE-UTRAN connection.

The Compressed Mode Command procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in chapter 3.1.

8.3.14.2 Successful Operation



Figure 47: Compressed Mode Command procedure, Successful Operation

The Node B shall deactivate all the ongoing Transmission Gap Pattern Sequences at the CM Configuration Change CFN requested by CRNC when receiving COMPRESSED MODE COMMAND message from the CRNC. From that moment on all Transmission Gap Pattern Sequences included in *Transmission Gap Pattern Sequence Status IE-group*

repetitions (if present) shall be started when the indicated TGCFN elapses. The CM Configuration Change CFN in the *Active Pattern Sequence Information* IE and TGCFN for each sequence refers to the next coming CFN with that value.

If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the Node B shall behave as specified in subclause 8.3.12.

8.3.14.3 Abnormal Conditions

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8.3.15 Downlink Power Timeslot Control [TDD]

8.3.15.1 General

The purpose of this procedure is to enable the Node B to use the indicated DL Timeslot ISCP values when deciding the DL TX Power for each timeslot

The Downlink Power Timeslot Control procedure can be initiated by the CRNC at any time when the Node B communication context exists, irrespective of other ongoing CRNC initiated dedicated NBAP procedures towards this Node B communication context. The only exception occurs when the CRNC has requested the deletion of the last RL via this Node B, in which case the Downlink Power Timeslot Control procedure shall no longer be initiated.

8.3.15.2 Successful Operation



Figure 47A: Downlink Power Timeslot Control procedure: Successful Operation

The procedure is initiated by the CRNC sending a DL POWER TIMESLOT CONTROL REQUEST message to the Node B.

Upon reception, the Node B shall use the indicated DL Timeslot ISCP value when deciding the DL TX Power for each timeslot as specified in [21], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged.

8.3.15.3 Abnormal Conditions

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8.3.16 Radio Link Pre-emption

8.3.16.1 General

This procedure is started by the Node B when resources need to be freed.

The Node B may initiate the Radio Link Pre-emption procedure at any time after establishing a Radio Link.

8.3.16.2 Successful Operation

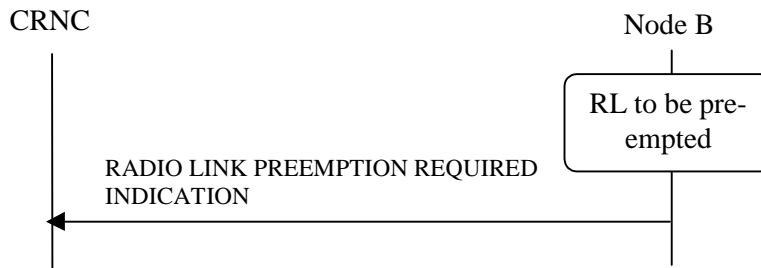


Figure 47B: RL Pre-emption procedure, Successful Operation

When Node B detects that a one or more Radio Links should be pre-empted, see Annex A, it shall send the RADIO LINK PREEMPTION REQUIRED INDICATION message to the CRNC. If all Radio Links for a CRNC Communication Context ID should be pre-empted, the *RL Information IE* shall be omitted. If one or several but not all Radio Links should be pre-empted for a CRNC Communication Context, the Radio Links that should be pre-empted shall be indicated in the *RL Information IE*. The Radio Link(s) that should be pre-empted, should be deleted by the CRNC.

8.3.16.3 Abnormal Conditions

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8.4 Error Handling Procedures

8.4.1 Error Indication

8.4.1.1 General

The Error Indication procedure is initiated by a node to report detected errors in one incoming message, provided they cannot be reported by an appropriate response failure message.

8.4.1.2 Successful Operation

When the conditions defined in chapter 10 are fulfilled, the Error Indication procedure is initiated by an ERROR INDICATION message sent from the receiving node.

When the ERROR INDICATION message is sent from a Node B to its CRNC, the *CRNC Communication Context ID IE* shall be included in the message if available. When the ERROR INDICATION message is sent from a CRNC to a Node B, the *Node B Communication Context ID IE* shall be included in the message if available.

When a message for a dedicated procedure is received in Node B with an invalid *Node B Communication Context ID IE*, the Node B shall include the unknown *Node B Communication Context ID IE* from the dedicated message in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

Typical cause values for the ERROR INDICATION message are:

Protocol Causes:

- Transfer Syntax Error
- Abstract Syntax Error ('Reject)
- Abstract Syntax Error (Ignore and Notify)
- Message not Compatible with Receiver State
- Unspecified

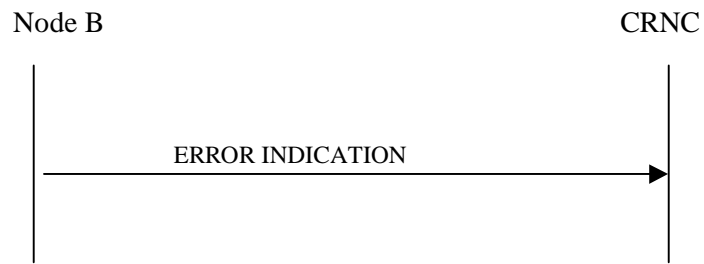


Figure 49: Error Indication procedure (Node B to CRNC): Successful Operation

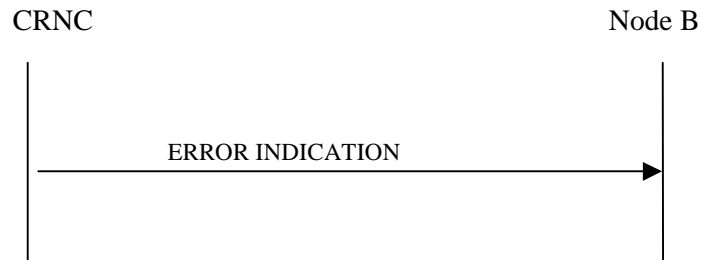


Figure 50: Error Indication procedure (CRNC to Node B): Successful Operation

8.4.1.3 Abnormal Conditions

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9 Elements for NBAP communication

9.1 Message Functional Definition and Content

9.1.1 General

Section 9.1 presents the contents of NBAP messages in tabular format. The corresponding ASN.1 definition is presented in section 9.3. In case there is contradiction between the tabular format in section 9.1 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional IEs, where the tabular format shall take precedence.

NOTE: The messages have been defined in accordance to the guidelines specified in [26].

9.1.2 Message Contents

9.1.2.1 Presence

An information element can be of the following *types*:

M	The information element is mandatory, i.e. always present in the message
O	The information element is optional, i.e. may or may not be present in the message independently on the presence or value of other information elements in the same message
C	The presence of the information element is conditional to the presence or to the value of another information element, as reported in the table below the message containing the explanation of the condition

In case of an information element group, the group is preceded by a name for the info group (in bold). It is also indicated how many times a group may be repeated in the message and whether the group is conditional. The presence field of the information elements inside one group defines if the information element is mandatory, optional or conditional if the group is present.

9.1.2.2 Criticality

Each information element or Group of information elements may have a criticality information applied to it. Following cases are possible:

-	No criticality information is applied explicitly.
YES	Criticality information is applied. 'YES' is usable only for non-repeatable information elements.
GLOBAL	The information element and all its repetitions together have one common criticality information. 'GLOBAL' is usable only for repeatable information elements.
EACH	Each repetition of the information element has its own criticality information. It is not allowed to assign different criticality values to the repetitions. 'EACH' is usable only for repeatable information elements.

9.1.2.3 Range

The Range column indicates the allowed number of copies of repetitive IEs/~~IE groups~~.

9.1.2.4 Assigned Criticality

This column provides the actual criticality information as defined in chapter 10.3.2, if applicable.

9.1.3 COMMON TRANSPORT CHANNEL SETUP REQUEST

9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
CHOICE common physical channel to be configured	M				YES	ignore
>Secondary CCPCH					–	
>>Secondary CCPCH		1				
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>FDD S-CCPCH Offset	M		9.2.2.15	Corresponds to [7]: s-CCPCH,k	–	
>>>DL Scrambling Code	C-PCH		9.2.2.13		–	
>>>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>>>TFCS	M		9.2.1.58	For the DL.	–	
>>>Secondary CCPCH Slot Format	M		9.2.2.43		–	
>>>TFCI Presence	C – SlotFormat		9.2.1.57	Refer to TS [7]	–	
>>>Multiplexing Position	M		9.2.2.23		–	
>>>Power Offset Information		1			–	
>>>>PO1	M		Power Offset 9.2.2.29	Power offset for the TFCI bits	–	
>>>>PO3	M		Power Offset 9.2.2.29	Power offset for the pilot bits	–	
>>>STTD Indicator	M		9.2.2.48		–	
>>>FACH Parameters	C-choiceCh	0..<maxnumberOfFACHs>			GLOBAL	reject
>>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>>ToAWS	M		9.2.1.61		–	
>>>>ToAWE	M		9.2.1.60		–	
>>>>Max FACH Power	M		DL Power 9.2.1.21	Maximum allowed power on the FACH.	–	
>>>PCH Parameters	C-choiceCh	0..1			YES	reject
>>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>>Transport Format	M		9.2.1.59	For the DL.	–	

Set						
>>>>ToAWS	M		9.2.1.61		-	
>>>>ToAWE	M		9.2.1.60		-	
>>>>PCH Power	M		DL Power 9.2.1.21		-	
>>>>PICH Parameters		1			-	
>>>>>Common Physical Channel ID	M		9.2.1.13		-	
>>>>>FDD DL Channelisation Code Number	M		9.2.2.14		-	
>>>>>PICH Power	M		9.2.1.49A		-	
>>>>>PICH Mode	M		9.2.2.26	Number of PI per frame	-	
>>>>>STTD Indicator	M		9.2.2.48		-	
>PRACH					-	
>>PRACH		1				
>>>Common Physical Channel ID	M		9.2.1.13		-	
>>>Scrambling Code Number	M		9.2.2.42		-	
>>>TFCS	M		9.2.1.58	For the UL.	-	
>>>Preamble Signatures	M		9.2.2.31		-	
>>>Allowed Slot Format Information		1..<Maximum Slot Formats PRACH>			-	
>>>>RACH Slot Format	M		9.2.2.37		-	
>>>RACH Sub Channel Numbers	M		9.2.2.38		-	
>>>Puncture Limit	M		9.2.1.50	For the UL	-	
>>>Preamble Threshold	M		9.2.2.32		-	
>>>RACH Parameters		1			YES	Reject
>>>>>Common Transport Channel ID	M		9.2.1.14		-	
>>>>>Transport Format Set	M		9.2.1.59	For the UL.	-	
>>AICH Parameters		1			-	
>>>Common Physical Channel ID	M		9.2.1.13		-	
>>>AICH Transmission Timing	M		9.2.2.1		-	
>>>FDD DL Channelisation Code Number	M		9.2.2.14		-	
>>>AICH Power	M		9.2.2.D		-	
>>>STTD Indicator	M		9.2.2.48		-	
>PCPCHes					-	
>>CPCH Parameters		1			-	
>>>Common Transport Channel ID	M		9.2.1.14		-	
>>>Transport Format Set	M		9.2.1.59	For the UL.	-	
>>>AP Preamble Scrambling Code	M		CPCH Scrambling		-	

			Code Number 9.2.2.4B			
>>>CD Preamble Scrambling Code	M		CPCH Scrambling Code Number 9.2.2.4B		–	
>>>TFCS	M		9.2.1.58	For the UL	–	
>>>CD Signatures	O		Preamble Signatures 9.2.2.31	Note: When not present, all CD signatures are to be used.	–	
>>>CD Sub Channel Numbers	C-CDSig		9.2.2.1C		–	
>>>Puncture Limit	M		9.2.1.50	For the UL	–	
>>>CPCH UL DPCCH Slot Format	M		9.2.2.4C	For UL CPCH message control part	–	
>>>UL SIR	M		UL SIR 9.2.2.58		–	
>>>Initial DL transmission Power	M		DL Power 9.2.1.21		–	
>>>Maximum DL Power	M		DL Power 9.2.1.21		–	
>>>Minimum DL Power	M		DL Power 9.2.1.21		–	
>>>PO2	M		Power Offset 9.2.2.29	Power offset for the TPC bits	–	
>>>PO3	M		Power Offset 9.2.2.29	Power offset for the pilot bits	–	
>>>FDD TPC DL Step Size	M		9.2.2.16		–	
>>>N_Start_Message	M		9.2.2.23C		–	
>>>N_EOT	M		9.2.2.23A		–	
>>>Channel Assignment Indication	M		9.2.2.1D		–	
>>>CPCH Allowed Total Rate	M		9.2.2.4A		–	
>>>PCPCH Channel Information		<i>1..<maxnoofPCPCHs></i>			–	
>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>CPCH Scrambling Code Number	M		9.2.2.4B	For UL PCPCH	–	
>>>>DL Scrambling Code	M		9.2.2.13	For DL CPCH message part	–	
>>>>FDD DL Channelisation Code Number	M		9.2.2.14	For DL CPCH message	–	

				part		
>>>>PCP Length	M		9.2.2.24A		–	
>>>>UCSM Information	C-NCA	1			–	
>>>>>Min UL Channelisation Code Length	M		9.2.2.22		–	
>>>>>NF_max	M		9.2.2.23B		–	
>>>>>Channel Request Parameters		0..<maxAPSig Num>			–	
>>>>>>AP Preamble Signature	M		9.2.2.1A		–	
>>>>>>AP Sub Channel Number	O		9.2.2.1B		–	
>>>>VCAM Mapping Information	C-CA	1..<maxnoofLen>		Refer to TS [18]	–	
>>>>>Min UL Channelisation Code Length	M		9.2.2.22		–	
>>>>>NF_max	M		9.2.2.23B		–	
>>>>>Max Number of PCPCHes	M		9.2.2.20A		–	
>>>>>SF Request Parameters		1..<maxAPSig Num>			–	
>>>>>>AP Preamble Signature	M		9.2.2.1A		–	
>>>>>>AP Sub Channel Number	O		9.2.2.1B		–	
>>>>>AP-AICH Parameters		1			–	
>>>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>>>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>>>>>>AP-AICH Power	M		AICH Power 9.2.2.D		–	
>>>>>>CSICH Power	M		AICH Power 9.2.2.D	For CSICH bits at end of AP-AICH slot	–	
>>>>>>STTD Indicator	M		9.2.2.48		–	
>>>>>>CD/CA-ICH Parameters		1			–	
>>>>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>>>>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>>>>>>>CD/CA-ICH Power	M		AICH Power 9.2.2.D		–	
>>>>>>>STTD Indicator	M		9.2.2.48		–	

Condition	Explanation
<i>SlotFormat</i>	This IE is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17
<i>ChoiceCh</i>	One of the channels FACH or PCH or both must be present.
<i>CDSig</i>	The IE may be present if the Available CD Signatures is present.
<i>CA</i>	The IE must be present if the Channel Assignment Indication is set to 'CA Active'.
<i>NCA</i>	The IE must be present if the Channel Assignment Indication is set to 'CA Inactive'.
<i>PCH</i>	This IE is present only if the PCH parameters IE group is not present.

Range bound	Explanation
<i>MaxnoofFACHs</i>	Maximum number of FACHs that can be defined on a Secondary CCPCH.
<i>MaxnoofPCPCHs</i>	Maximum number of PCPCHs for a CPCH
<i>MaxnoofLen</i>	Maximum number of Min UL Channelisation Code Length
<i>MaxnoofSlotFormatsPRACH</i>	Maximum number of SF for a PRACH
<i>MaxAPSigNum</i>	Maximum number of AP Signatures.

9.1.3.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
CHOICE <i>common physical channels to be configured</i>	M				YES	ignore
>Secondary CCPCHs					–	
>>CCTrCH ID	M		9.2.3.3	For DL CCTrCH supporting one or several Secondary CCPCHs	–	
>>TFCS	M		9.2.1.58	For DL CCTrCH supporting one or several Secondary CCPCHs	–	
>>TFCI Coding	M		9.2.3.22		–	
>>Puncture Limit	M		9.2.1.50		–	
>>>Secondary CCPCH		1..<maxnoofS - CCPC Hs>			GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>TDD Channelisation Code	M		9.2.3.19		–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble shift and Burst Type	M		9.2.3.7		–	
>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>Repetition Period	M		9.2.3.16		–	
>>>Repetition Length	M		9.2.3.15		–	
>>>S-CCPCH Power	M		DL Power 9.2.1.21		–	
>>>FACH	C ChoiceCh	0..<maxnoofF ACHs>			GLOBAL	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>CCTrCH ID	M		9.2.3.3		–	
>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	
>>>PCH	C	0..1			YES	reject

	ChoiceCh					
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>CCTrCH ID	M		9.2.3.3		–	
>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	
>>> PICH Parameters		1			YES	reject
>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>TDD Channelisation Code	M		9.2.3.19		–	
>>>>Time Slot	M		9.2.3.23		–	
>>>>Midamble shift and Burst Type	M		9.2.3.7		–	
>>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>>Repetition period	M		9.2.3.16		–	
>>>>Repetition length	M		9.2.3.15		–	
>>>>Paging Indicator Length	M		9.2.3.8		–	
>>>>PICH Power	M		9.2.1.49A		–	
>PRACH					–	
>>PRACH	M	1			YES	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>TFCS	M		9.2.1.58		–	
>>>Time Slot	M		9.2.3.23		–	
>>>TDD Channelisation Code	M		9.2.3.19		–	
>>>Max PRACH Midamble Shifts	M		9.2.3.6		–	
>>>PRACH Midamble	M		9.2.3.14		–	
>>> RACH		1			YES	reject
>>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>>Transport Format Set	M		9.2.1.59	For the UL	–	

Condition	Explanation
<i>ChoiceCh</i>	One of the channels FACH or PCH or both must be present.

Range bound	Explanation
<i>MaxnoofS-CCPCHs</i>	Maximum number of Secondary CCPCHs per CCTrCH.
<i>MaxnoofCCTrCHs</i>	Maximum number of CCTrCHs that can be defined in a cell.
<i>MaxnoofFACHs</i>	Maximum number of FACHs that can be defined on a Secondary CCPCH.

9.1.4 COMMON TRANSPORT CHANNEL SETUP RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
FACH Parameters info		<i>0..<maxnoofFACHs></i>		The FACH Parameters may be combined with PCH Parameters	GLOBAL	ignore
>FACH Parameters	M		Common Transport Channel Information Response 9.2.1.14A		–	
PCH Parameters	O		Common Transport Channel Information Response 9.2.1.14A	The PCH Parameters may be combined with FACH Parameters	YES	ignore
RACH parameters	O		Common Transport Channel Information Response 9.2.1.14A	The RACH Parameters shall not be combined with FACH Parameters or PCH Parameters	YES	ignore
CPCH parameters	O		Common Transport Channel Information Response 9.2.1.14A	The CPCH Parameters shall not be combined with FACH Parameters or PCH Parameters or RACH Parameters	YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range bound	Explanation
<i>MaxnoofFACHs</i>	Maximum number of FACHs that can be defined on a Secondary CCPCH[FDD] / a group of Secondary CCPCHs [TDD].

9.1.5 COMMON TRANSPORT CHANNEL SETUP FAILURE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	–
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	–
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.6 COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST

9.1.6.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
CHOICE <i>common physical channel to be reconfigured</i>	M				YES	reject
>Secondary CCPCCH					–	
>>FACH parameters		0..<maxFACHCell>			GLOBAL	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>Max FACH Power	O		DL Power 9.2.1.21	Maximum allowed power on the FACH.	–	
>>>ToAWS	O		9.2.1.61		–	
>>>ToAWE	O		9.2.1.60		–	
>>PCH Parameters		0..1			YES	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>PCH Power	O		DL Power 9.2.1.21	Power to be used on the PCH.	–	
>>>ToAWS	O		9.2.1.61		–	
>>>ToAWE	O		9.2.1.60		–	
>>PICH Parameters		0..1			YES	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>PICH Power	O		9.2.1.49A		–	
>PRACH					–	
>>PRACH Parameters		0..<MaxPRACHCell>			GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>Preamble Signatures	O		9.2.2.31		–	
>>>Allowed Slot Format Information		0..<Maxno ofSlotFormatsPRACH>			–	
>>>>RACH Slot Format	M		9.2.2.37		–	
>>>>RACH Sub Channel Numbers	O		9.2.2.38		–	
>>AICH Parameters		0..<MaxPRACHCell>			GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	

>>>AICH Power	O		9.2.2.D		–	
>CPCH					–	
>>CPCH Parameters		0..<maxno ofCPCHs>			GLOBAL	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>UL SIR	O		9.2.2.58		–	
>>>Initial DL transmission Power	O		DL Power 9.2.1.21		–	
>>>Maximum DL Power	O		DL Power 9.2.1.21		–	
>>>Minimum DL Power	O		DL Power 9.2.1.21		–	
>>AP-AICH Parameters		0..<maxno ofCPCHs>			GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>AP-AICH Power	O		AICH Power 9.2.2.D		–	
>>>CSICH Power	O		AICH Power 9.2.2.D	For CSICH bits at end of AP-AICH slot	–	
>>CD/CA-ICH Parameters		0..<maxno ofCPCHs>			GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>CD/CA-ICH Power	O		AICH Power 9.2.2.D		–	

Range bound	Explanation
MaxFACHCell	Maximum number of FACHs that can be defined in a Cell
MaxnoofCPCHs	Maximum number of CPCHs that can be defined in a Cell
MaxPRACHCell	Maximum number of PRACHs and AICHs that can be defined in a Cell
MaxnoofSlotFormatsPRACH	Maximum number of SF for a PRACH

9.1.6.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
Secondary CCPCH parameters		0 .. 1			YES	reject

>CCTrCH ID	M		9.2.3.3	For DL CCTrCH supporting one or several Secondary CCPCHs	–	
>Secondary CCPCHs to be configured		0..<MaxnoofS CCPCHs>			GLOBAL	reject
>>Common Physical Channel ID	M		9.2.1.13		–	
>>S-CCPCH Power	O		DL power 9.2.1.21		–	
PICH Parameters		0 .. 1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>PICH Power	O		9.2.1.49A		–	
FACH parameters		0..<Maxno ofFACHs>			GLOBAL	reject
>Common Transport Channel ID	M		9.2.1.14		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	
PCH parameters		0 .. 1			YES	reject
>Common Transport Channel ID	M		9.2.1.14		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	

Range bound	Explanation
<i>MaxFACHCell</i>	Maximum number of FACHs that can be repeated in a Cell

9.1.7 COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.8 COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.9 COMMON TRANSPORT CHANNEL DELETION REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Common Physical Channel ID	M		9.2.1.13	Indicates the Common Physical Channel for which the Common Transport Channels (together with the Common Physical Channel) shall be deleted.	YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject

9.1.10 COMMON TRANSPORT CHANNEL DELETION RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.11 BLOCK RESOURCE REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Blocking Priority Indicator	M		9.2.1.5		YES	reject
Shutdown Timer	C- <i>BlockNormal</i>		9.2.1.56		YES	reject

Condition	Explanation
BlockNormal	The information element is present when the Blocking Priority Indicator IE indicates 'Normal Priority'.

9.1.12 BLOCK RESOURCE RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.13 BLOCK RESOURCE FAILURE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.14 UNBLOCK RESOURCE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	ignore

9.1.15 AUDIT REQUIRED INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	

9.1.16 AUDIT REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Start Of Audit Sequence Indicator	M		9.2.1.56B		YES	reject

9.1.17 AUDIT RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
End Of Audit Sequence Indicator	M		9.2.1.29A		YES	ignore
Cell Information		0.. <maxCellin NodeB >			EACH	ignore
>C-ID	M		9.2.1.9		–	
>Configuration Generation ID	M		9.2.1.16		–	
>Resource Operational State	M		9.2.1.52		–	
>Availability Status	M		9.2.1.2		–	
>Local Cell ID	M		9.2.1.38	The local cell that the cell is configured on	–	
>Primary SCH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>Secondary SCH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>Primary CPICH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>Secondary CPICH Information		0..<maxSC PICHCell>			EACH	ignore
>>Secondary CPICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>Primary CCPCH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>BCH Information	O		Common Transport Channel Status Information 9.2.1.13A		YES	ignore

>Secondary CCPCH Information		<i>0..<maxSC CPCHCell ></i>			EACH	ignore
>>Secondary CCPCH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>PCH Information	O		Common Transport Channel Status Information 9.2.1.14B		YES	ignore
>PICH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>FACH Information		<i>0..<maxFA CHCell></i>			EACH	ignore
>>FACH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		–	
>PRACH Information		<i>0..<maxPR ACHCell></i>			EACH	ignore
>>PRACH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>RACH Information		<i>0..<maxRA CHCell></i>			EACH	ignore
>>RACH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		–	
>AICH Information		<i>0..<maxRA CHCell></i>			EACH	ignore
>>AICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>PCPCH Information		<i>0..<maxPC PCHCell></i>			EACH	ignore
>>PCPCH Individual Information	M		Common Physical Channel Status Information		–	

			9.2.1.13A			
>CPCH Information		<i>0..<maxCP CHCell></i>			EACH	ignore
>>CPCH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		–	
>AP-AICH Information		<i>0..<maxCP CHCell></i>			EACH	ignore
>>AP-AICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>CD/CA-ICH Information		<i>0..<maxCP CHCell></i>			EACH	ignore
>>CD/CA-ICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>SCH Information	O		Common Physical Channel Status Information 9.2.1.13A	TDD Sync Channel	YES	ignore
Communication Control Port Information		<i>0.. <maxCCPi nNodeB></i>			EACH	ignore
>Communication Control Port ID	M		9.2.1.15		–	
>Resource Operational State	M		9.2.1.52		–	
>Availability Status	M		9.2.1.2		–	
Local Cell Information		<i>0.. <maxLocal CellinNode B></i>			EACH	ignore
>Local Cell ID	M		9.2.1.38		–	
>DL or Global Capacity Credit	M		9.2.1.20B		–	
>UL Capacity Credit	O		9.2.1.65A		–	
>Common Channels Capacity Consumption Law	M		9.2.1.9A		–	
>Dedicated Channels Capacity Consumption Law	M		9.2.1.20A		–	
>Maximum DL Power Capability	O		9.2.1.39		–	
>Minimum Spreading Factor	O		9.2.1.47		–	
>Minimum DL Power Capability	O		9.2.1.46A		–	

>Local Cell Group ID	O		9.2.1.37A		–	
Local Cell Group Information		0.. <maxLocal CellinNode B>			EACH	ignore
>Local Cell Group ID	M		9.2.1.37A		–	
>DL or Global Capacity Credit	M		9.2.1.20B		–	
>UL Capacity Credit	O		9.2.1.65A		–	
>Common Channels Capacity Consumption Law	M		9.2.1.9A		–	
>Dedicated Channels Capacity Consumption Law	M		9.2.1.20A		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range bound	Explanation
MaxCellinNodeB	Maximum number of Cell that can be configured in Node B
MaxCCPinNodeB	Maximum number of communication control ports that can exist in the Node B
MaxCPCHCell	Maximum number of CPCHes that can be defined in a Cell
MaxLocalCellinNodeB	Maximum number of Local Cells that can exist in the Node B
MaxPCPCHCell	Maximum number of PCPCHes that can be defined in a Cell
MaxSCPICHCell	Maximum number of Secondary CPICH that can be defined in a Cell.
MaxSCCPCHCell	Maximum number of Secondary CCPCH that can be defined in a Cell.
MaxFACHCell	Maximum number of FACHes that can be defined in a Cell

9.1.17A AUDIT FAILURE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality diagnostics	O		9.2.1.17		YES	ignore

9.1.18 COMMON MEASUREMENT INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	reject
Common Measurement Object Type	M		9.2.1.10		YES	reject
CHOICE Common Measurement Object Type	M				YES	reject
>Cell					–	
>>C-ID	M		9.2.1.9		–	
>>Time Slot	O		9.2.3.23	TDD only	–	
>RACH				FDD only	–	
>>C-ID	M		9.2.1.9		–	
>>Common Transport Channel ID	M		9.2.1.14		–	
>CPCH				FDD only	–	
>>C-ID	M		9.2.1.9		–	
>>Common Transport Channel ID	M		9.2.1.14		–	
>>Spreading Factor	O		Minimum UL Channelisation Code Length 9.2.2.22		–	
Common Measurement Type	M		9.2.1.11		YES	reject
Measurement Filter Coefficient	O		9.2.1.41		YES	reject
Report Characteristics	M		9.2.1.51		YES	reject
SFN reporting indicator	M		FN reporting indicator 9.2.1.29B		YES	reject
SFN	O		9.2.1.53A		YES	reject

9.1.19 COMMON MEASUREMENT INITIATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
CHOICE Common Measurement Object Type	O			Common Measurement Object Type that the measurement was initiated with.	YES	ignore
>Cell					YES	
>>Common Measurement value	M		9.2.1.12		–	
>RACH				FDD only	–	
>>Common Measurement Value	M		9.2.1.12		–	
>CPCH				FDD only	–	
>>Common Measurement Value	M		9.2.1.12		–	
SFN	O		9.2.1.53A	Common Measurement Time Reference	YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.20 COMMON MEASUREMENT INITIATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	Ignore
Cause	M		9.2.1.6		YES	Ignore
Criticality Diagnostics	O		9.2.1.17		YES	Ignore

9.1.21 COMMON MEASUREMENT REPORT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
CHOICE Common Measurement Object Type	M			Common Measurement Object Type that the measurement was initiated with.	YES	ignore
>Cell					–	
>>Common Measurement Value Information	M		9.2.1.12A		–	
>RACH				FDD only	–	
>>Common Measurement Value Information	M		9.2.1.12A		–	
>CPCH				FDD only	–	
>>Common Measurement Value Information	M		9.2.1.12A			
SFN	O		9.2.1.53A	Common Measurement Time Reference	YES	ignore

9.1.22 COMMON MEASUREMENT TERMINATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore

9.1.23 COMMON MEASUREMENT FAILURE INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
Cause	M		9.2.1.6		YES	ignore

9.1.24 CELL SETUP REQUEST

9.1.24.1 FDD Message

IE/Group Name	Presence	Range	IE type and Reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Local Cell ID	M		9.2.1.38		YES	reject
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
T Cell	M		9.2.2.49		YES	reject
UARFCN	M		9.2.1.65	Corresponds to Nu [14]	YES	reject
UARFCN	M		9.2.1.65	Corresponds to Nd [14]	YES	reject

Maximum transmission power	M		9.2.1.40		YES	reject
Closed Loop Timing Adjustment Mode	O				YES	reject
Primary scrambling code	M		9.2.2.34		YES	reject
Synchronisation Configuration		1			YES	reject
>N_INSYNC_IND	M		9.2.1.47A		–	
>N_OUTSYNC_IND	M		9.2.1.47B		–	
>T_RLFAILURE	M		9.2.1.56A		–	
DL TPC pattern 01 count	M		9.2.2.13A		YES	reject
Primary SCH Information		1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Primary SCH Power	M		DL Power 9.2.1.21		–	
>TSTD Indicator	M		9.2.1.64		–	
Secondary SCH Information		1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Secondary SCH power	M		DL Power 9.2.1.21		–	
>TSTD Indicator	M		9.2.1.64		–	
Primary CPICH Information		1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Primary CPICH power	M		9.2.2.33		–	
>Transmit Diversity Indicator	M		9.2.2.53		–	
Secondary CPICH Information		0..<maxSC PICHCell>			EACH	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>DL Scrambling code	M		9.2.2.13		–	
>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>Secondary CPICH Power	M		DL Power 9.2.1.21		–	
>Transmit Diversity Indicator	M		9.2.2.53		–	
Primary CCPCH Information		1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>BCH Information		1			–	
>>Common Transport Channel ID	M		9.2.1.14		–	
>>BCH Power	M		DL Power 9.2.1.21		–	
>STTD Indicator	M		9.2.2.48		–	
Limited power increase information		1			YES	reject
>Power_Raise_Limit	M		9.2.2.29A		–	
>DL_power_averaging_window_size	M		9.2.2.12A		–	

Range bound	Explanation
MaxSCPICHCell	Maximum number of Secondary CPICH that can be defined in a Cell.

9.1.24.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Local Cell ID	M		9.2.1.38		YES	reject
C-ID	M		9.2.1.9		YES	reject
Configuration Generation Id	M		9.2.1.16		YES	reject
UARFCN	M		9.2.1.65	Corresponds to Nt [15]	YES	reject
Cell Parameter ID	M		9.2.3.4		YES	reject
Maximum Transmission Power	M		9.2.1.40		YES	reject
Transmission Diversity Applied	M		9.2.3.26	On DCHs	YES	reject
Sync Case	M		9.2.3.18		YES	reject
Synchronisation Configuration		1			YES	reject
>N_INSYNC_IND	M		9.2.1.47A		–	
>N_OUTSYNC_IND	M		9.2.1.47B		–	
>T_RLFAILURE	M		9.2.1.56A		–	
DPCH Constant Value	M		Constant Value		YES	reject
PUSCH Constant Value	M		Constant Value		YES	reject
PRACH Constant Value	M		Constant Value		YES	reject
Timing Advance Applied	M		9.2.3.22A		YES	reject
SCH Information		1			YES	reject
>Common physical channel ID	M		9.2.1.13		–	
>CHOICE Sync Case	M				YES	reject
>>Case 1					–	
>>>Time Slot	M		9.2.3.23		–	
>>Case 2					–	
>>>SCH Time Slot	M		9.2.3.17		–	
>SCH Power	M		DL Power 9.2.1.21		–	
>TSTD Indicator	M		9.2.1.64		–	
PCCPCH Information		1			YES	reject
>Common physical channel ID	M		9.2.1.13		–	
>TDD Physical Channel Offset	M		9.2.3.20		–	
>Repetition Period	M		9.2.3.16		–	
>Repetition Length	M		9.2.3.15		–	
>PCCPCH Power	M		9.2.3.9		–	
>Block STTD Indicator	M		9.2.3.1		–	
Time Slot Configuration		1 .. 15			GLOBAL	reject
>Time Slot	M		9.2.3.23		–	
>Time Slot Status	M		9.2.3.25		–	
>Time Slot Direction	M		9.2.3.24		–	

9.1.25 CELL SETUP RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.26 CELL SETUP FAILURE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.27 CELL RECONFIGURATION REQUEST

9.1.27.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
Maximum Transmission Power	O		9.2.1.40		YES	reject
Synchronisation Configuration		0,1			YES	reject
>N_INSYNC_IND	M		9.2.1.47A		–	
>N_OUTSYNC_IND	M		9.2.1.47B		–	
>T_RLFAILURE	M		9.2.1.56A		–	
Primary SCH Information		0,1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Primary SCH power	M		DL Power 9.2.1.21		–	
Secondary SCH Information		0,1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Secondary SCH power	M		DL Power 9.2.1.21		–	
Primary CPICH Information		0,1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Primary CPICH power	M		9.2.2.33		–	
Secondary CPICH Information		0..<maxSCPICHCell>			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Secondary CPICH Power	M		DL Power 9.2.1.21		–	
Primary CCPCH Information		0,1			YES	reject
> BCH Information		1			–	
>>Common Transport Channel ID	M		9.2.1.14		–	
>>BCH Power	M		DL Power 9.2.1.21		–	

Range bound	Explanation
MaxSCPICHCell	Maximum number of Secondary CPICH that can be defined in a Cell.

9.1.27.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
Synchronisation Configuration		0,1			YES	reject
>N_INSYNC_IND	M		9.2.1.47A		–	
>N_OUTSYNC_IND	M		9.2.1.47B		–	
>T_RLFAILURE	M		9.2.1.56A		–	
Timing Advance Applied	O		9.2.3.22A		YES	reject
SCH Information		0,1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>SCH Power	M		DL Power 9.2.1.21		–	
PCCPCH Information		0,1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>PCCPCH Power	M		9.2.3.9		–	
Maximum Transmission Power	O		9.2.1.40		YES	reject
DPCH Constant Value	O		Constant Value		YES	reject
PUSCH Constant Value	O		Constant Value		YES	reject
PRACH Constant Value	O		Constant Value		YES	reject
Time Slot Configuration		1..15			GLOBAL	reject
>Time Slot	M		9.2.3.23		–	
>Time Slot Status	M		9.2.3.25		–	
>Time Slot Direction	M		9.2.3.24		–	

9.1.28 CELL RECONFIGURATION RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.29 CELL RECONFIGURATION FAILURE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.30 CELL DELETION REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject

9.1.31 CELL DELETION RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.32 RESOURCE STATUS INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Indication Type	M		9.2.1.36		YES	ignore
CHOICE <i>Indication Type</i>	M				YES	ignore
> <i>No Failure</i>					–	
>>Local Cell Information		1.. <max LocalCellin NodeB >			EACH	ignore
>>>Local Cell ID	M		9.2.1.38		–	
>>>Add/Delete Indicator	M		9.2.1.1		–	
>>>DL or Global Capacity Credit	C-add		9.2.1.20B		–	
>>>UL Capacity Credit	O		9.2.1.65A		–	
>>>Common Channels Capacity Consumption Law	C-add		9.2.1.9A		–	
>>>Dedicated Channels Capacity Consumption Law	C-add		9.2.1.20A		–	
>>>Maximum DL Power Capability	C-add		9.2.1.39		–	
>>>Minimum Spreading Factor	C-add		9.2.1.47		–	
>>>Minimum DL Power Capability	C-add		9.2.1.46A		–	
>>>Local Cell Group ID	O		9.2.1.37A		–	
>>Local Cell Group Information		0.. <maxLocal CellinNode B>			EACH	ignore
>>>Local Cell Group ID	M		9.2.1.37A		–	
>>>DL or Global Capacity Credit	M		9.2.1.20B		–	
>>>UL Capacity Credit	O		9.2.1.65A		–	
>>>Common Channels Capacity Consumption Law	M		9.2.1.9A		–	
>>>Dedicated Channels Capacity Consumption Law	M		9.2.1.20A		–	
> <i>Service Impacting</i>					–	
>>Local Cell Information		0.. <maxLocal CellinNode B>			EACH	ignore
>>>Local Cell ID	M		9.2.1.38		–	
>>>DL or Global Capacity Credit	O		9.2.1.20B		–	
>>>UL Capacity Credit	O		9.2.1.65A		–	
>>>Common Channels Capacity Consumption	O		9.2.2.3		–	

Law						
>>>Dedicated Channels Capacity Consumption Law	O		9.2.2.6		–	
>>>Maximum DL Power Capability	O		9.2.1.39		–	
>>>Minimum Spreading Factor	O		9.2.1.47		–	
>>>Minimum DL Power Capability	O		9.2.1.46A		–	
>>Local Cell Group Information		<i>0.. <maxLocalCellinNodeB></i>			EACH	ignore
>>>Local Cell Group ID	M		9.2.1.37A		–	
>>>DL or Global Capacity Credit	O		9.2.2.12		–	
>>>UL Capacity Credit	O		9.2.2.60		–	
>>>Common Channels Capacity Consumption Law	O		9.2.2.3		–	
>>>Dedicated Channels Capacity Consumption Law	O		9.2.2.6		–	
>>Communication Control Port Information		<i>0.. <maxCCPinNodeB></i>			EACH	ignore
>>>Communication Control Port ID	M		9.2.1.15		–	
>>>Resource Operational State	M		9.2.1.52		–	
>>>Availability Status	M		9.2.1.2		–	
>>Cell Information		<i>0.. <maxCellinNodeB></i>			EACH	ignore
>>>C-ID	M		9.2.1.9		–	
>>>Resource Operational State	O		9.2.1.52		–	
>>>Availability Status	O		9.2.1.2		–	
>>>Primary SCH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>>>Secondary SCH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>>>Primary CPICH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>>>Secondary CPICH Information		<i>0..<maxSCPICHCell></i>			EACH	ignore
>>>>Secondary	M		Common		–	

CPICH Individual Information			Physical Channel Status Information 9.2.1.13A			
>>>Primary CCPCH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>>>BCH Information	O		Common Transport Channel Status Information 9.2.1.14B		YES	ignore
>>>Secondary CCPCH Information		<i>0..<maxSC CPCHCell ></i>			EACH	ignore
>>>>Secondary CCPCH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		-	
>>>PCH Information	O		Common Transport Channel Status Information 9.2.1.14B		YES	ignore
>>>PICH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>>>FACH Information		<i>0..<maxFACHCell></i>			EACH	ignore
>>>>FACH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		-	
>>>PRACH Information		<i>0..<maxPRACHCell></i>			EACH	ignore
>>>>PRACH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		-	
>>>RACH Information		<i>0..<maxPRACHCell></i>			EACH	ignore
>>>>RACH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		-	
>>>AICH Information		<i>0..<maxPRACHCell></i>			EACH	ignore

>>>>AICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		-	
>>>PCPCH Information		0..<maxPC PCHCell>			EACH	ignore
>>>>PCPCH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		-	
>>>CPCH Information		0..<maxCPC HCell>			EACH	ignore
>>>>CPCH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		-	
>>>AP-AICH Information		0..<maxCPC HCell>			EACH	ignore
>>>>AP-AICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		-	
>>>CD/CA-ICH Information		0..<maxCPC HCell>			EACH	ignore
>>>>CD/CA-ICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		-	
>>>SCH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
Cause	O		9.2.1.6		YES	ignore

Condition	Explanation
C-add	This IE is present only if "Add/Delete Indicator" equals to add

Range bound	Explanation
<i>MaxLocalCellinNodeB</i>	Maximum number of Local Cells that can exist in the Node B
<i>MaxCellinNodeB</i>	Maximum number of C ID that can be configured in Node B
<i>MaxCPCHCell</i>	Maximum number of CPCHes that can be defined in a Cell
<i>MaxSCPICHCell</i>	Maximum number of Secondary CPICH that can be defined in a Cell.
<i>MaxSCCPCHCell</i>	Maximum number of Secondary CCPCH that can be defined in a Cell.
<i>MaxFACHCell</i>	Maximum number of FACHes that can be defined in a Cell
<i>MaxPCPCHCell</i>	Maximum number of PCPCHes that can be defined in a Cell
MaxPRACHCell	Maximum number of PRACHes and AICHes that can be defined in a Cell
<i>MaxCCPinNodeB</i>	Maximum number of communication control ports that can exist in the Node B

9.1.33 SYSTEM INFORMATION UPDATE REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
BCCH Modification Time	O		9.2.1.3		YES	reject
MIB/SB/SIBInformation		1.. <i>maxIB</i>			GLOBAL	reject
>IB Type	M		9.2.1.35		–	
>IB OC ID	M		9.2.1.31A	In one message, every occurrence of IB Type can only be deleted once and/or added once.	–	
>CHOICE <i>IB DeletionIndicator</i>	M				–	
>> <i>NoDeletion</i>					–	
>>>SIB Originator	C-SIB		9.2.1.55		–	
>>>IB SG REP	O		9.2.1.34		–	
>>>Segment Information		1.. <i>maxIBSEGE</i>			GLOBAL	reject
>>>>IB SG POS	O		9.2.1.33		–	
>>>>Segment type	C – CRNCOri nation		9.2.1.53B		–	
>>>>IB SG DATA	C – CRNCOri nation		9.2.1.32		–	
>> <i>Deletion</i>			NULL		–	

Range bound	Explanation
1..maxIB	Maximum number of information Blocks supported in one message.
1..maxIBSEG	Maximum number of segments for one Information Block

Condition	Explanation
CRNCOriination	The IE shall be present if <i>the SIB Originator</i> IE is set to 'CRNC' or if the IB Type equals "MIB", "SB1" or "SB2".
SIB	This IE shall be present if the IB Type is equal to "SIB"

9.1.34 SYSTEM INFORMATION UPDATE RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.35 SYSTEM INFORMATION UPDATE FAILURE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.36 RADIO LINK SETUP REQUEST

9.1.36.1 FDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL DPCH Information		1			YES	reject
>UL Scrambling Code	M		9.2.2.59		–	
>Min UL Channelisation Code length	M		9.2.2.22		–	
>Max Number of UL DPCHs	C – CodeLen		9.2.2.21		–	
>puncture Limit	M		9.2.1.50	For UL	–	
>TFCS	M		9.2.1.58	for UL	–	
>UL DPCH Slot Format	M		9.2.2.57		–	
> UL SIR Target	M		UL SIR 9.2.2.58		–	
>Diversity mode	M		9.2.2.9		–	
>SSDT cell ID Length	O		9.2.2.45		–	
>S Field Length	C-FBI		9.2.2.40		–	
DL DPCH Information		1			YES	reject
>TFCS	M		9.2.1.58	For DL	–	
>DL DPCH Slot Format	M		9.2.2.10		–	
>TFCI signalling mode	M		9.2.2.50		–	
>TFCI presence	C- SlotFormat		9.2.1.57		–	
>Multiplexing Position	M		9.2.2.23		–	
>PDSCH RL ID	C-DSCH		RL ID 9.2.1.53		–	
>PDSCH code mapping	C-DSCH		9.2.2.25		–	
>Power Offset Information		1			–	
>>PO1	M		Power Offset 9.2.2.29	Power offset for the TFCI bits	–	
>>PO2	M		Power Offset 9.2.2.29	Power offset for the TPC bits	–	
>>PO3	M		Power Offset 9.2.2.29	Power offset for the pilot bits	–	
>FDD TPC DL Step Size	M		9.2.2.16		–	
>Limited Power Increase	M		9.2.2.18A		–	
>Inner Loop DL PC Status	M		9.2.2.18B		–	
DCH Information	M		DCH FDD Information 9.2.2.4D		YES	reject
DSCH Information	O		DSCH FDD Information 9.2.2.13B		YES	reject
TFCI2 bearer information		0..1			-	

>ToAWS	M		9.2.1.61		-	
>ToAWE	M		9.2.1.60		-	
RL Information		1 to <maxnoof RLs>			EACH	notify
>RL ID	M		9.2.1.53		-	
>C-ID	M		9.2.1.9		-	
>First RLS Indicator	M		9.2.2.16A		-	
>Frame Offset	M		9.2.1.31		-	
>Chip Offset	M		9.2.2.2		-	
>Propagation Delay	O		9.2.2.35		-	
>Diversity Control Field	C – NotFirstRL		9.2.1.25		-	
>DL Code Information	M		FDD DL Code Information 9.2.2.14A		-	
>Initial DL transmission Power	M		DL Power 9.2.1.21		-	
>Maximum DL power	M		DL Power 9.2.1.21		-	
>Minimum DL power	M		DL Power 9.2.1.21		-	
>SSDT Cell Identity	O		9.2.2.44		-	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2.53		-	
Transmission Gap Pattern Sequence Information	O		9.2.2.53A		YES	reject
Active Pattern Sequence Information	O		9.2.2.A		YES	reject

Condition	Explanation
CodeLen	This IE is present only if "Min UL Channelisation Code length" equals to 4
FBI	This IE shall be present if the <i>UL DPCCH Slot Format</i> IE indicates a slot format with 1 or 2 FBI bits (see ref.[7])
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information.
DSCH	This IE is present only if the <i>DSCH Information</i> IE is present
SlotFormat	This IE is only present if the DL DPCH slot format is equal to any of the value 12 to 16.
Diversity mode	This IE is present unless <i>Diversity Mode</i> IE in <i>UL DPCH Information</i> IE is "none"

Range bound	Explanation
MaxnoofRLs	Maximum number of RLs for one UE.

9.1.36.2 TDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL CTrCH Information		0 to <maxno CTrCH>			EACH	notify
>CTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>UL DPCH Information		0..1			YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
DL CTrCH Information		0 to <maxno CTrCH>			EACH	notify
>CTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>TDD TPC DL Step Size	M		9.2.3.21		–	
>TPC CTrCH List		0 to <maxnoC CTrCH>		List of uplink CTrCH which provide TPC	–	
>>TPC CTrCH ID	M		CTrCH ID 9.2.3.3		–	
>DL DPCH information		0..1			YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
DCH Information	O		DCH TDD Information 9.2.3.4C		YES	reject
DSCH Information	O		DSCH TDD Information 9.2.3.5A		YES	reject
USCH Information	O		9.2.3.28		YES	reject
RL Information		1			YES	reject
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Initial DL transmission Power	M		DL Power 9.2.1.21		–	

>Maximum DL power	M		DL Power 9.2.1.21		–	
>Minimum DL power	M		DL Power 9.2.1.21		–	
>DL Timeslot ISCP Information		<i>0..<maxno ofDLts></i>			–	
>>Time slot	M		9.2.3.23		–	
>>DL Timeslot ISCP	M		9.2.3.4B		–	

Range bound	Explanation
MaxnoCCTrCH	Number of CCTrCH for one UE.
<i>MaxnoofDLts</i>	Maximum number of Downlink time slots per Radio Link

9.1.37 RADIO LINK SETUP RESPONSE

9.1.37.1 FDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Communication Control Port ID	M		9.2.1.15		YES	ignore
RL Information Response		1 to <maxnoofRLs>			EACH	ignore
>RL ID	M		9.2.1.53		–	
>RL Set ID	M		9.2.2.39			
>Received total wide band power	M		9.2.2.39A		–	
>Diversity Indication	C-NotFirstRL		9.2.1.26		–	
>CHOICE <i>diversity Indication</i>	M				–	
>>Combining					–	
>>>RL ID	M		9.2.1.53	Reference RL ID for the combining	–	
>>Non Combining or First RL					–	
>>>DCH Information Response	M		9.2.1.20C		-	
>DSCH Information Response	O		9.2.1.27A		YES	ignore
>SSDT Support Indicator	M		9.2.2.46		–	
TFCI2 Bearer Information Response	O		9.2.2.49A		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Condition	Explanation
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information.

Range bound	Explanation
MaxnoofRLs	Maximum number of RLs for one UE.

9.1.37.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Communication Control Port ID	M		9.2.1.15		YES	ignore
RL Information Response		1			YES	ignore
>RL ID	M		9.2.1.53		–	
>UL Time Slot ISCP Info	M		9.2.3.26D		–	
>UL PhysCH SF Variation	M		9.2.3.26B		–	
>DCH Information Response	O		9.2.1.20C		YES	ignore
>DSCH Information Response	O		9.2.1.27A		YES	ignore
>USCH Information Response	O		9.2.3.28		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.38 RADIO LINK SETUP FAILURE

9.1.38.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	C-Success		9.2.1.48	The reserved value "All NBCC" shall not be used	YES	ignore
Communication Control Port ID	O		9.2.1.15		YES	ignore
CHOICE <i>cause level</i>	M				YES	ignore
> <i>General</i>					–	
>>Cause	M		9.2.1.6		–	
> <i>RL specific</i>					–	
>>Unsuccessful RL Information Response		1 to <maxnoo fRLs>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
>>Successful RL Information Response		0 to <maxnoo fRLs–1>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>RL Set ID	M		9.2.2.39			
>>>Received total wide band power	M		9.2.2.39A		–	
>>>Diversity Indication	C-NotFirstRL		9.2.1.26		–	
>>>CHOICE <i>diversity Indication</i>	M				–	
>>>>Combining					–	
>>>>RL ID	M		9.2.1.53	Reference RL ID for the combining	–	
>>>>Non Combining or First RL					–	
>>>>DCH Information Response	M		9.2.1.20C		–	
>>>DSCH Information Response	O		9.2.1.27A		YES	ignore
>>>TFCI2 Bearer Information Response	O		9.2.2.49A		–	
>>>SSDT Support Indicator	M		9.2.2.46		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Condition	Explanation
Success	This IE is present if at least one of the radio links has been successfully set up.
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information.

Range bound	Explanation
MaxnoofRLs	Maximum number of RLs for one UE.

9.1.38.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value “All CRNCC C” shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
CHOICE <i>cause level</i>	M				YES	ignore
> <i>General</i>					–	
>>Cause	M		9.2.1.6		–	
> <i>RL specific</i>					–	
>>Unsuccessful RL Information Response		1			YES	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.39 RADIO LINK ADDITION REQUEST

9.1.39.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
Compressed Mode Deactivation Flag	O		9.2.2.3A		YES	reject
RL Information		1..<maxnoofRL-1>			EACH	notify
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Chip Offset	M		9.2.2.2		–	
>Diversity Control Field	M		9.2.1.25		–	
>DL Code Information	M		FDD DL Code Information 9.2.2.14A		–	
>Initial DL transmission power	O		DL Power 9.2.1.21		–	
>Maximum DL power	O		DL Power 9.2.1.21		–	
>Minimum DL power	O		DL Power 9.2.1.21		–	
>SSDT Cell Identity	O		9.2.2.44		–	
>Transmit Diversity Indicator	O		9.2.2.53		–	

Range bound	Explanation
<i>MaxnoofRL</i>	Maximum number of RLs for one UE
<i>MaxnoofDL Codes</i>	Maximum number of DL code information

9.1.39.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL CTrCH Information		0 to <maxno of CTrCH>			GLOBAL	reject
>CTrCH ID	M		9.2.3.3		–	
>UL DPCH Information		0..1			YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
DL CTrCH Information		0 to <maxno of CTrCH>			GLOBAL	reject
>CTrCH ID	M		9.2.3.3		–	
>DL DPCH information		0..1			YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
RL Information		1			YES	reject
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Diversity Control Field	M		9.2.1.25		–	
>Initial DL transmission Power	O		DL Power 9.2.1.21		–	
>Maximum DL power	O		DL Power 9.2.1.21		–	
>Minimum DL power	O		DL Power 9.2.1.21		–	
>DL Timeslot ISCP Information		0..<maxno of DLts>			–	
>>Time slot	M		9.2.3.23		–	
>>DL Timeslot ISCP	M		9.2.3.4B		–	

Range bound	Explanation
MaxnoCTrCH	Number of CTrCH for one UE.
MaxnoofDLts	Maximum number of Downlink time slots per Radio Link

9.1.40 RADIO LINK ADDITION RESPONSE

9.1.40.1 FDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
RL Information Response		1..<maxno ofRL-1>			EACH	ignore
>RL ID	M		9.2.1.53		–	
>RL Set ID	M		9.2.2.9		–	
> Received total wide band power	M		9.2.2.39A		–	
>Diversity Indication	M		9.2.1.26		–	
>CHOICE <i>diversity indication</i>	M				–	
>> <i>Combining</i>					–	
>>>RL ID	M		9.2.1.53	Reference RL	–	
>> <i>Non combining</i>					–	
>>>DCH Information Response	M		9.2.1.20C		–	
>SSDT support indicator	M		9.2.2.46		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range bound	Explanation
<i>MaxnoofRL</i>	Maximum number of RLs for one UE

9.1.40.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
RL Information response		1			YES	ignore
>RL ID	M		9.2.1.53		–	
> UL Time Slot ISCP Info	M		9.2.3.26D		–	
>UL PhysCH SF Variation	M		9.2.3.26B		–	
>DCH Information		0..1			–	
>>Diversity Indication	M		9.2.1.26		–	
>>CHOICE <i>diversity indication</i>	M				–	
>>> <i>Combining</i>				In TDD it indicates whether the old Transport Bearer shall be reused or not	–	
>>>>RL ID	M		9.2.1.53	Reference RL	–	
>>>> <i>Non combining</i>					–	
>>>>DCH Information Response	M		9.2.1.20C		–	
>DSCH Information Response	O		9.2.1.27A		YES	ignore
>USCH Information Response	O		9.2.3.29		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.41 RADIO LINK ADDITION FAILURE

9.1.41.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
CHOICE <i>cause level</i>	M				YES	ignore
> <i>General</i>					–	
>> <i>Cause</i>	M		9.2.1.6		–	
> <i>RL specific</i>					–	
>> Unsuccessful RL Information Response		1..<maxnoofRL-1>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
>> Successful RL Information Response		1..<maxnoofRL-2>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>RL Set ID	M		9.2.2.39			
>>> Received total wide band power	M		9.2.2.39A		–	
>>>Diversity Indication	M		9.2.1.26		–	
>>>CHOICE <i>diversity indication</i>	M				–	
>>>> <i>Combining</i>					–	
>>>>>RL ID	M		9.2.1.53	Reference RL	–	
>>>>> <i>Non combining</i>					–	
>>>>>DCH Information Response	M		9.2.1.20C		–	
>>>SSDT support indicator	M		9.2.2.46		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range bound	Explanation
<i>MaxnoofRL</i>	Maximum number of RLs for one UE

9.1.41.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
CHOICE <i>cause level</i>	M				YES	Ignore
> <i>General</i>					–	
>> <i>Cause</i>	M		9.2.1.6		–	
> <i>RL specific</i>					–	
>> Unsuccessful RL Information Response		1			YES	ignore
>>>RL ID	M		9.2.1.53		–	
>>> <i>Cause</i>	M		9.2.1.6		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.42 RADIO LINK RECONFIGURATION PREPARE

9.1.42.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL DPCH Information		0..1			YES	reject
>UL Scrambling code	O		9.2.2.59		–	
>UL SIR Target	O		UL SIR 9.2.2.58		–	
>Min UL Channelisation Code Length	O		9.2.2.22		–	
>Max Number of UL DPDCHs	C – CodeLen		9.2.2.20		–	
>Puncture Limit	O		9.2.1.50	For UL	–	
>TFCS	O		9.2.1.58		–	
>UL DPCCH Slot Format	O		9.2.2.57		–	
>Diversity mode	O		9.2.2.9		–	
>SSDT Cell Identity Length	O		9.2.2.45		–	
>S-Field Length	O		9.2.2.40		–	
DL DPCH Information		0..1			YES	reject
>TFCS	O		9.2.1.58		–	
>DL DPCH Slot Format	O		9.2.2.10		–	
>TFCI Signalling Mode	O		9.2.2.50		–	
>TFCI presence	C-Slot Format		9.2.1.57		–	
>Multiplexing Position	O		9.2.2.23		–	
>PDSCH code mapping	O		9.2.2.25		–	
>PDSCH RL ID	O		RL ID 9.2.1.53		–	
>Limited Power Increase	O		9.2.2.18A		–	
DCHs to Modify	O		DCHs FDD to Modify 9.2.2.4E		YES	reject
DCHs to Add	O		DCH FDD Information 9.2.2.4D		YES	reject
DCHs to Delete		0..<max noofDC Hs>			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
DSCH to modify		0..<max noofDS CHs>			YES	reject
>DSCH ID	M		9.2.1.27		–	
>Transport Format Set	O		9.2.1.59	For the DL.	–	
>Allocation/Retention Priority	O		9.2.1.1A		–	
>Frame Handling Priority	O		9.2.1.30		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	

>Transport Bearer Request Indicator	M		9.2.1.62A		–	
DSCH to add	O		DSCH FDD Information 9.2.2.13B		YES	reject
DSCH to Delete		<i>0..<max noofDS CHs></i>			YES	reject
>DSCH ID	M		9.2.1.27		–	
TFCI2 bearer specific information		0..1			YES	reject
>CHOICE <i>TFCI2 bearer action</i>	M				–	
>> <i>Add or modify</i>					–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	
>> <i>Delete</i>			NULL		–	
RL Information		<i>0..<max noofRLs ></i>			EACH	reject
>RL ID	M		9.2.1.53		–	
>DL Code Information	O		FDD DL Code Information 9.2.2.14A		–	
>Maximum DL Power	O		DL Power 9.2.1.21		–	
>Minimum DL Power	O		DL Power 9.2.1.21		–	
>SSDT Indication	O		9.2.2.47		–	
>SSDT Cell Identity	C – SSDTIndON		9.2.2.44		–	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2.53		–	
Transmission Gap Pattern Sequence Information	O		9.2.2.53A		YES	reject

Condition	Explanation
SSDTIndON	The IE may be present if the SSDT Indication is set to 'SSDT Active in the UE'.
CodeLen	This IE is present only if "Min UL Channelisation Code length" equals to 4.
SlotFormat	This IE is only present if the DL DPCH slot format is equal to any of the value 12 to 16.
SF/2	This IE is present only if the <i>Transmission Gap Pattern Sequence Information</i> IE is included and the indicated Downlink Compressed Mode method for at least one of the included Transmission Gap Pattern Sequence is set to "SF/2".
Diversity mode	This IE is present unless <i>Diversity Mode</i> IE in <i>UL DPCH Information</i> group, unless it is equal to "none"

Range Bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs for a UE.
<i>MaxnoofDSCHs</i>	Maximum number of DSCHs for a UE.
<i>MaxnoofRLs</i>	Maximum number of RLs for a UE.

9.1.42.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL CCTrCH to Add		0..<maxno of CCTrC Hs>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>UL DPCH Information		0..1			YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
UL CCTrCH to Modify		0..<maxno of CCTrC Hs>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>TFCI Coding	O		9.2.3.22		–	
>Puncture Limit	O		9.2.1.50		–	
>UL DPCH to add		0..1			YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
>UL DPCH to modify		0..1			YES	reject
>>Repetition Period	O		9.2.3.16		–	
>>Repetition Length	O		9.2.3.15		–	
>>TDD DPCH Offset	O		9.2.3.19A		–	
>>UL Timeslot Information		0 to <maxno of ULTs>			–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift and Burst Type	O		9.2.3.7		–	
>>>TFCI Presence	O		9.2.1.57		–	
>>>UL Code Information		0 to <maxno OfDPC H>			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code	O		9.2.3.19		–	
>UL DPCH to delete		0..			GLOBAL	reject

		<maxno of DPCHs >				
>>DPCH ID	M		9.2.3.5		–	
UL CCTrCH to Delete		0.. <maxno of CCTrC Hs>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
DL CCTrCH to Add		0.. <maxno of CCTrC Hs			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>PunctureLimit	M		9.2.1.50		–	
>TPC CCTrCH List		0 to <maxno CCTrC H>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>DL DPCH Information		0..1			YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
DL CCTrCH to Modify		0.. <maxno of CCTrC Hs			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3.		–	
>TFCS	O		9.2.1.58		–	
>TFCI Coding	O		9.2.3.22		–	
>PunctureLimit	O		9.2.1.50		–	
>TPC CCTrCH List		0 to <maxno CCTrC H>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>DL DPCH to add		0..1			YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
>DL DPCH to modify		0..1			YES	reject
>>Repetition Period	O		9.2.3.16		–	
>>Repetition Length	O		9.2.3.15		–	
>>TDD DPCH Offset	O		9.2.3.19A		–	
>>DL Timeslot Information		0.. <maxno ofDLts>			–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift and	O		9.2.3.7		–	

Burst Type						
>>>TFCI Presence	O		9.2.1.57		–	
>>>DL Code Information		0 .. <maxno OFDPC H>			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code	O		9.2.3.19		–	
>DL DPCH to delete		0.. <maxno of DPCHs >			GLOBAL	reject
>>DPCH ID	M		9.2.3.5		–	
DL CCTrCH to Delete		0.. <maxno of CCTrC Hs			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
DCHs to Modify	O		DCHs TDD to Modify 9.2.3.4D		YES	reject
DCHs to Add	O		DCH TDD Information 9.2.3.4C		YES	reject
DCHs to Delete		0..<max noofDC Hs>			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
DSCH Information to modify		0 .. <Maxno of DSCHs >			GLOBAL	reject
>DSCH ID	M		9.2.1.27		–	
>CCTrCH ID	O		9.2.3.3	DL CCTrCH in which the DSCH is mapped	–	
>Transport Format Set	O		9.2.1.59		–	
> Allocation/Retention Priority	O		9.2.1.1A		–	
>Frame Handling Priority	O		9.2.1.30		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
DSCH Information to add	O		DSCH TDD Information 9.2.3.5A		YES	reject
DSCH Information to delete		0 .. <Maxno of DSCHs >			GLOBAL	reject
>DSCH ID	M		9.2.1.27		–	
USCH Information to modify		0 .. <Maxno of USCHs >			GLOBAL	reject
>USCH ID	M		9.2.3.27		–	

>Transport Format Set	O		9.2.1.59		–	
> Allocation/Retention Priority	O		9.2.1.1A		–	
>CCTrCH ID	O		9.2.3.2	UL CCTrCH in which the USCH is mapped	–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
USCH Information to add	O		USCH Information 9.2.3.28		YES	reject
USCH Information to delete		0 .. <Maxno of USCHs >			GLOBAL	reject
>USCH ID	M		9.2.3.27		–	
RL Information		0..1			YES	reject
>RL ID	M		9.2.1.53		–	
>Maximum Downlink Power	O		DL Power 9.2.1.21		–	
>Minimum Downlink Power	O		DL Power 9.2.1.21		–	

Condition	Explanation
CoordCH	This IE is present only this DCH is part of a set of coordinated DCHs (number of instances of DCH Specific Info is greater than 1)

Range Bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs for a UE.
<i>MaxnoofCCTrCHs</i>	Maximum number of CCTrCHs for a UE.
<i>MaxnoofDPCHs</i>	Maximum number of DPCHs in one CCTrCH.
<i>MaxnoofDSCHs</i>	Maximum number of DSCHs for one UE
<i>MaxnoofUSCHs</i>	Maximum number of USCHs for one UE
<i>MaxnoofDLts</i>	Maximum number of Downlink time slots per Radio Link
<i>MaxnoofULts</i>	Maximum number of Uplink time slots per Radio Link

9.1.43 RADIO LINK RECONFIGURATION READY

IE/Group name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
RL Information Response		<i>0..<max noofRLs ></i>		Only one RL information response group for one group of combined RLs shall be present	EACH	ignore
>RL ID	M		9.2.1.53		–	
>DCH Information Response	O		9.2.1.20C		YES	ignore
>DSCH Information Response	O		9.2.1.27A		YES	ignore
>USCH Information Response	O		9.2.3.29	TDD only	YES	ignore
>TFCI2 Bearer Information Response	O		9.2.2.49A		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range Bound	Explanation
<i>MaxnoofRLs</i>	Maximum number of RLs for a UE.

9.1.44 RADIO LINK RECONFIGURATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
CHOICE <i>cause level</i>	M				YES	ignore
> <i>General</i>					–	
>>Cause	M		9.2.1.6		YES	ignore
> <i>RL specific</i>					–	
>> RLs Causing Reconfiguration Failure		<i>0..<max noofRLs ></i>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range Bound	Explanation
<i>MaxnoofRLs</i>	Maximum number of RLs for a UE.

9.1.45 RADIO LINK RECONFIGURATION COMMIT

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message type	M		9.2.1.46		YES	ignore
Node B Communication Context ID	M		9.2.1.48	The reserved value “All NBCC” shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
CFN	M		9.2.1.7		YES	ignore
Active Pattern Sequence Information	O		9.2.2.A		YES	ignore

9.1.46 RADIO LINK RECONFIGURATION CANCEL

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message type	M		9.2.1.46		YES	ignore
Node B Communication Context ID	M		9.2.1.48	The reserved value “All NBCC” shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	

9.1.47 RADIO LINK RECONFIGURATION REQUEST

9.1.47.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL DPCH Information		0..1			YES	reject
>TFCS	O		9.2.1.58	For the UL.	–	
DL DPCH Information		0..1			YES	reject
>TFCS	O		9.2.1.58	For the DL.	–	
>TFCI Signalling Mode	O		9.2.2.50		–	
>Limited Power Increase	O		9.2.2.18A		–	
DCHs to Modify	O		DCHs FDD to Modify 9.2.2.4E		YES	reject
DCHs to Add	O		DCH FDD Information 9.2.2.4D		YES	reject
DCHs to Delete		0..<maxnoofDCHs>			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
Radio Link Information		0..<maxnoofRLs>			EACH	reject
>RL ID	M		9.2.1.53		–	
>Maximum DL Power	O		DL Power 9.2.1.21		–	
>Minimum DL Power	O		DL Power 9.2.1.21		–	
>DL Code Information	C-SF/2		FDD DL Code Information 9.2.2.14A		–	
Transmission Gap Pattern Sequence Information	O		9.2.2.53A		YES	reject

Range Bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs for a UE.
<i>MaxnoofRLs</i>	Maximum number of RLs for a UE.

Condition	Explanation
SF/2	This IE-group is present only if the <i>Transmission Gap Pattern Sequence Information</i> IE is included and the indicated Downlink Compressed Mode method for at least one of the included Transmission Gap Pattern Sequence is set to "SF/2".

9.1.47.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL CTrCH to modify		<i>0..<maxn oofCTrCHs></i>			EACH	notify
>CTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>Puncture Limit	O		9.2.1.50		–	
UL CTrCH to delete		<i>0..<maxn oofCTrCHs></i>			EACH	notify
>CTrCH ID	M		9.2.3.3		–	
DL CTrCH to modify		<i>0..<maxn oofCTrCHs></i>			EACH	notify
>CTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>Puncture Limit	O		9.2.1.50		–	
DL CTrCH to delete		<i>0..<maxn oofCTrCHs></i>			EACH	notify
>CTrCH ID	M		9.2.3.3		–	
DCHs to Modify	O		DCHs TDD to Modify 9.2.3.4D		YES	reject
DCHs to Add	O		DCH TDD Information 9.2.3.4C		YES	reject
DCHs to Delete		<i>0..<maxn oofDSCHs></i>			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
RL Information		<i>0..1</i>			YES	reject
>RL ID	M		9.2.1.53		–	
>Maximum Downlink Power	O		DL Power 9.2.1.21		–	
>Minimum Downlink Power	O		DL Power 9.2.1.21		–	

Range bound	Explanation
<i>MaxnoofCTrCHs</i>	Maximum number of CTrCHs for a UE.

9.1.48 RADIO LINK RECONFIGURATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
RL Information Response		<i>0..<maxn oofRLs></i>		Only one RL information response group for one group of combined RLs shall be present	EACH	ignore
>RL ID	M		9.2.1.53		–	
>DCH Information Response	O		9.2.1.20C		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range bound	Explanation
<i>MaxnoofRLs</i>	Maximum number of RLs for a UE.

9.1.49 RADIO LINK DELETION REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
CRNC Communication Context ID	M		9.2.1.18		YES	reject
Transaction ID	M		9.2.1.62		–	
RL Information		<i>1..<maxn oofRLs></i>			EACH	notify
>RL ID	M		9.2.1.53		–	

Range bound	Explanation
<i>MaxnoofRLs</i>	Maximum number of radio links for one UE

9.1.50 RADIO LINK DELETION RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.51 DL POWER CONTROL REQUEST [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
Power Adjustment Type	M		9.2.2.27		YES	ignore
DL Reference Power	C-Common		DL power 9.2.1.21		YES	Ignore
Inner Loop DL PC Status	O		9.2.2.18B		YES	ignore
DL Reference Power Information	C-Individual	1..<maxnoof RLs>			GLOBAL	ignore
>RL ID	M		9.2.1.53		–	
>DL Reference Power	M		DL power 9.2.1.21		–	
Max Adjustment Step	C-CommonOrIndividual		9.2.2.20		YES	ignore
Adjustment Period	C-CommonOrIndividual		9.2.2.A		YES	ignore
Adjustment Ratio	C-CommonOrIndividual		9.2.2.B		YES	ignore

Condition	Explanation
Common	This IE is present only "Adjustment Type " equals to 'Common'
Individual	This IE is present only "Adjustment Type " equals to 'Individual'
CommonOrIndividual	This IE is present only "Adjustment Type " equals to 'Common' or 'Individual'

Range Bound	Explanation
MaxnoofRLs	Maximum number of Radio Links for a UE

9.1.52 DEDICATED MEASUREMENT INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used when the Report characteristics type is set to "On-Demand".	YES	reject
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	reject
Dedicated Measurement Object Type	M		9.2.1.22		YES	reject
CHOICE <i>Dedicated Measurement Object Type</i>	M				YES	reject
>RL					–	reject
>>RL Information		1..<maxnoofRLs>			EACH	reject
>>>RL ID	M		9.2.1.53		–	
>>>DPCH ID	O		9.2.3.5	TDD only	–	
>ALL RL			NULL		–	
>RLS				FDD only	–	
>>RL Set Information		1..<maxnoofRLSets>			–	
>>>RL Set ID	M		9.2.2.39		–	
>ALL RLS			NULL	FDD only	–	
Dedicated Measurement Type	M		9.2.1.23		YES	reject
Measurement Filter Coefficient	O		9.2.1.41		YES	reject
Report Characteristics	M		9.2.1.51		YES	reject
CFN reporting indicator	M		FN reporting indicator 9.2.1.29B		YES	reject
CFN	O		9.2.1.7		YES	reject

Range	Explanation
<i>MaxnoofRLs</i>	Maximum number of individual RL's a measurement can be started on.
<i>MaxnoofRLSets</i>	Maximum number of individual RL Sets a measurement can be started on.

9.1.53 DEDICATED MEASUREMENT INITIATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18		YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
CHOICE <i>Dedicated Measurement Object Type</i>	O			Dedicated Measurement Object Type the measurement was initiated with	YES	ignore
>RL or ALL RL					–	
>>RL Information		1..<maxnoofRLs>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>DPCH ID	O		9.2.3.5	TDD only	–	
>>>Dedicated Measurement Value	M		9.2.1.24		–	
>>>CFN	O		9.2.1.7	Dedicated Measurement Time Reference	–	
>RLS or ALL RLS				FDD only	–	
>>RL Set Information		1..<maxnoofRLSets>			–	
>>>RL Set ID	M		9.2.2.39		–	
>>>Dedicated Measurement Value	M		9.2.1.24		–	
>>>CFN	O		9.2.1.7	Dedicated Measurement Time Reference	–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range	Explanation
<i>MaxnoofRLs</i>	Maximum number of individual RL's the measurement can be started on.
<i>MaxnoofRLSets</i>	Maximum number of individual RL Sets a measurement can be started on.

9.1.54 DEDICATED MEASUREMENT INITIATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18		YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.55 DEDICATED MEASUREMENT REPORT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
CHOICE <i>Dedicated Measurement Object Type</i>	M			Dedicated Measurement Object Type the measurement was initiated with	YES	ignore
>RL or ALL RL					–	
>>RL Information		1..<maxnoofRLs>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>DPCH ID	O		9.2.3.5	TDD only	–	
>>>Dedicated Measurement Value Information	M		9.2.1.24A		–	
>RLS or ALL RLS				FDD only	–	
>>RL Set Information		1..<maxnoofRLSets>			EACH	ignore
>>>RL Set ID	M		9.2.1.39		–	
>>>Dedicated Measurement Value Information	M		9.2.1.24A		–	

Range	Explanation
<i>MaxnoofRLs</i>	Maximum number of individual RL's the measurement can be started on.
<i>MaxnoofRLSets</i>	Maximum number of individual RL Sets a measurement can be started on.

9.1.56 DEDICATED MEASUREMENT TERMINATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Node B Communication Context ID	M		9.2.1.48	The reserved value “All NBCC” shall only be used if this value was used when initiating the measurement.	YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore

9.1.57 DEDICATED MEASUREMENT FAILURE INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
CRNC Communication Context ID	M		9.2.1.18		YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
Cause	M		9.2.1.6		YES	ignore

9.1.58 RADIO LINK FAILURE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
CHOICE <i>Reporting Object</i>	M			Object for which the Failure shall be reported.	YES	ignore
>RL					–	
>>RL Information		1 to <MaxnoofRLs>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
>RL Set					–	
>>RL Set Information		1 to <MaxnoofRLSets>			EACH	ignore
>>>RL Set ID	M		9.2.2.39		–	
>>>Cause	M		9.2.1.6		–	

Range bound	Explanation
<i>MaxnoofRLs</i>	Maximum number of RLs for one UE.
<i>MaxnoofRLSets</i>	Maximum number of RL Sets for one UE.

9.1.59 RADIO LINK RESTORE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value “All CRNCC C” shall not be used.	YES	ignore
CHOICE <i>Reporting Object</i>	M			Object for which the Restoration shall be reported.	YES	ignore
>RL					–	
>>Radio Link Information		1 to <MaxnoofRLs>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>RL Set					–	
>>RL Set Information		1 to <MaxnoofRLSets>			EACH	ignore
>>>RL Set ID	M		9.2.2.39		–	

Range bound	Explanation
<i>MaxnoofRLs</i>	Maximum number of RLS for one UE.
<i>MaxnoofRLSets</i>	Maximum number of RL Sets for one UE.

9.1.60 COMPRESSED MODE COMMAND [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Node B communication context ID	M		9.2.1.48	The reserved value “All NBCC” shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
Active Pattern Sequence Information	M		9.2.2.A		YES	ignore

9.1.61 ERROR INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
CRNC Communication Context ID	O		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Node B Communication Context ID	O		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		YES	ignore
Cause	C-ifalone		9.2.1.6		YES	ignore
Criticality Diagnostics	C-ifalone		9.2.1.17		YES	ignore

Condition	Explanation
Ifalone	At least either of Cause IE or Criticality Diagnostics IE shall be present.

9.1.62 PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		-	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		-	
C-ID	M		9.2.1.9		YES	reject
SFN	O		9.2.1.53A		YES	reject
PDSCH Sets to add		<i>0..<maxnoof PDSCHSets ></i>			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		-	
>PDSCH Information		<i>1</i>			YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>DL Timeslot Information		<i>1 .. <maxnoofDLts></i>			–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift and Burst Type	M		9.2.3.7		–	
>>>TFCI Presence	M		9.2.1.57		–	
>>>DL Code Information		<i>1 .. <maxnoofPDSCH></i>			–	
>>>>PDSCH ID	M		9.2.3.10		–	

>>>>TDD Channelisation Code	M		9.2.3.19		-	
PDSCH Sets to Modify		0..<maxnoof PDSCHSets >			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		-	
>PDSCH Information		1			YES	reject
>>Repetition Period	O		9.2.3.16		-	
>>Repetition Length	O		9.2.3.15		-	
>>TDD Physical Channel Offset	O		9.2.3.20		-	
>>Midamble Shift and Burst Type	M		9.2.3.7		-	
>>DL Timeslot Information		0 .. <maxnoofDLts>			-	
>>>Time Slot	M		9.2.3.23		-	
>>>Midamble Shift and Burst Type	O		9.2.3.7		-	
>>>TFCI Presence	O		9.2.1.57		-	
>>>DL Code Information		0 .. <maxnoOfPDSCH>			-	
>>>>PDSCH ID	M		9.2.3.10		-	
>>>>TDD Channelisation Code	M		9.2.3.19		-	
PDSCH Sets to Delete		0..<maxnoof PDSCHSets >			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		-	
PUSCH Sets to add		0..<maxnoof PUSCHSets >			GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13		-	
>PUSCH Information		1			YES	reject
>>Repetition Period	M		9.2.3.16		-	
>>Repetition Length	M		9.2.3.15		-	
>>TDD Physical Channel Offset	M		9.2.3.20		-	
>>UL Timeslot Information		1 .. <maxnoofULts>			-	
>>>Time Slot	M		9.2.3.23		-	
>>>Midamble Shift and Burst Type	M		9.2.3.7		-	
>>>TFCI Presence	M		9.2.1.57		-	
>>>UL Code Information		1 .. <maxnoOfPUSCH>			-	
>>>>PUSCH ID	M		9.2.3.12		-	
>>>>TDD Channelisation Code	M		9.2.3.19		-	
PUSCH Sets to Modify		0..<maxnoof PUSCHSets >			GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13		-	
>PUSCH Information		1			YES	reject
>>Repetition Period	O		9.2.3.16		-	

>>Repetition Length	O		9.2.3.15		-	
>>TDD Physical Channel Offset	O		9.2.3.20		-	
>>UL Timeslot Information		0 .. <maxnoofULts>			-	
>>>Time Slot	M		9.2.3.23		-	
>>>Midamble Shift and Burst Type	O		9.2.3.7		-	
>>>TFCI Presence	O		9.2.1.57		-	
>>>UL Code Information		0 .. <maxnoOfPDSCH>			-	
>>>>PUSCH ID	M		9.2.3.12		-	
>>>>TDD Channelisation Code	M		9.2.3.19		-	
PUSCH Sets to Delete		0..<maxnoofPUSCHSets>			GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13		-	

Range bound	Explanation
<i>Maxnoof PDSCH Sets</i>	Maximum number of PDSCH Sets in a cell.
<i>Maxnoof PDSCH</i>	Maximum number of PDSCH in a cell.
<i>Maxnoof PUSCH Sets</i>	Maximum number of PUSCH Sets in a cell.
<i>Maxnoof PUSCH</i>	Maximum number of PUSCH in a cell.
<i>MaxnoofDLts</i>	Maximum number of Downlink time slots in a cell
<i>MaxnoofULts</i>	Maximum number of Uplink time slots in a cell

9.1.63 PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		-	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		-	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.64 PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		-	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		-	
CHOICE <i>cause level</i>	M				YES	ignore
> <i>General</i>					-	
>> <i>Cause</i>	M		9.2.1.6		-	
> <i>Set specific</i>					-	
>>Unsuccessful DL Shared channel set		0..<maxnoof PDSCHSets >			EACH	ignore
>>>PDSCH Set ID	M		9.2.3.13		-	
>>>Cause	M		9.2.1.6		YES	ignore
>>Unsuccessful UL Shared channel set		0..<maxnoof PUSCHSets >			EACH	ignore
>>>PUSCH Set ID	M		9.2.3.13		-	
>>>Cause	M		9.2.1.6		-	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range bound	Explanation
<i>Maxnoof PDSCH Sets</i>	Maximum number of PDSCH Sets in a cell.
<i>Maxnoof PUSCH Sets</i>	Maximum number of PUSCH Sets in a cell.

9.1.65 RESET REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		-	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		-	

CHOICE <i>Reset Indicator</i>	M				YES	ignore
> <i>CommunicationContext</i>					–	
>> Communication Context Information		1.. <i>maxCommunicationContext</i> >			EACH	reject
>>>CHOICE <i>Communication Context Type</i>	M				–	
>>>>CRNC <i>Communication Context</i>					–	
>>>>>CRNC <i>Communication Context ID</i>	C-ifUL		9.2.1.18		–	
>>>>Node B <i>Communication Context</i>					–	
>>>>>Node B <i>Communication Context ID</i>	C-ifDL		9.2.1.48		–	
> <i>CommunicationControl Port</i>					–	
>> Communication Control Port Information		1.. <i>maxCCPinNodeB</i> >			EACH	reject
>>>Communication <i>Control Port ID</i>	M		9.2.1.15		–	
> <i>Node B</i>			NULL		–	

Range bound	Explanation
IfDL	This IE is only present when message is sent by the CRNC .
IfUL	This IE is only present when message is sent by the Node B .
1.. <i>maxCommunicationContext</i>	Maximum number of communication contexts that can exist in the Node-B
1.. <i>maxCCPinNodeB</i>	Maximum number of communication control ports that can exist in the Node B

9.1.66 RESET RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.67 DL POWER TIMESLOT CONTROL REQUEST [TDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
DL Timeslot ISCP Information		1..<maxnoof DLts>			GLOBAL	ignore
>RL ID	M		9.2.1.53		–	
>Time slot	M		9.2.3.23		–	
>DL Timeslot ISCP	M		9.2.3.4B		–	

Range Bound	Explanation
<i>MaxnoofDLts</i>	Maximum number of Downlink time slots per Radio Link

9.1.68 RADIO LINK PREEMPTION REQUIRED INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18		YES	ignore
RL Information		0..<maxno ofRLs>			EACH	ignore
>RL ID	M		9.2.1.53		–	

Range bound	Explanation
<i>MaxnoofRLs</i>	Maximum number of radio links for one UE

9.2 Information Element Functional Definition and Contents

9.2.0 General

Section 9.2 presents the NBAP IE definitions in tabular format. The corresponding ASN.1 definition is presented in section 9.3. In case there is contradiction between the tabular format in section 9.2 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional elements, where the tabular format shall take precedence.

9.2.1 Common parameters

9.2.1.1 Add/Delete Indicator

The add/delete indicator shall notify the RNC whether the associated resource has been added to or removed from the Node B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Add/Delete Indicator			ENUMERATED(Add, Delete)	

9.2.1.1A Allocation/Retention Priority

This parameter indicates the priority level in the allocation and retention of Node B internal resources. See Annex A.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Allocation/Retention Priority				
>Priority Level	M		INTEGER (0..15)	This IE indicates the priority of the request. 0 = spare. 1 = highest priority. . . . 14 = Lowest priority. 15= not used.
>Pre-emption Capability	M		ENUMERATED(shall not trigger pre-emption, may trigger pre-emption)	
>Pre-emption Vulnerability	M		ENUMERATED (not pre-emptable, pre-emptable)	

9.2.1.2 Availability Status

The availability status is used to indicate more detailed information of the availability of the resource. In accordance with [6], following values are defined. If the value of this attribute is an empty set, this implies that none of the status conditions described in [6] are present.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Availability Status			ENUMERATED (empty, in test, failed, power off, off line, off duty, dependency, degraded, not installed, log full, ...)	

9.2.1.3 BCCH Modification Time

Indicates the time after which the new system information shall be applied on BCCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
BCCH Modification Time			Integer (0..511)	All SFN values in which MIB may be mapped are allowed. The tabular description is presented in [18].

9.2.1.4 Binding ID

The Binding ID is the identifier of a user data stream. It is allocated at Node B and it is unique for each transport bearer under establishment to/from the Node B. ~~The length of this parameter is variable.~~

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Binding ID			Octetstring (1..4,...)	

9.2.1.5 Blocking Priority Indicator

The Blocking priority indicator shall indicate the immediacy with which a resource should be blocked from use. The following priority classes shall be supported in the Blocking priority indicator.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Blocking Priority Indicator			ENUMERATED(High, Normal, Low,...)	High priority: Block resource immediately. Normal priority: Block resource when idle or upon timer expiry. Low priority: Block resource when idle.

9.2.1.6 Cause

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE Cause group				
>Radio Network Layer				
>Radio Network Layer Cause	M		Enumerated (unknown C-ID, Cell not available, Power level not supported, DL radio resources not available, UL radio resources not available, RL Already Activated/allocated, Node B Resources Unavailable, Measurement not supported for the object, Combining Resources not available, Requested configuration not supported, Synchronization failure, Priority transport channel established, SIB Origination in Node B not Supported, Requested Tx Diversity Mode not supported, Unspecified, BCCH scheduling error, Measurement Temporarily not Available, Invalid CM Setting, Reconfiguration CFN not elapsed, Number of DL codes not supported, S-CPICH not supported, Combining not supported, UL SF not supported, DL SF not supported, Common Transport Channel Type not supported, Dedicated Transport Channel Type not supported, Downlink Shared Channel Type not supported, Uplink Shared Channel Type not supported, CM not supported, Tx diversity no longer supported, Unknown Local Cell ID, ...)	
>Transport Layer				
>Transport Layer Cause	M		Enumerated (Transport resource unavailable, Unspecified, ...)	
>Protocol				
>Protocol Cause			Enumerated (Transfer syntax error, Abstract syntax error (reject), Abstract syntax error (ignore and notify),	

			Message not compatible with receiver state, Semantic error, Unspecified, Abstract syntax error (falsely constructed message), ...)	
>Misc				
>Miscellaneous Cause	M		Enumerated (Control processing overload Hardware failure, O&M intervention, Not enough user plane processing resources, Unspecified, ...)	

The meaning of the different cause values is described in the following table. In general, "not supported" cause values indicate that the concerning capability is missing. On the other hand, "not available" cause values indicate that the concerning capability is present, but insufficient resources were available to perform the requested action.

Radio Network Layer cause	Meaning
BCCH scheduling error	The Node B has detected an illegal BCCH schedule update (see 8.2.16.3)
Cell not Available,	The concerning cell or local cell is not available
Combining not supported	The Node B does not support RL combining for the concerning cells
Combining Resources Not Available	The value of the received <i>Diversity Control Field</i> IE was set to 'Must', but the Node B cannot perform the requested combining
CM not supported	The concerning cell(s) do not support Compressed Mode
Common Transport Channel Type not supported	The concerning cell(s) do not support the RACH and/or FACH and/or CPCH Common Transport Channel Type
Dedicated Transport Channel Type not supported	The concerning cell(s) do not support the Dedicated Transport Channel Type
DL Radio Resources not Available	The Node B does not have sufficient DL radio resources available
DL SF not supported	The concerning cell(s) do not support the requested DL SF
DL Shared Channel Type not supported	The concerning cell(s) do not support the Downlink Shared Channel Type
Invalid CM Settings	The concerning cell(s) consider the requested Compressed Mode settings invalid
Measurement not Supported For The Object	At least one of the concerning cell(s) does not support the requested measurement on the concerning object type
Measurement Temporarily not Available	The Node B can temporarily not provide the requested measurement value
Node B resources unavailable	The Node B does not have sufficient resources available
Number of DL codes not supported	The concerning cell(s) do not support the requested number of DL codes
Power Level not Supported	A DL power level was requested which the concerning cell(s) do not support
Priority transport channel established	The CRNC cannot perform the requested blocking since a transport channel with a high priority is present
Reconfiguration CFN not elapsed	The requested action cannot be performed due to that a COMMIT message was received previously, but the concerning CFN has not yet elapsed
Requested Configuration not Supported	The concerning cell(s) do not support the requested configuration i.e. power levels, Transport Formats, physical channel parameters,.....
Requested Tx Diversity mode not supported	The concerning cell(s) do not support the requested transmit diversity mode
RL already Activated/ allocated	The Node B has already allocated an RL with the requested RL-id for this UE context
S-CPICH not supported	The concerning cell(s) do not support S-CPICH
SIB origination in Node B not supported	The Node B does not support the origination of the requested SIB for the concerning cell
Synchronisation Failure	Loss of UL Uu synchronisation

Tx diversity no longer supported	Tx diversity can no longer be supported in the concerning cell.
UL Radio Resources not Available	The Node B does not have sufficient UL radio resources available
UL SF not supported	The concerning cell(s) do not support the requested UL SF
UL Shared Channel Type not supported	The concerning cell(s) do not support the Uplink Shared Channel Type
Unknown C-ID	The Node B is not aware of a cell with the provided C-ID
Unknown Local Cell ID	The Node B is not aware of a local cell with the provided Local Cell ID
Unspecified	Sent when none of the above cause values applies but still the cause is Radio Network layer related

Transport Network Layer cause	Meaning
Transport resource unavailable	The required transport resources are not available
Unspecified	Sent when none of the above cause values applies but still the cause is Transport Network layer related

Protocol cause	Meaning
Abstract Syntax Error (Reject)	The received message included an abstract syntax error and the concerning criticality indicated “reject” (see subclause 10.3)
Abstract Syntax Error (Ignore and Notify)	The received message included an abstract syntax error and the concerning criticality indicated “ignore and notify” (see subclause 10.3)
Abstract syntax error (falsely constructed message)	The received message contained IEs or IE groups in wrong order or with too many occurrences (see subclause 10.3)
Message not Compatible with Receiver State	The received message was not compatible with the receiver state (see subclause 10.4)
Semantic Error	The received message included a semantic error (see subclause 10.4)
Transfer Syntax Error	The received message included a transfer syntax error (see section 10.2)
Unspecified	Sent when none of the above cause values applies but still the cause is protocol related

Miscellaneous cause	Meaning
Control Processing Overload	Node B control processing overload
Hardware Failure	Node B hardware failure
Not enough User Plane Processing Resources	Node B has insufficient user plane processing resources available
O&M Intervention	Operation and Maintenance intervention related to Node B equipment
Unspecified	Sent when none of the above cause values applies and the cause is not related to any of the categories Radio Network Layer, Transport Network Layer or Protocol.

9.2.1.7 CFN

Connection Frame Number for the radio connection, see ref. [17].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CFN			Integer (0..255)	

9.2.1.8 CFN Offset

Void

9.2.1.9 C-ID

The C-ID (Cell identifier) is the identifier of a cell in one RNC.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
C-ID			INTEGER (0..65535)	

9.2.1.9A Common Channels Capacity Consumption Law

The capacity consumption law indicates the CRNC how the Capacity Credit is consumed by NBAP set of procedures, depending on the allocated Spreading Factor.

This capacity consumption law indicates the consumption law to be used with the following procedures :

- Common Transport Channel Setup

In case of usage of the Common Transport Channel Deletion, the consumption cost given in the consumption law must be credited to the Capacity Credit.

If the modelling of the internal resource capability of the B is modelled independently for the Uplink and Downlink, the "DL cost" shall be applied to the "DL or Global Capacity Credit" and the "UL Cost" shall be applied to the "UL Capacity Credit". If it is modelled as shared resources, both the "DL cost" and the "UL cost" shall be applied to the "DL or Global Capacity Credit".

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Common Channels Capacity Consumption Law				
>SF allocation law		<maxNumberOfSF>		For each SF, cost of its allocation: the first instance corresponds to SF = 4, the second to SF = 8, the third to SF = 16 and so on.
>>DL cost	M		INTEGER (0..65535)	
>>UL cost	M		INTEGER (0..65535)	

9.2.1.10 Common Measurement Object Type

The Common Measurement Object type indicates the type of object that the measurement is to be performed on.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Measurement Object Type			ENUMERATED (CELL, RACH, CPCH,...)	

9.2.1.11 Common Measurement Type

The Common Measurement Type identifies which measurement that shall be performed.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Measurement Type			ENUMERATED (Received total wide band power, Transmitted Carrier Power, Acknowledged PRACH preambles, UL Timeslot ISCP, Acknowledged PCPCH Access Preambles, Detected PCPCH Access Preambles, ...)	UL Timeslot ISCP is used by TDD only, Acknowledged PRACH preambles, Acknowledged PCPCH Access Preambles, Detected PCPCH Access Preambles are used by FDD only

9.2.1.12 Common Measurement Value

The Common Measurement Value shall be the most recent value for this measurement, for which the reporting criteria were met.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
➤Transmitted Carrier Power Value	C <i>MeasValue</i>		INTEGER(0..100)	According to mapping in [22] and [23]
➤Received total wide band power Value	C <i>MeasValue</i>		INTEGER(0..621)	According to mapping in [22] and [23]
➤Acknowledged PRACH Preamble Value (FDD only)	C <i>MeasValue</i>		INTEGER(0..240, ...)	According to mapping in [22]
➤UL Timeslot ISCP (TDD only)	C <i>MeasValue</i>		INTEGER(0..81)	According to mapping in [23]
➤Acknowledged PCPCH Access Preambles (FDD only)	C <i>MeasValue</i>		INTEGER(0..15,...)	According to mapping in [22]
➤Detected PCPCH Access Preambles (FDD only)	C <i>MeasValue</i>		INTEGER(0..240,...)	According to mapping in [22]

Condition	Explanation
<i>MeasValue</i>	Only one measurement value can be present at the same time.

9.2.1.12A Common Measurement Value Information

The *Common Measurement Value Information* IE provides information both on whether or not the Common Measurement Value is provided in the message or not and if provided also the Common Measurement Value itself.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Common Measurement Value Information		1			–	
>CHOICE <i>Measurement Availability Indicator</i>	M				–	
>> <i>Measurement Available</i>					–	
>>>Common Measurement value	M		9.2.1.12		–	
>> <i>Measurement not Available</i>			NULL		–	

9.2.1.13 Common Physical Channel ID

Common Physical Channel ID is the unique identifier for one common physical channel within a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Common Physical Channel ID			Integer(0..255)	

9.2.1.13A Common Physical Channel Status Information

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Common Physical Channel Status Information		1			–	
>Common Physical Channel ID	M		9.2.1.13		–	
>Resource Operational State	M		9.2.1.52		–	
>Availability Status	M		9.2.1.2		–	

9.2.1.14 Common Transport Channel ID

Common Transport Channel ID is the unique identifier for one common transport channel within a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Common Transport Channel ID			Integer(0..255)	

9.2.1.14A Common Transport Channel Information Response

The *Common Transport Channel Information Response* IE provides information for Common Transport Channels that have been established or modified.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Common Transport Channel Information Response		1			–	
>Common Transport Channel ID	M		9.2.1.14		–	
>Binding ID	O		9.2.1.4		–	
>Transport Layer Address	O		9.2.1.63		–	

9.2.1.14B Common Transport Channel Status Information

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Common Transport Channel Status Information		1			–	
>Common Transport Channel ID	M		9.2.1.14		–	
>Resource Operational State	M		9.2.1.52		–	
>Availability Status	M		9.2.1.2		–	

9.2.1.15 Communication Control Port ID

A Communication Control Port corresponds to one signalling bearer between the RNC and Node B for the control of Node B Communication Contexts. Node B may have multiple Communication Control Ports (one per Traffic Termination Point). The Communication Control Port is selected at creation of the Node B Communication Context. The Communication Control Port ID is the identifier of the Communication Control Port.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Communication Control Port ID			INTEGER (0..65535)	

9.2.1.16 Configuration Generation ID

The Configuration Generation ID describes the generation of the configuration of logical resources in a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Configuration Generation ID			Integer(0..255)	Value '0' means "No configuration". At possible wraparound of the ID counter in CRNC the value '0' shall not be used.

9.2.1.17 Criticality Diagnostics

The *Criticality Diagnostics* IE is sent by a Node B or the CRNC when parts of a received message have not been comprehended or are missing. It contains information about which IE was not comprehended or is missing.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Criticality Diagnostics				
>Procedure ID		0..1		Procedure ID is to be used if Criticality Diagnostics is part of Error Indication procedure, and not within the response message of the same procedure that caused the error
>>Procedure Code	M		INTEGER (0..255)	
>>Ddmode	M		ENUMERATED (FDD, TDD, Common)	Common = common to FDD and TDD.
>Triggering Message	O		ENUMERATED (initiating message, successful outcome, unsuccessful outcome)	The Triggering Message is used only if the Criticality Diagnostics is part of Error Indication.
> Procedure Criticality	O		ENUMERATED (reject, ignore, notify)	This Procedure Criticality is used for reporting the Criticality of the Triggering message (Procedure). The value 'ignore' shall never be used.
>Transaction ID	O		Transaction ID 9.2.1.62	
>Information Element Criticality Diagnostics				
>>IE Criticality	M	0 to <maxnoof errors>	ENUMERATED (reject, ignore, notify)	The IE Criticality is used for reporting the criticality of the triggering IE. The value 'ignore' shall never be used.
>>IE ID	M		INTEGER (0..65535)	The IE ID of the not understood or missing IE
>>Repetition Number	O		INTEGER (1..256)	The repetition number of the not understood IE if applicable

Range bound	Explanation
<i>Maxnooferrors</i>	Maximum no. of IE errors allowed to be reported with a single message.

9.2.1.18 CRNC Communication Context ID

The CRNC Communication Context ID is the identifier of the Communication Context in the CRNC.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CRNC Communication Context ID			INTEGER (0..2 ²⁰ -1)	2 ²⁰ -1 is reserved value to indicate all the CRNC communication contexts that can be reached by the communication control port (All CRNCCC).

9.2.1.19 DCH Combination Indicator

Void

9.2.1.20 DCH ID

The DCH ID is the identifier of an active dedicated transport channel. It is unique for each active DCH among the active DCHs simultaneously allocated for the same UE.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DCH ID			INTEGER (0..255)	

9.2.1.20A Dedicated Channels Capacity Consumption Law

The capacity consumption law indicates the CRNC how the Capacity Credit is consumed by NBAP set of procedures, depending on the allocated Spreading Factor and the RL/RLS situation.

This capacity consumption law indicates the consumption law to be used with the following procedures :

- Radio Link Setup
- Radio Link Addition
- Radio Link Reconfiguration (case of increase of the SF)

In case of usage of the Radio Link Deletion or of the Radio Link Reconfiguration (case of decrease of the SF) procedure, the consumption cost given in the consumption law shall be credited to the Capacity Credit.

If the modelling of the internal resource capability of the B is modelled independently for the Uplink and Downlink, the DL cost shall be applied to the DL or Global Capacity Credit and the UL Cost shall be applied to the UL Capacity Credit. If it is modelled as shared resources, both the DL costs" and the UL costs shall be applied to the DL or Global Capacity Credit.

For a Radio Link creating a Radio Link Set (first RL of a RLS), the cost for the RL and RLS shall be taken into account. When adding a Radio Link to a Radio Link Set, only the RL cost shall be taken into account.

In the case of multiple Radio Links are established in one procedure, for every created Radio Link Set the first Radio Link is always the Radio Link with the lowest repetition number.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Dedicated Channels Capacity Consumption Law				
>SF allocation law		1..<maxNumberOf SF>		For each SF, cost of its allocation: the first instance corresponds to SF = 4, the second to SF = 8, the third to SF = 16 and so on.
>>DL cost RLS	M		INTEGER (0..65535)	
>>DL cost RL	M		INTEGER (0..65535)	
>>UL cost RLS	M		INTEGER (0..65535)	
>>UL cost RL	M		INTEGER (0..65535)	

9.2.1.20B DL or Global Capacity Credit

The capacity credit indicates to the CRNC the Downlink or global capacity of a Local Cell or a Local Cell Group.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL or Global Capacity Credit			INTEGER (0..65535)	

9.2.1.20C DCH Information Response

The *DCH Information Response* IE provides information for DCHs that have been established or modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DCH Information Response		1 to <maxnoofDCHs>		Only one DCH per set of coordinated DCH shall be included	–	
>DCH ID	M		9.2.1.20		–	
>Binding ID	O		9.2.1.4		–	
>Transport Layer Address	O		9.2.1.63		–	

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCH per UE.

9.2.1.21 DL Power

The DL Power IE indicates a power level relative to the [FDD-primary CPICH power] [TDD-primary CCPCH power] configured in a cell [FDD-If referred to a DPCH, it indicates the power of the DPDCH symbols].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL Power			Enumerated(-35..+15dB)	Step 0.1dB

9.2.1.22 Dedicated Measurement Object Type

The Dedicated Measurement Object type indicates the type of object that the measurement is to be performed on.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated Measurement Object Type			ENUMERATED (RL, RLS, ALL RL, ALL RLS,...)	

9.2.1.23 Dedicated Measurement Type

The Dedicated Measurement Type identifies the type of measurement that shall be performed.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated Measurement Type			ENUMERATED (SIR, SIR Error, Transmitted Code Power, RSCP, Rx Timing Deviation, Round Trip Time,...)	RSCP, Rx Timing Deviation are used by TDD only, Round Trip Time, SIR Error are used by FDD only.

Note: For definitions of the measurement types refer to [4] and [5].

9.2.1.24 Dedicated Measurement Value

The Dedicated Measurement Value shall be the most recent value for this measurement, for which the reporting criteria were met.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated measurement Value				
>SIR value	C <i>MeasValue</i>		INTEGER(0..63)	According to mapping in [22] and [23]
>SIR error Value	C <i>MeasValue</i>		INTEGER(0..125)	According to mapping in [22], (FDD only)
>Transmitted Code Power Value	C <i>MeasValue</i>		INTEGER(0..127)	According to mapping in [22] and [23]
>RSCP	C <i>MeasValue</i>		INTEGER(0..81)	According to mapping in [23], (TDD only)
>Rx Timing Deviation	C <i>MeasValue</i>		INTEGER(0..2047)	According to mapping in [23], (TDD only)
>Round Trip Time	C <i>MeasValue</i>		INTEGER(0..32767)	According to mapping in [22], (FDD only)

Condition	Explanation
<i>MeasValue</i>	Only one measurement value can be present at the same time.

9.2.1.24A Dedicated Measurement Value Information

The *Dedicated Measurement Value Information* IE provides information both on whether or not the Dedicated Measurement Value is provided in the message or not and if provided also the Dedicated Measurement Value itself.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Dedicated Measurement Value Information		1			–	
>CHOICE <i>Measurement Availability Indicator</i>	M				–	
>> <i>Measurement Available</i>					–	
>>>Dedicated Measurement Value	M		9.2.1.24		–	
>>>CFN	O		9.2.1.7	Dedicated Measurement Time Reference	–	
>> <i>Measurement not Available</i>			NULL		–	

9.2.1.25 Diversity Control Field

The Diversity Control Field indicates if the current RL may, must or must not be combined with the already existing RLs.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Diversity Control Field			ENUMERATED (May, Must, Must not)	

9.2.1.26 Diversity Indication

The Diversity Indication indicates if the RL has been or has not been combined with another RL.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Diversity Indication			ENUMERATED (Combined, not combined)	

9.2.1.27 DSCH ID

The DSCH ID uniquely identifies a DSCH within a Node B Communication Context.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DSCH ID			INTEGER (0..255)	

9.2.1.27A DSCH Information Response

The *DSCH Information Response* IE provides information for DSCHs that have been established or modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DSCH Information Response		<i>1 to <Numof DSCH></i>			–	
>DSCH ID	M		9.2.1.27		–	
>Binding ID	O		9.2.1.4		–	
>Transport Layer Address	O		9.2.1.63		–	

Range bound	Explanation
<i>MaxnoofDSCHs</i>	Maximum number of DSCHs for one UE.

9.2.1.28 DSCH Transport Format Set

Void

9.2.1.29 DSCH Transport Format Combination Set

Void

9.2.1.29A End Of Audit Sequence Indicator

Indicates if the AUDIT RESPONSE message ends an audit sequence or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
End Of Audit Sequence Indicator			ENUMERATED(end of audit sequence, not end of audit sequence)	End of audit sequence = all audit information has been provided by the Node B; Not end of audit sequence = more audit information is available;

9.2.1.29B FN reporting indicator

Frame Number reporting indicator.

Indicates if the SFN or CFN shall be included together with the reported measurement value.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FN reporting indicator			ENUMERATED(FN Reporting Required, FN Reporting Not Required)	

9.2.1.30 Frame Handling Priority

This parameter indicates the priority level to be used during the lifetime of the DCH/DSCH for temporary restriction of the allocated resources due overload reason.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Frame Handling Priority			INTEGER (0..15)	0=lower priority, 15=higher priority

9.2.1.31 Frame Offset

Frame Offset is the required offset between the dedicated channel downlink transmission frames (CFN, Connection Frame Number) and the broadcast channel frame offset (Cell Frame Number). The Frame_offset is used in the translation between Connection Frame Number (CFN) on lub/lur and least significant 8 bits of SFN (System Frame Number) on Uu. The Frame Offset is UE and cell specific.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Frame Offset			INTEGER (0..255)	Frames

9.2.1.31A IB_OC_ID

The IB OC ID identifies the occurrence of a specific Information Block.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB OC ID			INTEGER (1..16)	

9.2.1.32 IB_SG_DATA

Segment as defined in [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB SG DATA			Bit String	Contains "SIB data fixed" or "SIB data variable" in segment as encoded in ref: [18].

9.2.1.33 IB_SG_POS

First position of an Information Block segment in the SFN cycle ($IB_SG_POS < IB_SG_REP$).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB SG POS			INTEGER (0.. 4094)	Only even positions allowed. Reference [18]

9.2.1.34 IB_SG_REP

Repetition distance for an Information Block segment. The segment shall be transmitted when $SFN \bmod IB_SG_REP = IB_SG_POS$.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB SG REP			ENUMERATED (4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, 4096)	Repetition period for the IB segment in frames

9.2.1.35 IB Type

The IB Type identifies a specific system information block.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB Type			Enumerated (MIB, SB1, SB2, SIB1, SIB2, SIB3, SIB4, SIB5, SIB6, SIB7, SIB8, SIB9, SIB10, SIB11, SIB12, SIB13, SIB13.1, SIB13.2, SIB13.3, SIB13.4, SIB14, SIB15, SIB15.1, SIB15.2, SIB15.3, SIB16, ...)	

9.2.1.36 Indication Type

The indication type shall indicate the category of a failure with respect to its impact on the logical resources supported at Node B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Indication Type			ENUMERATED (No Failure, Service Impacting, ...)	Service Impacting – The failure has impacted on the logical resources supported at Node B.

9.2.1.37 Limited Power Increase

Void.

9.2.1.37A Local Cell Group ID

The Local Cell Group ID represents resources in the Node B, which has been pooled from a capacity point of view.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Local Cell Group ID			Local Cell ID 9.2.1.38	

9.2.1.38 Local Cell ID

The local cell ID represents resources in Node B that can be used for the configuration of a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Local Cell ID			INTEGER(0 ...26843545 5)	

9.2.1.39 Maximum DL Power Capability

This parameter indicates the maximum DL power capability for a local cell within Node B. The reference point is the antenna connector.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Maximum DL Power Capability			ENUMERATED(0...500)	dBm, granularity 0.1 dB 0: 0 dBm 1: 0.1 dBm ... 499: 49.9 dBm 500: 50.0 dBm

9.2.1.40 Maximum Transmission Power

Maximum Transmission Power is maximum power for all downlink channels added together, that is allowed to be used simultaneously in a cell. The reference point is the antenna connector.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Maximum transmission Power			ENUMERATED(0,..500)	Unit dBm Granularity 0.1 dB 0: 0 dBm 1: 0.1 dBm ... 499: 49.9 dBm 500: 50.0 dBm

9.2.1.40A Measurement Availability Indicator

Indicates if measurement is available or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Measurement Availability Indicator			ENUMERATED(measurement available, measurement not available)	

9.2.1.41 Measurement Filter Coefficient

The Measurement Filter Coefficient determines the amount of filtering to be applied for measurements.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Measurement Filter Coefficient			ENUMERATED (0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 15, 17, 19)	

9.2.1.42 Measurement ID

The Measurement ID uniquely identifies any measurement per (Node B- or communication) control port.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Measurement ID			Integer(0 .. 2 ²⁰ -1)	

9.2.1.43 Measurement Increase/Decrease Threshold

The Measurement Increase/Decrease Threshold defines the threshold that shall trigger Event C or D.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
Received total wide band power	<i>C – Threshold</i>		INTEGER(0..620)	0: 0 dB 1: 0.1 dB 2: 0.2 dB ... 620: 62dB
Transmitted Carrier Power	<i>C – Threshold</i>		INTEGER(0..100)	According to mapping in [22] and [23]
Acknowledged PRACH Preambles	<i>C – Threshold</i>		INTEGER(0..240,...)	According to mapping in [22], (FDD only)
UL Timeslot ISCP	<i>C – Threshold</i>		INTEGER(0..80)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 80: 40dB, (TDD only)
SIR	<i>C – Threshold</i>		INTEGER(0..62)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 62: 31dB
SIR Error	<i>C – Threshold</i>		INTEGER(0..124)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 124: 62 dB, (FDD only)
Transmitted Code Power	<i>C – Threshold</i>		INTEGER(0..112,...)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 112: 56 dB
RSCP	<i>C – Threshold</i>		INTEGER(0..80)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 80: 40dB, (TDD only)
Round Trip Time	<i>C – Threshold</i>		INTEGER(0..32766)	0: 0 chips 1: 0.0625 chips 2: 0.1250 chips ... 32766: 2047.875 chips, (FDD only)
Acknowledged PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..15,...)	According to mapping in [22] (FDD only)
Detected PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..240,...)	According to mapping in [22] (FDD only)

Condition	Explanation
<i>Threshold</i>	Only one measurement threshold can be present at the same time.

9.2.1.44 Measurement Threshold

The Measurement Threshold defines which threshold that shall trigger Event A, B, E or F.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
Received total wide band power	<i>C – Threshold</i>		INTEGER(0..621)	According to mapping in [22] and [23]
Transmitted Carrier Power	<i>C – Threshold</i>		INTEGER(0..100)	According to mapping in [22] and [23]
Acknowledged PRACH Preambles	<i>C – Threshold</i>		INTEGER(0..240,...)	According to mapping in [22], (FDD only)
UL Timeslot ISCP	<i>C – Threshold</i>		INTEGER(0..81)	According to mapping in [23] (TDD only)
SIR	<i>C – Threshold</i>		INTEGER(0..63)	According to mapping in [22] and [23]
SIR Error	<i>C – Threshold</i>		INTEGER(0..125)	According to mapping in [22], (FDD only)
Transmitted Code Power	<i>C – Threshold</i>		INTEGER(0..127)	According to mapping in [22] and [23]
RSCP	<i>C – Threshold</i>		INTEGER(0..81)	According to mapping in [23] (TDD only)
Rx Timing Deviation	<i>C – Threshold</i>		INTEGER(0..2047)	According to mapping in [23] (TDD only)
Round Trip Time	<i>C – Threshold</i>		INTEGER(0..32767)	According to mapping in [22] (FDD only)
Acknowledged PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..15,...)	According to mapping in [22] (FDD only)
Detected PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..240,...)	According to mapping in [22] (FDD only)

Condition	Explanation
<i>Threshold</i>	Only one measurement threshold can be present at the same time.

9.2.1.45 Message Discriminator

This field is used to discriminate between Dedicated NBAP and Common NBAP messages.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator			ENUMERATED(Common, Dedicated)	

9.2.1.46 Message Type

The Message Type uniquely identifies the message being sent.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type				
>Procedure ID	M	1		
>>Procedure Code	M		ENUMERATED (COMMON TRANSPORT CHANNEL SETUP, COMMON TRANSPORT CHANNEL RECONFIGURATION, COMMON TRANSPORT CHANNEL DELETION, BLOCK RESOURCE, UNBLOCK RESOURCE, AUDIT REQUIRED, AUDIT, COMMON MEASUREMENT INITIATION, COMMON MEASUREMENT REPORTING, COMMON MEASUREMENT TERMINATION, COMMON MEASUREMENT FAILURE, CELL SETUP, CELL RECONFIGURATION, CELL DELETION, RESOURCE STATUS INDICATION, SYSTEM INFORMATION UPDATE, RL SETUP, RL ADDITION, SYNCHRONISED RL RECONFIGURATION PREPARATION, SYNCHRONISED RL RECONFIGURATION COMMIT, SYNCHRONISED RL RECONFIGURATION CANCELLATION, UNSYNCHRONISED RL RECONFIGURATION, RL DELETION, DL POWER CONTROL, DL POWER TIMESLOT CONTROL, DEDICATED MEASUREMENT INITIATION, DEDICATED MEASUREMENT REPORTING, DEDICATED MEASUREMENT TERMINATION, DEDICATED MEASUREMENT FAILURE, RL FAILURE, RL RESTORATION, COMPRESSED MODE COMMAND, ERROR INDICATION, PHYSICAL SHARED CHANNEL RECONFIGURATION, RESET, ...)	
>>Ddmode	M		ENUMERATED (FDD, TDD, Common, ...)	Common = common to FDD and TDD.
>Type of Message	M		ENUMERATED (Initiating Message, Successful Outcome, Unsuccessful Outcome, Outcome)	

9.2.1.46A Minimum DL Power Capability

This parameter indicates the minimum DL power capability for a local cell within Node B. The reference point is the antenna connector.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Minimum DL Power Capability			ENUMERATED(0..800)	dBm, granularity 0.1 dB 0: -30.0 dBm 1: -29.9 dBm ... 799: 49.9 dBm 800: 50.0 dBm

9.2.1.47 Minimum Spreading Factor

This parameter indicates the minimum spreading factor supported at a cell within the Node B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Minimum Spreading Factor			Enumerated(4, 8, 16, 32, 64, 128, 256, 512)	

9.2.1.47A N_INSYNC_IND

This parameter defines the number of successive in-sync indications after which the Node B shall trigger the Radio Link Restore procedure (see also [10] and [21]).

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
N_INSYNC_IND			Integer (1, 2, ..., 256)	

9.2.1.47B N_OUTSYNC_IND

This parameter defines the number of consecutive out-of-sync indications after which the timer T_RLFAILURE shall be started (see also [10] and [21]).

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
N_OUTSYNC_IND			Integer (1, 2, ..., 256)	

9.2.1.48 Node B Communication Context ID

The Node B Communication Context ID is the identifier of the Communication Context in the Node B, it corresponds to the dedicated resources which are necessary for an UE using one or more dedicated channels in a given Node B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Node B Communication Context ID			INTEGER (0..2 ²⁰ -1)	2 ²⁰ -1 is reserved value to indicate all the existing and future Node B communication contexts that can be reached by the communication control port (All NBCC).

9.2.1.49 Payload CRC Presence Indicator

This parameter indicates whether FP payload 16 bit CRC is used or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Payload CRC Presence Indicator			ENUMERATED (CRC Included, CRC not included)	

9.2.1.49A PICH Power

The PICH Power IE indicates a power level relative to the [FDD-primary CPICH power] [TDD-primary CCPCH power] configured in a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PICH Power			Enumerated(-10..+5dB)	Step 1dB

9.2.1.50 Puncture Limit

The Puncture limit limits the amount of puncturing that can be applied in order to minimise the number of dedicated physical channels.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Puncture limit			INTEGER (0..15)	0: 40% 1: 44 % ... 14: 96% 15: 100% (no puncturing)

9.2.1.50A QE-Selector

The QE-Selector indicates from which source the value for the quality estimate (QE) shall be taken.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
QE-Selector			ENUMERATED(selected, non-selected)	

9.2.1.51 Report Characteristics

The report characteristics, defines how the reporting shall be performed.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Report characteristics				
>Report characteristics type			ENUMERATED(On Demand, Periodic, Event A, Event B, Event C, Event D, Event E, Event F,...)	
>Periodic Report Information	C – Periodic			
>>Report Periodicity	M		ENUMERATED (10ms...1min,...) step 10ms, (1min...1hr,...) step 1min,...	The frequency with which the Node B shall send measurement reports.
>Event A	C – Event A			
>>Measurement Threshold	M		Measurement Threshold 9.2.1.44	The threshold for which the Node B shall trigger a measurement report.
>>Measurement Hysteresis Time	O		ENUMERATED (10ms...1min,...) step 10ms,...	
>Event B	C – Event B			
>>Measurement Threshold	M		Measurement Threshold 9.2.1.44	The threshold for which the Node B shall trigger a measurement report.
>>Measurement Hysteresis Time	O		ENUMERATED (10ms...1min,...) step 10ms,...	
>Event C	C – Event C			
>>Measurement Increase/Decrease Threshold	M		Measurement Increase/Decrease Threshold 9.2.1.43	
>>Measurement Change Time	M		ENUMERATED (10ms...1min,...) step 10ms,...	The time the measurement entity shall rise on (in ms), in order to trigger a measurement report.
>Event D	C – Event D			
>>Measurement Increase/Decrease Threshold	M		Measurement Increase/Decrease Threshold 9.2.1.43	
>>Measurement Change Time	M		ENUMERATED (10ms...1min,...)	The time the measurement entity shall fall (in ms), in order to trigger a measurement report.

			step 10ms,...	
>Event E	C – Event E			
>>Measurement Threshold 1	M		Measureme nt Threshold 9.2.1.44	
>>Measurement Threshold 2	O		Measureme nt Threshold 9.2.1.44	
>>Measurement Hysteresis Time	O		ENUMERAT ED (10ms...1mi n,...) step 10ms,...	The hysteresis time in ms
>>Report Periodicity	O		ENUMERAT ED (10ms...1mi n,...) step 10ms, (1min...1hr, ...) step 1min,...	The frequency with which the Node B shall send measurement reports.
>Event F	C – Event F			
>>Measurement Threshold 1	M		Measureme nt Threshold 9.2.1.44	
>>Measurement Threshold 2	O		Measureme nt Threshold 9.2.1.44	
>>Measurement Hysteresis Time	O		ENUMERAT ED (10ms...1mi n,...) step 10ms,...	The hysteresis time in ms
>>Report Periodicity	O		ENUMERAT ED (10ms...1mi n,...) step 10ms, (1min...1hr, ...) step 1min,...	The frequency with which the Node B shall send measurement reports.

Condition	Explanation
C-Periodic	Valid if <i>Report Characteristics Type</i> IE indicates "periodic"
C-Event A	Valid if <i>Report Characteristics Type</i> IE indicates "Event A"
C-Event B	Valid if <i>Report Characteristics Type</i> IE indicates "Event B"
C-Event C	Valid if <i>Report Characteristics Type</i> IE indicates "Event C"
C-Event D	Valid if <i>Report Characteristics Type</i> IE indicates "Event D"
C-Event E	Valid if <i>Report Characteristics Type</i> IE indicates "Event E"
C-Event F	Valid if <i>Report Characteristics Type</i> IE indicates "Event F"

9.2.1.52 Resource Operational State

The resource operational state is used to indicate the current operational state of the associated resource following a Node B failure.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Resource Operational State			ENUMERATED(Enabled, Disabled)	When a resource is marked as disabled, then its child resources are implicitly disabled. Cell Resource hierarchy can be referred to [6].

9.2.1.52A Retention Priority

Void.

9.2.1.53 RL ID

The RL ID is the unique identifier for one RL associated with a UE.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RL ID			INTEGER (0..31)	

9.2.1.53A SFN

System Frame Number of the cell, see ref. [17].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SFN			Integer (0..4095)	

9.2.1.53B Segment type

Segment type as defined in [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Segment type			Enumerated(First segment, First segment short, Subsequent segment, Last segment, Last segment short, Complete SIB, Complete SIB short,...)	

9.2.1.54 SIB Deletion Indicator

Void.

9.2.1.55 SIB Originator

Indicates if the Node B shall fill in the SIB information or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SIB Originator			Enumerated(Node B, CRNC,...)	

9.2.1.56 Shutdown Timer

The shutdown timer shall indicate the length of time available to the CRNC to perform the block of a resource when a Normal priority block is requested.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Shutdown Timer			INTEGER(1..3600)	Value in seconds

9.2.1.56A T_RLFAILURE

The Radio Link Failure procedure shall be triggered after a period of time T_RLFAILURE has elapsed with a persisting out-of-sync indication (see also [10] and [21]).

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
T_RLFAILURE			ENUMERATED (0, 0.1, 0.2, .., 25.5)	In seconds

9.2.1.56B Start Of Audit Sequence Indicator

Indicates if the AUDIT REQUEST message initiates a new audit sequence or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Start Of Audit Sequence Indicator			ENUMERATED (start of audit sequence, not start of audit sequence)	

9.2.1.57 TFCI Presence

The TFCI Presence parameter indicates whether the TFCI shall be included. In TDD if it is present in the timeslot, it will be included within the first Channelization code listed.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI presence			ENUMERATED (Present, not present)	

9.2.1.58 TFCS (Transport Format Combination Set)

The Transport Format Combination Set is defined as a set of Transport Format Combinations on a Coded Composite Transport Channel. It is the allowed Transport Format Combinations of the corresponding Transport Channels. The DL Transport Format Combination Set is applicable for DL Transport Channels.

[FDD - Where the UE is assigned access to one or more DSCH transport channels then the UTRAN has the choice of two methods for signalling the mapping between TFCI(field 2) values and the corresponding TFC:

Method #1 - TFCI range

The mapping is described in terms of a number of groups, each group corresponding to a given transport format combination (value of CTFC(field2)). The CTFC(field2) value specified in the first group applies for all values of TFCI(field 2) between 0 and the specified 'Max TFCI(field2) value'. The CTFC(field2) value specified in the second group applies for all values of TFCI(field 2) between the 'Max TFCI(field2) value' specified in the last group plus one and the specified 'Max TFCI(field2) value' in the second group. The process continues in the same way for the following groups with the TFCI(field 2) value used by the UE in constructing its mapping table starting at the largest value reached in the previous group plus one.

Method #2 - Explicit

The mapping between TFCI(field 2) value and CTFC(field2) is spelt out explicitly for each value of TFCI (field2)]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE <i>DSCH</i> > <i>No split in TFCI</i>				This choice is made if : a) The TFCS refers to the uplink OR b) The mode is FDD and none of the Node B communication contexts are assigned any DSCH transport channels OR c) The mode is TDD
>>TFCS		1 to <maxnoofTFCs>		The first instance of the parameter corresponds to TFC zero, the second to 1 and so on.
>>>CTFC	M		INTEGER(0..MaxCTFC)	Integer number calculated according to [18]
>>>CHOICE Gain Factors	C-PhysChan			
>>>>Signalled Gain Factors				
>>>>>CHOICE mode				
>>>>>>FDD				
>>>>>>>Gain Factor β_c	M		Integer (0..15)	For UL DPCH or control part of PRACH or control part of PCPCH in FDD; mapping in accordance to [9]
>>>>>>>Gain Factor β_d	M		Integer (0..15)	For UL DPCH or data part of PRACH or data part of PCPCH in FDD; mapping in accordance to [9]
>>>>>>>TDD				
>>>>>>>>Gain Factor β	M		Integer (0..15)	For UL DPCH in TDD; mapping in accordance to [20]
>>>>>Reference TFC nr	O		Integer (0..3)	If this TFC is a reference TFC, this IE indicates the reference number
>>>>>Computed Gain Factors				
>>>>>>Reference TFC nr	M		Integer (0..3)	Indicates the reference TFC to be used to calculate the gain factors for this TFC
> <i>There is a split in the TFCI</i>				This choice is made if : a) The TFCS refers to the downlink AND b) The mode is FDD and one of the Node B communication contexts is assigned one or more DSCH transport channels
>>Transport format combination_DCH		1 to <MaxTFCI_1_Comb>		The first instance of the parameter <i>Transport format combination_DCH</i> corresponds to TFCI (field 1) = 0, the second to TFCI (field 1) = 1 and so on.
>>>CTFC(field1)	M		Integer(0..MaxCTFC)	Integer number calculated according to [18]. The calculation of CTFC ignores any DSCH transport channels which may be assigned
>>Choice Signalling method				
>>>TFCI range				
>>>>TFC mapping on DSCH		1 to <MaxNoTFCIGroups>		

>>>>Max TFCI(field2) value	M		Integer(1..1023)	This is the Maximum value in the range of TFCI(field2) values for which the specified CTFC(field2) applies
>>>>>CTFC(field 2)	M		Integer(0..MaxCTFC)	Integer number calculated according to [18]. The calculation of CTFC ignores any DCH transport channels which may be assigned
>>>Explicit				
>>>>Transport format combination_DSCH		1 to <MaxTFCI_2_Combs>		The first instance of the parameter <i>Transport format combination_DSCH</i> corresponds to TFCI (field2) = 0, the second to TFCI (field 2) = 1 and so on.
>>>>>CTFC(field2)	M		Integer(0..MaxCTFC)	Integer number calculated according to [18]. The calculation of CTFC ignores any DCH transport channels which may be assigned

Condition	Explanation
PhysChan	The choice shall be present if the TFCS concerns a UL DPCH or PRACH channel or PCPCH channel in FDD, not when the TFCS is used for other physical channels.

Range bound	Explanation
MaxnoofTFCs	The maximum number of Transport Format Combinations.
MaxTFCI_1_Combs	Maximum number of TFCI (field 1) combinations (given by 2 raised to the power of the length of the TFCI (field 1))
MaxTFCI_2_Combs	Maximum number of TFCI (field 2) combinations (given by 2 raised to the power of the length of the TFCI (field 2))
MaxNoTFCIGroups	Maximum number of groups, each group described in terms of a range of TFCI(field 2) values for which a single value of CTFC(field2) applies
MaxCTFC	Maximum number of the CTFC value is calculated according to the following: $\sum_{i=1}^I (L_i - 1)P_i$ with the notation according to [18]

9.2.1.59 Transport Format Set

The Transport Format Set is defined as the set of Transport Formats associated to a Transport Channel, e.g. DCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transport Format Set				
>Dynamic Transport Format Information		1 to <maxTFcount>		
>>Number of Transport blocks	M		INTEGER (0..512)	
>>Transport Block Size	C – Blocks		INTEGER (0..5000)	Bits
>>CHOICE <i>mode</i>	M			
>>>TDD				
>>>>Transmission Time interval Information	C- TTIdynamic	1 to <maxTTIcount>		
>>>>>Transmission time interval	M		Enumerated(10, 20, 40, 80,...)	ms
>Semi-static Transport Format Information		1		
>>Transmission time interval	M		ENUMERATED (10, 20, 40, 80, dynamic,...)	ms Value “dynamic” for TDD only
>>Type of channel coding	M		ENUMERATED (No coding, Convolutional, Turbo,...)	
>>Coding Rate	C – Coding		ENUMERATED (1/2, 1/3,...)	
>>Rate matching attribute	M		INTEGER (1..maxRM)	
>>CRC size	M		ENUMERATED (0, 8, 12, 16, 24,...)	
>>CHOICE <i>mode</i>	M			
>>>TDD				
>>>>2 nd interleaving mode	M		Enumerated(Frame related, Timeslot related,...)	

Condition	Explanation
Blocks	This IE is only present if "Number of Transport Blocks" is greater than 0.
Coding	This IE is only present if IE "Type of channel coding" is "Convolutional" or "Turbo"
<i>TTIdynamic</i>	This IE is mandatory if the “Transmission Time Interval” of the “Semi-static Transport Format Information” is “dynamic”. Otherwise it is absent.

Range bound	Explanation
MaxTFcount	Maximum number of different transport formats that can be included in the Transport format set for one transport channel.
MaxRM	Maximum number that could be set as rate matching attribute for a transport channel.
<i>MaxTTIcount</i>	The amount of different TTI that are possible for that transport format.

9.2.1.60 ToAWE

TOAWE is the window endpoint. DL data frames are expected to be received before this window endpoint. TOAWE is defined with a positive value relative Latest Time of Arrival (LTOA). A data frame arriving after TOAWS gives a Timing Adjustment Control frame response.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
ToAWE			INTEGER (0..2559)	ms.

9.2.1.61 ToAWS

TOAWS is the window startpoint. DL data frames are expected to be received after this window startpoint. TOAWS is defined with a positive value relative Time of Arrival Window Endpoint (TOAWE). A data frame arriving before TOAWS gives a Timing Adjustment Control frame response.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
ToAWS			INTEGER (0..1279)	ms.

9.2.1.62 Transaction ID

The transaction ID is used to associate all the messages belonging to the same procedure. Messages belonging to the same procedure shall use the same transaction ID.

The transaction ID is determined by the initiating peer of a procedure. For common procedures the transaction ID shall uniquely identify a procedure within all ongoing parallel procedures initiated by one protocol peer, using the same procedure code and signalled over the same Node B control port. For dedicated procedures the transaction ID shall uniquely identify a procedure within all ongoing parallel procedures initiated by one protocol peer, using the same procedure code and initiated towards the same Node B/CRNC context.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transaction ID			CHOICE INTEGER (0..127) or INTEGER (0..32767)	

9.2.1.62A Transport Bearer Request Indicator

Indicates whether a new transport bearer needs to be established for carrying the concerning transport channel.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transport Bearer Request Indicator			ENUMERATED (Bearer Requested, Bearer not Requested, ...)	

9.2.1.63 Transport Layer Address

Transport Layer Address defines the transport address of the Node B. For details on the Transport Address used see [2].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transport Layer Address			Bit string(1... 160, ...)	

9.2.1.64 TSTD Indicator

Indicates if TSTD shall be active or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TSTD Indicator			ENUMERATED(active, inactive)	

9.2.1.65 UARFCN

Designate the central frequency of the channel number.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
UARFCN			INTEGER (0..16383, ...)	corresponds to 0.0Hz.. 3276.6MHz ([15] section 5.4 and [15])

[Editor's Note: in RRC they have additional attributes such as the "raster" included in the IE]

9.2.1.65A UL Capacity Credit

The capacity credit indicates to the CRNC the Uplink capacity of a Local Cell or a Local Cell Group.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL Capacity Credit			INTEGER (0..65535)	

9.2.1.66 UL FP Mode

This parameter defines if normal or silent mode of the Frame Protocol shall be used for the UL.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL FP Mode			ENUMERATED (Normal, Silent,...)	

9.2.1.67 UL interference level

Void.

9.2.2 FDD specific parameters

9.2.2.A Active Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence activation. For details see [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CM Configuration Change CFN	M		CFN 9.2.1.7	Defines when the old Active pattern sequences, if active, shall be terminated. From this moment on, the new sequences are activated at the given TGCFN .
Transmission Gap Pattern Sequence Status		0 to <MaxTGPS>		
>TGPSI Identifier	M		Integer(1..<MaxTGPS>)	If the group is not present, none of the pattern sequences are activated. References an already defined sequence.
>TGPRC	M		Integer (0..63)	The number of transmission gap patterns within the Transmission Gap Pattern Sequence. 0=Infinity
>TGCFN	M		CFN 9.2.1.7	Connection Frame Number of the first frame of the first pattern within the Transmission Gap Pattern Sequence.

Range bound	Explanation
MaxTGPS	Maximum number of active pattern sequences. Value 6.

9.2.2.B Adjustment Period

Adjustment Period IE defines the period to be used for power balancing.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Adjustment Period			INTEGER (1 .. 256)	Frames

9.2.2.C Adjustment Ratio

Adjustment Ratio IE (*Radj*) defines the convergence rate used for the associated Adjustment Period.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Adjustment Ratio			INTEGER (0 .. 100)	The Adjustment Ratio is given with a granularity of 0.01 0 -> 0.00 1 -> 0.01 ... 100 -> 1.00

9.2.2.D AICH Power

The AICH Power IE indicates a power level relative to the primary CPICH power configured in a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
AICH Power			Integer(-22..+5)	Offset in dB

9.2.2.1 AICH Transmission Timing

IE/Group Name	Presence	Range	IE type and reference	Semantics description
AICH Transmission Timing			ENUMERATED (0, 1)	See parameter AICH_Transmission_Timing in ref. [7].

9.2.2.1A AP Preamble Signature

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
AP Preamble Signature			INTEGER (0..15)	Described in [9]

9.2.2.1B AP Sub Channel Number

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
AP Sub Channel Number			INTEGER (0..11)	Described in [10]

9.2.2.1C CD Sub Channel Numbers

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
CD Sub Channel Numbers			BIT STRING (12)	Bit 0=Sub Channel Number 0 Bit 1=Sub Channel Number 1 ... Bit 11=Sub Channel Number 11 [10]

9.2.2.1D Channel Assignment Indication

The Channel Assignment Indication indicates whether CA is active or inactive. When CA is active, CPCH is in Versatile Channel Assignment Method (VCAM) mode and when CA is inactive, CPCH is in UE Channel Selection Method (UCSM) mode. In VCAM mode (CA active), CA message in CD/CA-ICH shall be sent.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Channel Assignment Indication			ENUMERATED (CA Active, CA Inactive)	

9.2.2.2 Chip Offset

The Chip Offset is defined as the radio timing offset inside a radio frame. The Chip offset is used as offset for the DL DPCH relative to the Primary CPICH timing.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Chip Offset			INTEGER (0..38399)	Chips

9.2.2.2A Closed Loop Timing Adjustment Mode

Indicates when the phase/amplitude adjustment is performed in the DL in relation to the receipt of the UL feedback command in case of closed loop mode transmit diversity on DPCH.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Closed Loop Timing Adjustment Mode			ENUMERATED (Offset1, Offset2,...)	According to [10] chapter 7.1: Offset1 = slot(j+1)mod15 Offset2 = slot(j+2)mod15

9.2.2.3 Common Channels Capacity Consumption Law

Void

9.2.2.3A Compressed Mode Deactivation Flag

Compressed Mode Deactivation Flag indicates whether Compressed Mode shall be deactivated or not in the new RL.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Compressed Mode Deactivation flag			ENUMERATED (On, Off)	On = deactivate.

9.2.2.4 Compressed Mode Method

Void.

9.2.2.4A CPCH Allowed Total Rate

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CPCH Allowed Total Rate			ENUMERATED (15, 30, 60, 120, 240, 480, 960, 1920, 2880, 3840, 4800, 5760,...)	Channel Symbol Rate (ksps)

9.2.2.4B CPCH Scrambling Code Number

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
CPCH Scrambling Code Number			INTEGER (0..79)	Described in [9]

9.2.2.4C CPCH UL DPCH Slot Format

Indicates the slot format used in UL CPCH message control part, accordingly to [7]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CPCH UL DPCCH slot format			INTEGER (0..2,...)	

9.2.2.4D DCH FDD Information

The *DCH FDD Information* IE provides information for DCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DCH FDD Information		1 to <maxnoof DCHs>			–	
>Payload CRC Presence Indicator	M		9.2.1.49		–	
>UL FP mode	M		9.2.1.66		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	
>DCH Specific Info		1..<maxno ofDCHs>			–	
>>DCH ID	M		9.2.1.20		–	
>>Transport Format Set	M		9.2.1.59	For UL	–	
>>Transport Format Set	M		9.2.1.59	For DL	–	
>>Allocation/Retention Priority	M		9.2.1.1A		–	
>>Frame Handling Priority	M		9.2.1.30		–	
>>QE-Selector	M		9.2.1.50A		–	

Range bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs for one UE.

9.2.2.4E DCHs FDD to Modify

The *DCHs FDD to Modify* IE provides information for DCHs to be modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DCHs FDD to Modify		1..<max noofDC Hs>			–	
>UL FP Mode	O		9.2.1.66		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
>DCH Specific Info		1..<max noofDC Hs>			–	
>>DCH ID	M		9.2.1.20		–	
>>Transport Format Set	O		9.2.1.59	For the UL.	–	
>>Transport Format Set	O		9.2.1.59	For the DL.	–	
>>Allocation/Retention Priority	O		9.2.1.1A		–	
>>Frame Handling Priority	O		9.2.1.20		–	

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for one UE.

9.2.2.5 D-Field Length

Void.

9.2.2.6 Dedicated Channels Capacity Consumption Law

Void

9.2.2.7 Diversity Control Field

Void.

9.2.2.8 Diversity Indication

Void.

9.2.2.9 Diversity mode

Define the diversity mode to be applied.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Diversity Mode			ENUMERATED(None, STTD, Closed loop mode 1, Closed loop mode2,...)	

9.2.2.10 DL DPCH Slot Format

Indicates the slot format used in DPCH in DL, accordingly to [7].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL DPCH slot format			INTEGER (0..16,...)	

9.2.2.11 DL frame type

Void.

9.2.2.12 DL or Global Capacity Credit

Void

9.2.2.12A DL_power_averaging_window_size

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL_power_averaging_window_size			INTEGER (1..60)	1-60 time slots, step size 1 slot

9.2.2.13 DL Scrambling Code

DL scrambling code to be used by the RL. One cell may have multiple DL scrambling codes available.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL Scrambling Code			INTEGER (0..15)	0= Primary scrambling code of the cell 1...15= Secondary scrambling code

9.2.2.13A DL TPC pattern 01 count

The *DL TPC pattern 01 count* IE contains the value of the parameter n, which is used for determining the DL TPC pattern on Radio Links marked with “first RLS” by the *First RLS indicator* IE before UL synchronisation is achieved.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL TPC pattern 01 count			INTEGER(0..30,...)	

9.2.2.13B DSCH FDD Information

The *DSCH FDD Information* IE provides information for DSCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DSCH FDD Information		1 to <maxnoof DSCHs>			–	
>DSCH ID	M		9.2.1.27		–	
>Transport Format Set	M		9.2.1.59	For DSCH	–	
>Allocation/Retention Priority	M		9.2.1.1A		–	
>Frame Handling Priority	M		9.2.1.30		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	

Range bound	Explanation
MaxnoofDSCHs	Maximum number of DSCHs for one UE.

9.2.2.14 FDD DL Channelisation Code Number

The DL Channelisation Code Number indicates the DL Channelisation Code number for a specific DL physical channel.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FDD DL ChannelisationCode Number			INTEGER(0.. 511)	According to the mapping in [9]. The maximum value is equal to the DL spreading factor –1

9.2.2.14A FDD DL Code Information

The *FDD DL Code Information* IE provides DL Code information for the RL.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
FDD DL Code Information		1 to <maxnoof-DLCodes>			–	
>DL Scrambling Code	M		9.2.2.13		–	
>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>Transmission Gap Pattern Sequence Code Information	O		9.2.2.53B		–	

Range bound	Explanation
MaxnoofDLCodes	Maximum number of DL code information.

9.2.2.15 FDD S-CCPCH Offset

The Secondary CCPCH offset is defined as the time offset towards the Primary CCPCH in the cell. The offset is a multiple of 256 chips.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FDD S-CCPCH Offset			INTEGER(0..149)	0: 0 chip 1: 256 chip 2: 512 chip .. 149: 38144 chip [7]

9.2.2.16 FDD TPC DL step size

This parameter indicates step size for the DL power adjustment.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FDD TPC Downlink step size			ENUMERATED (0.5, 1, 1.5, 2,...)	

9.2.2.16A First RLS Indicator

The First *RLS Indicator* IE indicates if a specific Radio Link and all Radio Links which are part of the same Radio Link Set, shall be considered as the first radio links established towards the UE or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
First RLS Indicator			ENUMERATED (first RLS, not first RLS)	

9.2.2.17 Gap Period

Void.

9.2.2.18 Gap Position Mode

Void.

9.2.2.18A Limited Power Increase

The parameter is used for a more efficient use of the inner loop DL power control for non real time data.

If the limited power increase is used, Node B shall use the limited power increase algorithm as specified in [10], Chapter 5.2.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Limited Power Increase			ENUMERATED (Used, Not used)	

9.2.2.18B Inner Loop DL PC Status

The *Inner Loop DL PC Status* IE indicates whether inner loop DL control shall be active or inactive for all radio links associated with the context identified by the *Node B Communication Context Id* IE.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Inner Loop DL PC Status			ENUMERATED(Active, Inactive)	

9.2.2.19 Max Adjustment Period

Void.

9.2.2.20 Max Adjustment Step

Defines the maximum allowed value for the change of DL power level during a certain number of slots that can be utilised by the downlink power balancing algorithm. *Max Adjustment Step* IE defines a time period, in terms of number of slots, in which the accumulated power adjustment shall be maximum 1dB. This value does not include the DL inner loop PC adjustment.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max Adjustment Step			INTEGER (1 .. 10)	Slots

9.2.2.20A Max Number of PCPCHes

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max Number of PCPCHes			INTEGER(1..64, ...)	

9.2.2.21 Maximum Number of UL DPDCHs

This parameter is an UE Radio Access Capability parameter which is needed in rate matching algorithm.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max Number of UL DPDCHs			INTEGER (1..6)	

9.2.2.22 Minimum UL Channelisation Code Length

Minimum UL channelisation code length (spreading factor) of a DPDCH which is supported by UE. Needed by rate matching algorithm.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Min UL Channelisation Code length			ENUMERATED(4,8,16, 32,64,128, 256)	

9.2.2.23 Multiplexing Position

Multiplexing Position specifies whether fixed or flexible positions of transport channels shall be used in the physical channel.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Multiplexing Position			ENUMERATED(Fixed, Flexible)	

9.2.2.23A N_EOT

The N_EOT is defined as number of End of Transmission for release of PCPCH transmission.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
N_EOT			INTEGER (0..8)	TTI

9.2.2.23B NF_max

The NF_max is defined as maximum number of Frame in a PCPCH message data part.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
NF_max			INTEGER (1..64,...)	

9.2.2.23C N_Start_Message

The N_Start_Message is defined as number of Frames for start message of DL DPDCHes for a CPCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
N_Start_Message			INTEGER (1..8)	

9.2.2.24 Pattern Duration (PD)

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PD			INTEGER(0..2047, ...)	Frames If the value is set to '0', the Pattern Duration shall be interpreted as 'infinite'

9.2.2.24A PCP Length

Indicates CPCH power control preamble length.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PCP Length			ENUMERATED(0,8)	

9.2.2.25 PDSCH code mapping

This IE indicates the association between each possible value of TFCI(field 2) and the corresponding PDSCH channelisation code(s). There are three fundamentally different ways that the UTRAN must choose between in order to signal the mapping information, these are described below. The signalling capacity consumed by the different methods will vary depending on the way in which the UTRAN configures usage of the DSCH. A fourth option is also provided

which allows the UTRAN to replace individual entries in the TFCI(field 2) to PDSCH code mapping table with new PDSCH code values.

Method #1 - Using code range

The mapping is described in terms of a number of groups, each group associated with a given spreading factor. The UE maps TFCI(field2) values to PDSCH codes in the following way. The PDSCH code used for TFCI(field 2) = 0, is given by the SF and code number = 'PDSCH code start' of Group = 1. The PDSCH code used for TFCI(field 2) = 1, is given by the SF and code number = 'PDSCH code start' + 1. This continues, with unit increments in the value of TFC mapping to unit increments in code number up until the point that code number = 'PDSCH code stop'. The process continues in the same way for the next group with the TFCI(field 2) value used by the UE when constructing its mapping table starting at the largest value reached in the previous group plus one. In the event that 'PDSCH code start' = 'PDSCH code stop' (as may occur when mapping the PDSCH root code to a TFCI (field 2) value) then this is to be interpreted as defining the mapping between the channelisation code and a single TFCI (ie. TFCI(field 2) should not be incremented twice).

Note that each value of TFCI (field 2) maps to a given code number and when the 'multi-code info' parameter is greater than 1, then each value of TFCI (field 2) actually maps to a set of PDSCH codes. In this case contiguous codes are assigned, starting at the channelisation code denoted by the 'code number' parameter and including all codes with code numbers up to and including 'code number' - 1 + the value given in the parameter 'multi-code info'.

Method #2 - Using TFCI range

The mapping is described in terms of a number of groups, each group corresponding to a given PDSCH channelisation code or codes for multicode. The PDSCH code specified in the first group applies for all values of TFCI(field 2) between 0 and the specified 'Max TFCI(field2)'. The PDSCH code specified in the second group applies for all values of TFCI(field 2) between the 'Max TFCI(field2) value' specified in the last group plus one and the specified 'Max TFCI(field2)' in the second group. The process continues in the same way for the following groups with the TFCI(field 2) value starting at the largest value reached in the previous group plus one.

Method #3 - Explicit

The mapping between TFCI(field 2) value and PDSCH channelisation code is spelt out explicitly for each value of TFCI (field2)

Information Element/Group name	Presence	Range	IE type and reference	Semantics description
DL Scrambling Code	M		INTEGER (0..15)	Scrambling code on which PDSCH is transmitted. 0= Primary scrambling code of the cell 1...15 = Secondary scrambling code

<i>Choice signalling method</i>				
<i>>code range</i>				
>>PDSCH code mapping		1 to <MaxNoCodeGroups>		
>>Spreading factor	M		Enumerated(4, 8, 16, 32, 64, 128, 256)	
>>multi-code info	M		Integer(1..16)	This parameter indicates the number of PDSCH transmitted to the UE. The PDSCH codes all have the same SF as denoted by the Spreading factor parameter. Contiguous codes are assigned, starting at the channelisation code denoted by the spreading factor and code number parameter and including all codes, with code numbers up to and including 'code number' - 1 + 'multi-code info'. Note that 'code number'-1+'multi-code info' will not be allowed to exceed 'maxCodeNumComp'-1
>>Code number	M		Integer(0..maxCodeNumComp-1)	PDSCH code start, Numbering as described in [18]
>>Code number	M		Integer(0..maxCodeNumComp-1)	PDSCH code stop, Numbering as described in [18]
<i>>TFCI range</i>				
>>DSCH mapping		1 to <MaxNoTFCIGroups>		
>>>Max TFCI(field2) value	M		Integer(1..1023)	This is the maximum value in the range of TFCI(field 2) values for which the specified PDSCH code applies
>>>Spreading factor	M		Enumerated(4, 8, 16, 32, 64, 128, 256)	SF of PDSCH code
>>>multi-code info	M		Integer(1..16)	Semantics as described for this parameter above
>>>Code number	M		Integer(0..maxCodeNumComp-1)	Code number of PDSCH code. Numbering as described in [18]
<i>>Explicit</i>				
>>PDSCH code		1 to MaxTFCI_2_Combs		The first instance of the parameter PDSCH code corresponds to TFCI (field2) = 0, the second to TFCI(field 2) = 1 and so on.
>>>Spreading factor	M		Enumerated(4, 8, 16, 32, 64, 128, 256)	SF of PDSCH code
>>>multi-code info	M		Integer(1..16)	Semantics as described for this parameter above
>>>Code number	M		Integer(0..maxCodeNumComp-1)	Code number of PDSCH code. Numbering as described in [18]

Range Bound	Explanation
MaxCodeNumComp	Maximum number of codes at the defined spreading factor, within the complete code tree.
MaxTFCI_2_Combs	Maximum number of TFCI (field 2) combinations (given by 2 raised to the power of the length of the TFCI field 2)
MaxNoTFCIGroups	Maximum number of groups, each group described in terms of a range of TFCI(field 2) values for which a single PDSCH code applies.
MaxNoCodeGroups	Maximum number of groups, each group described in terms of a range of PDSCH channelisation code values for which a single spreading factor applies.

9.2.2.26 PICH Mode

The number of paging indicators (PIs) in a PICH frame.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PICH Mode			Enumerated(18, 36, 72, 144)	Number of PI per frame

9.2.2.27 Power Adjustment Type

Defines the characteristic of the power adjustment.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Adjustment Type			ENUMERATED (None, Common, Individual)	

9.2.2.28 Power Control Mode

Void.

9.2.2.29 Power Offset

This IE defines a power offset relative to the Downlink transmission power of a DPCH or a Secondary CCPCCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Offset			INTEGER (0...24)	Step 0.25 dB, range 0-6 dB

9.2.2.29A Power_Raise_Limit

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power_Raise_Limit			INTEGER (0..10)	0-10 dB, step size 1 dB

9.2.2.30 Power Resume Mode

Void.

9.2.2.31 Preamble Signature

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Preamble Signatures			BIT STRING (16)	Bit 0=P0 Bit 1=P1 .. Bit 15=P15 [9]

9.2.2.32 Preamble Threshold

The IE sets the threshold for preamble detection. The ratio between received preamble power during the preamble period and interference level shall be above this threshold in order to be acknowledged.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Preamble Threshold			INTEGER (0 , 1, ...,72)	0: - 36.0 dB 1: - 35.5 dB 2: - 35.0 dB .. 72: 0.0 dB

9.2.2.33 Primary CPICH Power

Primary CPICH power is the power that shall be used for transmitting the P-CPICH in a cell. The reference point is the antenna connector.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Primary CPICH power			Enumerated (-10, ..., 50)	Unit dBm Granularity 0.1 dB

9.2.2.34 Primary Scrambling code

The Primary scrambling code to be used in the cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Primary Scrambling Code			Integer (0 .. 511)	

9.2.2.35 Propagation Delay

Propagation delay is the one-way propagation delay of the radio signal from the MS to the Node B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Propagation Delay			INTEGER (0..255)	Chips. Step size is 3 chips. 0=0 chips, 1=3 chips, ...

9.2.2.36 QE-Selector

Void.

9.2.2.37 RACH Slot Format

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RACH Slot Format			ENUMERATED(0..3, ...)	See [7].

9.2.2.38 RACH sub Channel numbers

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RACH Sub Channel Numbers			BIT STRING (12)	Bit 0=Sub Channel Number 0 Bit 1=Sub Channel Number 1 ... Bit 11=Sub Channel Number 11

9.2.2.39 RL Set ID

The RL Set ID uniquely identifies one RL Set within a Node B Communication Context.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RL Set ID			INTEGER (0..31)	

9.2.2.39A Received total wide band power

The Received total wide band power indicates the UL interference at a certain cell under CRNC, see ref. [4].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Received total wide band power			INTEGER(0..621)	According to mapping in [22].

9.2.2.40 S-Field Length

The UE uses the S Field of the UL DPCCH slot to send the SSDT Cell ID to the network.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
S Field Length			ENUMERATED (1, 2,...)	

9.2.2.41 Scrambling Code Change

Void.

9.2.2.42 Scrambling Code Number

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Scrambling Code Word Number			INTEGER (0..15)	Identification of scrambling code see Ref. [9].

9.2.2.43 Secondary CCPCH Slot Format

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Secondary CCPCH Slot Format			INTEGER(0..17,...)	

9.2.2.44 SSdT Cell Identity

The SSdT Cell ID is a temporary ID for SSdT assigned to a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SSdT Cell Identity			ENUMERATED (a, b.., h)	

9.2.2.45 SSdT Cell ID Length

The SSdT Cell ID Length parameter shows the length of the SSdT Cell ID.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell ID Length			ENUMERATED (Short, Medium, Long)	

9.2.2.46 SSdT Support Indicator

The SSdT Support Indicator indicates whether a RL supports SSdT or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SSdT Support Indicator			ENUMERATED (SSdT Supported, SSdT not supported).	

9.2.2.47 SSdT Indication

The SSdT Indication indicates whether SSdT is in use by the UE or not.

IE/Group name	Presence	Range	IE type and reference	Semantics description
SSDT Indication			ENUMERATED(SSDT Active in the UE, SSDT not Active in the UE)	

9.2.2.48 STTD Indicator

Indicates if STTD shall be active or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
STTD Indicator			ENUMERATED(active, inactive)	

9.2.2.49 T_Cell

Timing delay used for defining start of SCH, CPICH and the DL scrambling code(s) in a cell relative BFN. Resolution 256 chips.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
T Cell			Enumerated (0 , 1, ...,9)	0: 0 chip 1: 256 chip .. 9: 2304 chip [17]

9.2.2.49A TFCI2 Bearer Information Response

The *TFCI2 Bearer Information Response* IE provides information for TFCI2 bearer that have been established or modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
TFCI2 Bearer Information Response		1				
>Binding ID	M		9.2.1.4		-	
>Transport Layer Address	M		9.2.1.63		-	

9.2.2.50 TFCI signalling mode

This parameter indicates if the normal or split mode is used for the TFCI. In the event that the split mode is to be used then the IE indicates whether the split is 'Hard' or 'Logical', and in the event that the split is 'Logical' the IE indicates the number of bits in TFCI (field 2).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI signalling option	M		ENUMERATED (Normal, Split)	'Normal' : meaning no split in the TFCI field (either 'Logical' or 'Hard') 'Split' : meaning there is a split in the TFCI field (either 'Logical' or 'Hard')
Split type	C-IfSplit		Enumerated (Hard, Logical)	'Hard' : meaning that TFCI (field 1) and TFCI (field 2) are each 5 bits long and each field is block coded separately. 'Logical' : meaning that on the physical layer TFCI (field 1) and TFCI (field 2) are concatenated, field 1 taking the most significant bits and field 2 taking the least significant bits). The whole is then encoded with a single block code.
Length of TFCI2	C-SplitType		Integer (1..10)	This IE indicates the length measured in number of bits of TFCI (field2).

Condition	Explanation
IfSplit	This IE is only present if 'TFCI signalling option' = 'split'
SplitType	This IE is only present if 'Split type' = 'Logical'

9.2.2.51 TGD

Void.

9.2.2.52 TGL

Void.

9.2.2.53 Transmit Diversity Indicator

The Transmit Diversity Indicator indicates whether transmit diversity shall be active or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transmit Diversity Indicator			ENUMERATED(active, inactive)	

9.2.2.53A Transmission Gap Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence. For details see [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transmission gap pattern Sequence Information		1 to <MaxTGPS>		
>TGPSI Identifier	M		Integer(1..<MaxTGPS>)	Transmission Gap Pattern Sequence Identifier Establish a reference to the compressed mode pattern sequence. Up to <MaxTGPS> simultaneous compressed mode pattern sequences can be used.
>TGSN	M		Integer (0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.
>TGL1	M		Integer(1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots.
>TGL2	O		Integer (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.
>TGD	M		Integer (0, 15.. 269)	Transmission gap distance indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to 0 (0 =undefined).
>TGPL1	M		Integer (1..144,...)	The duration of transmission gap pattern 1 in frames.
>TGPL2	O		Integer (1..144,...)	The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1.
>UL/DL mode	M		Enumerated (UL only, DL only, UL/DL)	Defines whether only DL, only UL, or combined UL/DL compressed mode is used.
>Downlink compressed mode method	C-DL		Enumerated (puncturing, SF/2, higher layer scheduling, ...)	Method for generating downlink compressed mode gap None means that compressed mode pattern is stopped.
>Uplink compressed mode method	C-UL		Enumerated (SF/2, higher layer scheduling, ...)	Method for generating uplink compressed mode gap.
>Downlink frame type	M		Enumerated (A, B,...)	Defines if frame structure type 'A' or 'B' shall be used in downlink compressed mode.
>DeltaSIR1	M		Integer (0..30)	Delta in UL SIR target value to be set in the Node B during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) Step 0.1 dB, Range 0-3dB
>DeltaSIRafter1	M		Integer	Delta in UL SIR target value to

			(0..30)	be set in the Node B one frame after the frame containing the start of the first transmission gap in the transmission gap pattern, Step 0.1 dB, Range 0-3dB
>DeltaSIR2	O		Integer (0..30)	Delta in UL SIR target value to be set in the Node B during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1. Step 0.1 dB, Range 0-3dB
>DeltaSIRafter2	O		Integer (0..30)	Delta in UL SIR target value to be set in the Node B one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1. Step 0.1 dB, Range 0-3dB

Condition	Explanation
C-UL	This information element is only sent when the value of the "UL/DL mode" IE is "UL only" or "UL/DL".
C-DL	This information element is only sent when the value of the "UL/DL mode" IE is "DL only" or "UL/DL".

Range bound	Explanation
MaxTGPS	Maximum number of transmission gap pattern sequences.

9.2.2.53B Transmission Gap Pattern Sequence Code Information

This IE indicates whether the alternative scrambling code shall be used for the Downlink compressed mode method or not in the Transmission Gap Pattern Sequence. For details see [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Scrambling code change			Enumerated (code change, no code change)	Indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'.

9.2.2.54 UL/DL compressed mode selection:

Void.

9.2.2.55 UL delta SIR

Void.

9.2.2.56 UL delta SIR after

Void.

9.2.2.57 UL DPCCH Slot Format

Indicates the slot format used in DPCCH in UL, accordingly to 25.211

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL DPCCH slot format			INTEGER (0..5,...)	

9.2.2.58 UL SIR

The UL SIR indicates a received UL SIR.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL SIR			ENUMERATED (-8.2 .. 17.3)	Step 0.1 dB

9.2.2.59 UL Scrambling Code

The UL Scrambling Code is the scrambling code used by UE. Every UE has its specific UL Scrambling Code.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL scrambling code				
>UL scrambling code number	M		INTEGER (0.. $2^{24}-1$)	
>UL scrambling code length	M		ENUMERATED (Short, Long)	

9.2.2.60 UL Capacity Credit

Void

9.2.3 TDD specific Parameters

9.2.3.1 Block STTD Indicator

Indicates if Block STTD antenna diversity is applied or not to the PCCPCH.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Block STTD Indicator			ENUMERATED (active, inactive)	

9.2.3.2 Burst Type

Void.

9.2.3.3 CCTrCH ID

The CCTrCH ID identifies unambiguously a CCTrCH inside a Radio Link.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CCTrCH ID			INTEGER (0..15)	

9.2.3.4 Cell Parameter ID

The Cell Parameter ID identifies unambiguously the Code Groups, Scrambling Codes, Midambles and Toffset (see [20]).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell Parameter ID			INTEGER (0..127,...)	

9.2.3.4A Constant Value

The Constant Value is the power margin used by a UE to set the proper uplink power for a DCH, USCH, or a RACH .

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Constant Value			INTEGER (-10...10,...)	Unit dB Granularity 1 dB.

9.2.3.4B DL Timeslot ISCP

DL Timeslot ISCP is the measured interference in a downlink timeslot at the UE, see ref. [5].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL Timeslot ISCP			INTEGER (0..91)	According to mapping in [5].

9.2.3.4C DCH TDD Information

The *DCH TDD Information* IE provides information for DCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DCH TDD Information		1 to <maxnoof DCHs>			–	
>Payload CRC Presence Indicator	M		9.2.1.49		–	
>UL FP mode	M		9.2.1.66		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	
>DCH Specific Info		1..<maxno ofDCHs>			–	
>>DCH ID	M		9.2.1.20		–	
>>CCTrCH ID	M		9.2.3.3	UL CCTrCH in which the DCH is mapped	–	
>>CCTrCH ID	M		9.2.3.3	DL CCTrCH in which the DCH is mapped	–	
>>Transport Format Set	M		9.2.1.59	For UL	–	
>>Transport Format Set	M		9.2.1.59	For DL	–	
>>Allocation/Retention Priority	M		9.2.1.1A		–	
>>Frame Handling Priority	O		9.2.1.30		–	
>>QE-Selector	C-CoordDCH		9.2.1.50A		–	

Condition	Explanation
CoordDCH	This IE is present only this DCH is part of a set of coordinated DCHs (number of instances of DCH Specific Info is greater than 1)

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for one UE

9.2.3.4D DCHs TDD to Modify

The *DCHs TDD to Modify* IE provides information for DCHs to be modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DCHs TDD to Modify		1..<maxnoofDCHs>			GLOBAL	reject
>UL FP Mode	O		9.2.1.66		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
>DCH Specific Info		1..<maxnoofDCHs>			–	
>>DCH ID	M		9.2.1.20		–	
>>CCTrCH ID	O		9.2.3.3	UL CCTrCH in which the DCH is mapped.	–	
>>CCTrCH ID	O		9.2.3.3	DL CCTrCH in which the DCH is mapped	–	
>>Transport Format Set	O		9.2.1.59	For the UL.	–	
>>Transport Format Set	O		9.2.1.59	For the DL.	–	
>>Allocation/Retention Priority	O		9.2.1.1A		–	
>>Frame Handling Priority	O		9.2.1.30		–	

Range bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs for one UE

9.2.3.4E DL Timeslot Information

The *DL Timeslot Information* IE provides information for DL Time slot to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DL Timeslot Information		1 .. <maxnoofDLts>			–	
>Time Slot	M		9.2.3.23		–	
>Midamble Shift and Burst Type	M		9.2.3.7		–	
>TFCI Presence	M		9.2.1.57		–	
>DL Code Information	M		TDD DL Code Information 9.2.3.x		–	

Range bound	Explanation
<i>MaxnoofDLts</i>	Maximum number of Downlink time slots per Radio Link

9.2.3.4F DL Time Slot ISCP Info

The *DL Time Slot ISCP Info* IE provides information for DL Interference level for each time slot within the Radio Link.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DL Time Slot ISCP Info		1 .. <maxnoofDLts>			–	
>Time Slot	M		9.2.3.23		–	
>DL Timeslot ISCP	M		9.2.3.4B		–	

Range bound	Explanation
<i>MaxnoofDLts</i>	Maximum number of Downlink time slots per Radio Link

9.2.3.5 DPCH ID

The DPCH ID identifies unambiguously a DPCH inside a Radio Link.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DPCH ID	M		INTEGER (0..239)	

9.2.3.5A DSCH TDD Information

The *DSCH TDD Information* IE provides information for DSCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DSCH TDD Information		1 to <MaxnoofDSCHs>			–	
>DSCH ID	M		9.2.1.27		–	
>CCTrCH ID	M		9.2.3.2	DL CCTrCH in which the DSCH is mapped	–	
>Transport Format Set	M		9.2.1.59	For DSCH	–	
>Allocation/Retention Priority	M		9.2.1.1A		–	
>Frame handling Priority	M		9.2.1.30		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	

Range bound	Explanation
<i>MaxnoofDSCHs</i>	Maximum number of DSCH for one UE

9.2.3.6 Max PRACH Midamble shift

Indicates the maximum number of Midamble shifts to be used in a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max PRACH Midamble Shifts			ENUMERATED (4, 8,...)	

9.2.3.7 Midamble shift and burst type

This information element indicates burst type and midamble allocation.

The 256 chip midamble supports 3 different time shifts, the 512 chips midamble may support 8 or even 16 time shifts.

Three different midamble allocation schemes exist:

Default midamble: the midamble shift is selected by layer 1 depending on the associated channelisation code (DL and UL)

Common midamble: the midamble shift is chosen by layer 1 depending on the number of channelisation codes (possible in DL only)

UE specific midamble: a UE specific midamble is explicitly assigned (DL and UL)

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE Burst Type				
>"Type 1"				
>>Midamble Allocation Mode	M		Enumerated (Default midamble, Common midamble, UE specific midamble)	
>>Midamble Shift	C-UE		Integer(0..15)	
>"Type 2"				
>>Midamble Allocation Mode	M		Enumerated (Default midamble, Common midamble, UE specific midamble)	
>>Midamble Shift	C-UE		INTEGER (0..5)	
>"Type 3"				UL only
>>Midamble Allocation Mode	M		Enumerated (Default midamble, UE specific midamble)	
>>Midamble Shift	C-UE		Integer(0..15)	
> "..."				

Condition	Explanation
C-UE	This information element is only sent when the value of the "Midamble Allocation Mode" IE is "UE-specific midamble".

9.2.3.8 Paging Indicator Length

The Paging Indicator Length indicates the number of symbols for Page Indication transmitted in one timeslot (see [19]).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Paging Indicator Length			ENUMERATED (2, 4, 8,...)	

9.2.3.9 PCCPCH Power

Primary CCPCH power is the power that shall be used for transmitting the P CCPCH in a cell. The P CCPCH power is the reference power in a TDD-cell. The reference point is the antenna connector.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PCCPCH Power			INTEGER(-15..+40,...)	Unit dBm Granularity 0.1 dB

9.2.3.10 PDSCH ID

The PDSCH ID identifies unambiguously a PDSCH inside a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PDSCH ID			INTEGER (0..255)	

9.2.3.11 PDSCH Set ID

The PDSCH Set Id identifies unambiguously a PDSCH Set inside a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PDSCH Set ID			INTEGER (0..255)	See [6]

9.2.3.12 PUSCH ID

The PUSCH ID identifies unambiguously a PUSCH inside a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PUSCH ID			INTEGER (0..255)	

9.2.3.13 PUSCH Set ID

The PUSCH Set ID identifies unambiguously a PUSCH Set inside a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PUSCH Set ID			INTEGER (0..255)	See [6]

9.2.3.14 PRACH Midamble

The PRACH Midamble indicates if only the Basic Midamble Sequence or also the time-inverted Midamble Sequence is used.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PRACH Midamble			ENUMERATED (Inverted, Direct)	

9.2.3.15 Repetition Length

The Repetition Length represents the number of consecutive Radio Frames inside a Repetition Period in which the same Time Slot is assigned to the same Physical Channel [see 18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Repetition Length			INTEGER(1..63)	

9.2.3.16 Repetition Period

The Repetition Period represents the number of consecutive Radio Frames after which the same assignment scheme of Time Slots to a Physical Channel is repeated. This means that if the Time Slot K is assigned to a physical channel in the Radio Frame J , it is assigned to the same physical channel also in all the Radio Frames $J+n*Repetition\ Period$ (where n is an integer) [see 18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Repetition Period			ENUMERATED(1, 2, 4, 8, 16, 32, 64)	

9.2.3.17 SCH Time Slot

The SCH Time Slot is only applicable if the value of Sync Case IE is Case 2.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SCH Time Slot			INTEGER(0..6)	

9.2.3.18 Sync case

The SCH and PCCPCH are mapped on one or two downlink slots per frame. There are two cases of SCH and PCCPCH allocation as follows:

- Case 1) SCH and PCCPCH allocated in a single TS#k
- Case 2) SCH allocated in two TS: TS#k and TS#k+8
PCCPCH allocated in TS#k

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Sync Case			Integer (1..2,...)	

9.2.3.19 TDD Channelisation Code

The Channelisation Code Number indicates which Channelisation Code is used for a given Physical Channel. In TDD the Channelisation Code is an Orthogonal Variable Spreading Factor code, that can have a spreading factor of 1, 2, 4, 8 or 16.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TDD Channelisation Code			ENUMERATED ((1/1), (2/1), (2/2), (4/1),... (4/4), (8/1), (8/8), (16/1)... (16/16),)	

9.2.3.19A TDD DPCH Offset

The Offset represents the phase information for the allocation of a group of dedicated physical channels. The first range is used when a starting offset is not required and the TDD Physical channel offset for each DPCH in the CCTrCH shall be directly determined from the TDD DPCH Offset. The second range is used when a starting offset is required. The TDD DPCH Offset shall map to the CFN and the TDD Physical Channel Offset for each DPCH in this CCTrCH shall be calculated by TDD DPCH Offset *mod* Repetition period, see [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TDD DPCH Offset			CHOICE INTEGER (0..63) or INTEGER (0..255)	

9.2.3.19B TDD DL Code Information

The *TDD DL Code Information* IE provides DL Code information for the RL.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
TDD DL Code Information		1 .. <maxnoOf DPCH>			–	
>DPCH ID	M		9.2.3.5		–	
>TDD Channelisation Code	M		9.2.3.19		–	

Range bound	Explanation
<i>maxnoOfDPCH</i>	Maximum number of DPCH in one CCTrCH

9.2.3.20 TDD Physical Channel Offset

The Offset represents the phase information for the allocation of a physical channel. (SFN *mod* Repetition Period = Offset) [see 18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TDD Physical Channel Offset			INTEGER (0..63)	

9.2.3.21 TDD TPC DL step size

This parameter indicates step size for the DL power adjustment.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TDD TPC Downlink step size			ENUMERATED (1, 2, 3,...)	

9.2.3.21A TDD UL Code Information

The *TDD UL Code Information* IE provides information for UL Code to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
TDD UL Code Information		1 .. <maxno OfDPCH >			–	
>DPCH ID	M		9.2.3.5		–	
>TDD Channelisation Code	M		9.2.3.19		–	

Range bound	Explanation
<i>MaxnoOfDPCH</i>	Maximum number of DPCH in one CCTrCH

9.2.3.22 TFCI Coding

The TFCI Coding describes the way how the TFCI bits are coded. By default 1 TFCI bit is coded with 4 bits, 2 TFCI bits are coded with 8 bits, 3-5 TFCI bits are coded with 16 bits and 6-10 TFCI bits are coded with 32 bits.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI Coding			Enumerated (4, 8, 16, 32,...)	

9.2.3.22A Timing Advance Applied

Defines the need for Rx Timing Deviation measurement results to be reported in a particular cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Timing Advance Applied			ENUMERATED (Yes, No)	

9.2.3.23 Time Slot

The Time Slot represents the minimum time interval inside a Radio Frame that can be assigned to a Physical Channel.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Time Slot			INTEGER (0..14)	

9.2.3.24 Time Slot Direction

This parameter indicates whether the TS in the cell is used in Uplink or Downlink direction.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Time Slot Direction			Enumerated (UL, DL,...)	

9.2.3.25 Time Slot Status

This parameter indicates whether the TS in the cell is active or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Time Slot Status			Enumerated (active, notActive,...)	

9.2.3.26 Transmission Diversity Applied

Defines if Transmission Diversity on DCHs to be applied in a cell (see[19]).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transmission Diversity Applied			Boolean	

9.2.3.26A UL Timeslot ISCP

UL Timeslot ISCP is the measured interference in a uplink timeslot at the Node B, see ref. [5].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL Timeslot ISCP			INTEGER (0..81)	According to mapping in [23].

9.2.3.26B UL PhysCH SF Variation

Indicates whether variation of SF in UL is supported by Radio Link or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL PhysCH SF Variation			ENUMERATED (SF_Variation_supported, SF_Variation_NOT_supported)	

9.2.3.26C UL Timeslot Information

The *UL Timeslot Information* IE provides information on the time slot allocation for an UL DPCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
UL Timeslot Information		1 .. <maxnoofULts>			–	
>Time Slot	M		9.2.3.23		–	
>Midamble Shift and Burst Type	M		9.2.3.7		–	
>TFCI Presence	M		9.2.1.57		–	
> UL Code Information	M		TDD UL Code Information 9.2.3.x			

Range bound	Explanation
<i>MaxnoofULts</i>	Maximum number of Uplink time slots per Radio Link

9.2.3.26D UL Time Slot ISCP Info

The *UL Time Slot ISCP Info* IE provides information for UL Interference level for each time slot within the Radio Link.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
UL Time Slot ISCP Info		1 .. <maxnoofULts>				
>Time Slot	M		9.2.3.23			
>UL Timeslot ISCP	M		9.2.3.26A			

Range bound	Explanation
<i>MaxnoofULts</i>	Maximum number of Uplink time slots per Radio Link

9.2.3.27 USCH ID

The USCH ID uniquely identifies a USCH within a Node B Communication Context.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
USCH ID			INTEGER (0..255)	

9.2.3.28 USCH Information

The *USCH Information* IE provides information for USCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
USCH Information		1 to <Maxnoof USCHs>			–	
>USCH ID	M		9.2.3.27		–	
>CCTrCH ID	M		9.2.3.3	UL CCTrCH in which the USCH is mapped	–	
>Transport Format Set	M		9.2.1.59	For USCH	–	
>Allocation/Retention Priority	M		9.2.1.1A		–	

Range bound	Explanation
MaxnoofUSCHs	Maximum number of USCH for one UE

9.2.3.29 USCH Information Response

The *USCH Information Response* IE provides information for USCHs that have been established or modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
USCH Information Response		1 .. <Maxnoof USCHs>			–	
>USCH ID	M		9.2.3.27		–	
>Binding ID	O		9.2.1.4		–	
>Transport Layer Address	O		9.2.1.63		–	

Range bound	Explanation
MaxnoofUSCHs	Maximum number of USCHs for one UE

9.3 Message and Information element abstract syntax (with ASN.1)

9.3.0 General

Section 9.3 presents the Abstract Syntax of NBAP protocol with ASN.1. In case there is contradiction between the ASN.1 definition in this section and the tabular format in sections 9.1 and 9.2, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional elements, where the tabular format shall take precedence.

The ASN.1 definition specifies the structure and content of NBAP messages. NBAP messages can contain any IEs specified in the object set definitions for that message without the order or number of occurrence being restricted by ASN.1. However, for this version of the standard, a sending entity shall construct a NBAP message according to the PDU definitions module and with the following additional rules (Note that in the following IE means an IE in the object set with an explicit id. If one IE needed to appear more than once in one object set, then the different occurrences have different IE ids):

- IEs shall be ordered (in an IE container) in the order they appear in object set definitions.
- Object set definitions specify how many times IEs may appear. An IE shall appear exactly once if the presence field in an object has value "mandatory". An IE may appear at most once if the presence field in an object has value "optional" or "conditional". If in a tabular format there is multiplicity specified for an IE (i.e. an IE list) then in the corresponding ASN.1 definition the list definition is separated into two parts. The first part defines an IE container list where the list elements reside. The second part defines list elements. The IE container list appears as an IE of its own. For this version of the standard an IE container list may contain only one kind of list elements.

If a NBAP message that is not constructed as defined above is received, this shall be considered as Abstract Syntax Error, and the message shall be handled as defined for Abstract Syntax Error in section 10.3.6.

9.3.1 Usage of Private Message mechanism for non-standard use

The private message mechanism for non-standard use may be used

- For special operator- (and/or vendor) specific features considered not to be part of the basic functionality, i.e. the functionality required for a complete and high-quality specification in order to guarantee multi-vendor inter-operability.
- By vendors for research purposes, e.g. to implement and evaluate new algorithms/features before such features are proposed for standardisation

The private message mechanism shall not be used for basic functionality. Such functionality shall be standardised.

9.3.2 Elementary Procedure Definitions

```
-- *****
--
-- Elementary Procedure definitions
--
-- *****
```

```
NBAP-PDU-Discriptions {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-PDU-Descriptions (0) }
```

```
DEFINITIONS AUTOMATIC TAGS ::=
```

```
BEGIN
```

```
-- *****
--
-- IE parameter types from other modules.
--
-- *****
```

```
IMPORTS
```

```
    Criticality,
    ProcedureID,
    MessageDiscriminator,
    TransactionID
```

```
FROM NBAP-CommonDataTypes
```

```
    CommonTransportChannelSetupRequestFDD,
    CommonTransportChannelSetupRequestTDD,
    CommonTransportChannelSetupResponse,
    CommonTransportChannelSetupFailure,
    CommonTransportChannelReconfigurationRequestFDD,
    CommonTransportChannelReconfigurationRequestTDD,
    CommonTransportChannelReconfigurationResponse,
    CommonTransportChannelReconfigurationFailure,
    CommonTransportChannelDeletionRequest,
    CommonTransportChannelDeletionResponse,
    BlockResourceRequest,
    BlockResourceResponse,
    BlockResourceFailure,
    UnblockResourceIndication,
    AuditFailure,
    AuditRequiredIndication,
    AuditRequest,
    AuditResponse,
    CommonMeasurementInitiationRequest,
    CommonMeasurementInitiationResponse,
    CommonMeasurementInitiationFailure,
    CommonMeasurementReport,
    CommonMeasurementTerminationRequest,
    CommonMeasurementFailureIndication,
    CellSetupRequestFDD,
    CellSetupRequestTDD,
    CellSetupResponse,
    CellSetupFailure,
    CellReconfigurationRequestFDD,
    CellReconfigurationRequestTDD,
    CellReconfigurationResponse,
```

CellReconfigurationFailure,
 CellDeletionRequest,
 CellDeletionResponse,
 ResourceStatusIndication,
 SystemInformationUpdateRequest,
 SystemInformationUpdateResponse,
 SystemInformationUpdateFailure,
 ResetRequest,
 ResetResponse,
 RadioLinkPreemptionRequiredIndication,
 RadioLinkSetupRequestFDD,
 RadioLinkSetupRequestTDD,
 RadioLinkSetupResponseFDD,
 RadioLinkSetupResponseTDD,
 RadioLinkSetupFailureFDD,
 RadioLinkSetupFailureTDD,
 RadioLinkAdditionRequestFDD,
 RadioLinkAdditionRequestTDD,
 RadioLinkAdditionResponseFDD,
 RadioLinkAdditionResponseTDD,
 RadioLinkAdditionFailureFDD,
 RadioLinkAdditionFailureTDD,
 RadioLinkReconfigurationPrepareFDD,
 RadioLinkReconfigurationPrepareTDD,
 RadioLinkReconfigurationReady,
 RadioLinkReconfigurationFailure,
 RadioLinkReconfigurationCommit,
 RadioLinkReconfigurationCancel,
 RadioLinkReconfigurationRequestFDD,
 RadioLinkReconfigurationRequestTDD,
 RadioLinkReconfigurationResponse,
 RadioLinkDeletionRequest,
 RadioLinkDeletionResponse,
 DL-PowerControlRequest,
 DL-PowerTimeslotControlRequest,
 DedicatedMeasurementInitiationRequest,
 DedicatedMeasurementInitiationResponse,
 DedicatedMeasurementInitiationFailure,
 DedicatedMeasurementReport,
 DedicatedMeasurementTerminationRequest,
 DedicatedMeasurementFailureIndication,
 RadioLinkFailureIndication,
 RadioLinkRestoreIndication,
 CompressedModeCommand,
 ErrorIndication,
 PrivateMessage,
 PhysicalSharedChannelReconfigurationRequestTDD,
 PhysicalSharedChannelReconfigurationResponseTDD,
 PhysicalSharedChannelReconfigurationFailureTDD

FROM NBAP-PDU-Contents

id-audit,
 id-auditRequired,

```

id-blockResource,
id-cellDeletion,
id-cellReconfiguration,
id-cellSetup,
id-commonMeasurementFailure,
id-commonMeasurementInitiation,
id-commonMeasurementReport,
id-commonMeasurementTermination,
id-commonTransportChannelDelete,
id-commonTransportChannelReconfigure,
id-commonTransportChannelSetup,
id-compressedModeCommand,
id-dedicatedMeasurementFailure,
id-dedicatedMeasurementInitiation,
id-dedicatedMeasurementReport,
id-dedicatedMeasurementTermination,
id-downlinkPowerControl,
id-downlinkPowerTimeslotControl,
id-errorIndicationForDedicated,
id-errorIndicationForCommon,
id-physicalSharedChannelReconfiguration,
id-privateMessageForDedicated,
id-privateMessageForCommon,
id-radioLinkAddition,
id-radioLinkDeletion,
id-radioLinkFailure,
id-radioLinkPreemption,
id-radioLinkRestoration,
id-radioLinkSetup,
id-reset,
id-resourceStatusIndication,
id-synchronisedRadioLinkReconfigurationCancellation,
id-synchronisedRadioLinkReconfigurationCommit,
id-synchronisedRadioLinkReconfigurationPreparation,
id-systemInformationUpdate,
id-unblockResource,
id-unSynchronisedRadioLinkReconfiguration
FROM NBAP-Constants;

-- *****
--
-- Interface Elementary Procedure Class
--
-- *****

NBAP-ELEMENTARY-PROCEDURE ::= CLASS {
    &InitiatingMessage           ,
    &SuccessfulOutcome           OPTIONAL,
    &UnsuccessfulOutcome         OPTIONAL,
    &Outcome                     OPTIONAL,
    &messageDiscriminator        MessageDiscriminator,
    &procedureID                 ProcedureID    UNIQUE,
    &criticality                 Criticality     DEFAULT ignore

```

```

}

WITH SYNTAX {
    INITIATING MESSAGE           &InitiatingMessage
    [SUCCESSFUL OUTCOME         &SuccessfulOutcome]
    [UNSUCCESSFUL OUTCOME       &UnsuccessfulOutcome]
    [OUTCOME                     &Outcome]
    MESSAGE DISCRIMINATOR       &messageDiscriminator
    PROCEDURE ID                 &procedureID
    [CRITICALITY                 &criticality]
}

-- *****
--
-- Interface PDU Definition
--
-- *****

NBAP-PDU ::= CHOICE {
    initiatingMessage           InitiatingMessage,
    succesfulOutcome            SuccessfulOutcome,
    unsuccessfulOutcome         UnsuccessfulOutcome,
    outcome                     Outcome,
    ...
}

InitiatingMessage ::= SEQUENCE {
    procedureID                 NBAP-ELEMENTARY-PROCEDURE.&procedureID   ( {NBAP-ELEMENTARY-PROCEDURES} ),
    criticality                 NBAP-ELEMENTARY-PROCEDURE.&criticality ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    messageDiscriminator        NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID               TransactionID,
    value                       NBAP-ELEMENTARY-PROCEDURE.&InitiatingMessage ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}

SuccessfulOutcome ::= SEQUENCE {
    procedureID                 NBAP-ELEMENTARY-PROCEDURE.&procedureID   ( {NBAP-ELEMENTARY-PROCEDURES} ),
    criticality                 NBAP-ELEMENTARY-PROCEDURE.&criticality ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    messageDiscriminator        NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID               TransactionID,
    value                       NBAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}

UnsuccessfulOutcome ::= SEQUENCE {
    procedureID                 NBAP-ELEMENTARY-PROCEDURE.&procedureID   ( {NBAP-ELEMENTARY-PROCEDURES} ),
    criticality                 NBAP-ELEMENTARY-PROCEDURE.&criticality ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    messageDiscriminator        NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID               TransactionID,
    value                       NBAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}

Outcome ::= SEQUENCE {
    procedureID                 NBAP-ELEMENTARY-PROCEDURE.&procedureID   ( {NBAP-ELEMENTARY-PROCEDURES} ),
    criticality                 NBAP-ELEMENTARY-PROCEDURE.&criticality ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
}

```

```

messageDiscriminator NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
transactionID TransactionID,
value NBAP-ELEMENTARY-PROCEDURE.&Outcome ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

```

```

-- *****
--
-- Interface Elementary Procedure List
--
-- *****

```

```

NBAP-ELEMENTARY-PROCEDURES NBAP-ELEMENTARY-PROCEDURE ::= {
  NBAP-ELEMENTARY-PROCEDURES-CLASS-1 |
  NBAP-ELEMENTARY-PROCEDURES-CLASS-2 |
  ...
}

```

```

NBAP-ELEMENTARY-PROCEDURES-CLASS-1 NBAP-ELEMENTARY-PROCEDURE ::= {
  cellSetupFDD
  cellSetupTDD
  cellReconfigurationFDD
  cellReconfigurationTDD
  cellDeletion
  commonTransportChannelSetupFDD
  commonTransportChannelSetupTDD
  commonTransportChannelReconfigureFDD
  commonTransportChannelReconfigureTDD
  commonTransportChannelDelete
  audit
  blockResource
  radioLinkSetupFDD
  radioLinkSetupTDD
  systemInformationUpdate
  commonMeasurementInitiation
  radioLinkAdditionFDD
  radioLinkAdditionTDD
  radioLinkDeletion
  reset
  synchronisedRadioLinkReconfigurationPreparationFDD
  synchronisedRadioLinkReconfigurationPreparationTDD
  unSynchronisedRadioLinkReconfigurationFDD
  unSynchronisedRadioLinkReconfigurationTDD
  dedicatedMeasurementInitiation
  physicalSharedChannelReconfiguration
  ...
}

```

```

NBAP-ELEMENTARY-PROCEDURES-CLASS-2 NBAP-ELEMENTARY-PROCEDURE ::= {
  resourceStatusIndication
  auditRequired
  commonMeasurementReport
  commonMeasurementTermination
  commonMeasurementFailure
}

```



```

    synchronisedRadioLinkReconfigurationCommit
    synchronisedRadioLinkReconfigurationCancellation
    radioLinkFailure
    radioLinkPreemption
    radioLinkRestoration
    dedicatedMeasurementReport
    dedicatedMeasurementTermination
    dedicatedMeasurementFailure
    downlinkPowerControlFDD
    downlinkPowerTimeslotControl
    compressedModeCommand
    unblockResource
    errorIndicationForDedicated
    errorIndicationForCommon
    privateMessageForDedicated
    privateMessageForCommon
    ...
}

-- *****
--
-- Interface Elementary Procedures
--
-- *****

-- Class 1

-- *** CellSetup (FDD) ***
cellSetupFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellSetupRequestFDD
    SUCCESSFUL OUTCOME      CellSetupResponse
    UNSUCCESSFUL OUTCOME    CellSetupFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID             { procedureCode id-cellSetup, ddMode fdd }
    CRITICALITY              reject
}

-- *** CellSetup (TDD) ***
cellSetupTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellSetupRequestTDD
    SUCCESSFUL OUTCOME      CellSetupResponse
    UNSUCCESSFUL OUTCOME    CellSetupFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID             { procedureCode id-cellSetup, ddMode tdd }
    CRITICALITY              reject
}

-- *** CellReconfiguration(FDD) ***
cellReconfigurationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellReconfigurationRequestFDD
    SUCCESSFUL OUTCOME      CellReconfigurationResponse
    UNSUCCESSFUL OUTCOME    CellReconfigurationFailure
    MESSAGE DISCRIMINATOR   common
}

```

```

    PROCEDURE ID      { procedureCode id-cellReconfiguration, ddMode fdd }
    CRITICALITY      reject
  }

-- *** CellReconfiguration(TDD) ***
cellReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CellReconfigurationRequestTDD
  SUCCESSFUL OUTCOME      CellReconfigurationResponse
  UNSUCCESSFUL OUTCOME    CellReconfigurationFailure
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-cellReconfiguration, ddMode tdd }
  CRITICALITY             reject
}

-- *** CellDeletion ***
cellDeletion NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CellDeletionRequest
  SUCCESSFUL OUTCOME      CellDeletionResponse
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-cellDeletion, ddMode common }
  CRITICALITY             reject
}

-- *** CommonTransportChannelSetup (FDD) ***
commonTransportChannelSetupFDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CommonTransportChannelSetupRequestFDD
  SUCCESSFUL OUTCOME      CommonTransportChannelSetupResponse
  UNSUCCESSFUL OUTCOME    CommonTransportChannelSetupFailure
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-commonTransportChannelSetup, ddMode fdd }
  CRITICALITY             reject
}

-- *** CommonTransportChannelSetup (TDD) ***
commonTransportChannelSetupTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CommonTransportChannelSetupRequestTDD
  SUCCESSFUL OUTCOME      CommonTransportChannelSetupResponse
  UNSUCCESSFUL OUTCOME    CommonTransportChannelSetupFailure
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-commonTransportChannelSetup, ddMode tdd }
  CRITICALITY             reject
}

-- *** CommonTransportChannelReconfigure (FDD) ***
commonTransportChannelReconfigureFDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CommonTransportChannelReconfigurationRequestFDD
  SUCCESSFUL OUTCOME      CommonTransportChannelReconfigurationResponse
  UNSUCCESSFUL OUTCOME    CommonTransportChannelReconfigurationFailure
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-commonTransportChannelReconfigure, ddMode fdd }
  CRITICALITY             reject
}

```

```
-- *** CommonTransportChannelReconfigure (TDD) ***
commonTransportChannelReconfigureTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CommonTransportChannelReconfigurationRequestTDD
  SUCCESSFUL OUTCOME      CommonTransportChannelReconfigurationResponse
  UNSUCCESSFUL OUTCOME    CommonTransportChannelReconfigurationFailure
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-commonTransportChannelReconfigure, ddMode tdd }
  CRITICALITY             reject
}

-- *** CommonTransportChannelDelete ***
commonTransportChannelDelete NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CommonTransportChannelDeletionRequest
  SUCCESSFUL OUTCOME      CommonTransportChannelDeletionResponse
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-commonTransportChannelDelete, ddMode common }
  CRITICALITY             reject
}

-- *** Audit ***
audit NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      AuditRequest
  SUCCESSFUL OUTCOME      AuditResponse
  UNSUCCESSFUL OUTCOME    AuditFailure
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-audit, ddMode common }
  CRITICALITY             reject
}

-- *** BlockResourceRequest ***
blockResource NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      BlockResourceRequest
  SUCCESSFUL OUTCOME      BlockResourceResponse
  UNSUCCESSFUL OUTCOME    BlockResourceFailure
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-blockResource, ddMode common }
  CRITICALITY             reject
}

-- *** RadioLinkSetup (FDD) ***
radioLinkSetupFDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      RadioLinkSetupRequestFDD
  SUCCESSFUL OUTCOME      RadioLinkSetupResponseFDD
  UNSUCCESSFUL OUTCOME    RadioLinkSetupFailureFDD
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-radioLinkSetup, ddMode fdd }
  CRITICALITY             reject
}

-- *** RadioLinkSetup (TDD) ***
radioLinkSetupTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      RadioLinkSetupRequestTDD
  SUCCESSFUL OUTCOME      RadioLinkSetupResponseTDD
```

```

    UNSUCCESSFUL OUTCOME      RadioLinkSetupFailureTDD
    MESSAGE DISCRIMINATOR      common
    PROCEDURE ID                { procedureCode id-radioLinkSetup, ddMode tdd }
    CRITICALITY                 reject
}

-- *** SystemInformationUpdate ***
systemInformationUpdate NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE         SystemInformationUpdateRequest
    SUCCESSFUL OUTCOME         SystemInformationUpdateResponse
    UNSUCCESSFUL OUTCOME      SystemInformationUpdateFailure
    MESSAGE DISCRIMINATOR      common
    PROCEDURE ID               { procedureCode id-systemInformationUpdate, ddMode common }
    CRITICALITY                 reject
}

-- *** Reset ***
reset NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE         ResetRequest
    SUCCESSFUL OUTCOME         ResetResponse
    MESSAGE DISCRIMINATOR      common
    PROCEDURE ID               { procedureCode id-reset, ddMode common }
    CRITICALITY                 reject
}

-- *** CommonMeasurementInitiation ***
commonMeasurementInitiation NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE         CommonMeasurementInitiationRequest
    SUCCESSFUL OUTCOME         CommonMeasurementInitiationResponse
    UNSUCCESSFUL OUTCOME      CommonMeasurementInitiationFailure
    MESSAGE DISCRIMINATOR      common
    PROCEDURE ID               { procedureCode id-commonMeasurementInitiation, ddMode common }
    CRITICALITY                 reject
}

-- *** RadioLinkAddition (FDD) ***
radioLinkAdditionFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE         RadioLinkAdditionRequestFDD
    SUCCESSFUL OUTCOME         RadioLinkAdditionResponseFDD
    UNSUCCESSFUL OUTCOME      RadioLinkAdditionFailureFDD
    MESSAGE DISCRIMINATOR      dedicated
    PROCEDURE ID               { procedureCode id-radioLinkAddition, ddMode fdd }
    CRITICALITY                 reject
}

-- *** RadioLinkAddition (TDD) ***
radioLinkAdditionTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE         RadioLinkAdditionRequestTDD
    SUCCESSFUL OUTCOME         RadioLinkAdditionResponseTDD
    UNSUCCESSFUL OUTCOME      RadioLinkAdditionFailureTDD
    MESSAGE DISCRIMINATOR      dedicated

```

```

    PROCEDURE ID          { procedureCode id-radioLinkAddition, ddMode tdd }
    CRITICALITY          reject
}

-- *** RadioLinkDeletion ***
radioLinkDeletion NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    RadioLinkDeletionRequest
    SUCCESSFUL OUTCOME    RadioLinkDeletionResponse
    MESSAGE DISCRIMINATOR dedicated
    PROCEDURE ID          { procedureCode id-radioLinkDeletion, ddMode common }
    CRITICALITY          reject
}

-- *** SynchronisedRadioLinkReconfigurationPreparation (FDD) ***
synchronisedRadioLinkReconfigurationPreparationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    RadioLinkReconfigurationPrepareFDD
    SUCCESSFUL OUTCOME    RadioLinkReconfigurationReady
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    MESSAGE DISCRIMINATOR dedicated
    PROCEDURE ID          { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode fdd }
    CRITICALITY          reject
}

-- *** SynchronisedRadioLinkReconfigurationPreparation (TDD) ***
synchronisedRadioLinkReconfigurationPreparationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    RadioLinkReconfigurationPrepareTDD
    SUCCESSFUL OUTCOME    RadioLinkReconfigurationReady
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    MESSAGE DISCRIMINATOR dedicated
    PROCEDURE ID          { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode tdd }
    CRITICALITY          reject
}

-- *** UnSynchronisedRadioLinkReconfiguration (FDD) ***
unSynchronisedRadioLinkReconfigurationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    RadioLinkReconfigurationRequestFDD
    SUCCESSFUL OUTCOME    RadioLinkReconfigurationResponse
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    MESSAGE DISCRIMINATOR dedicated
    PROCEDURE ID          { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode fdd }
    CRITICALITY          reject
}

-- *** UnSynchronisedRadioLinkReconfiguration (TDD) ***
unSynchronisedRadioLinkReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    RadioLinkReconfigurationRequestTDD
    SUCCESSFUL OUTCOME    RadioLinkReconfigurationResponse
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    MESSAGE DISCRIMINATOR dedicated
    PROCEDURE ID          { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode tdd }
    CRITICALITY          reject
}

```

```

-- *** DedicatedMeasurementInitiation ***
dedicatedMeasurementInitiation NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      DedicatedMeasurementInitiationRequest
    SUCCESSFUL OUTCOME      DedicatedMeasurementInitiationResponse
    UNSUCCESSFUL OUTCOME    DedicatedMeasurementInitiationFailure
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-dedicatedMeasurementInitiation, ddMode common }
    CRITICALITY             reject
}

-- *** PhysicalSharedChannelReconfiguration (TDD only) ***
physicalSharedChannelReconfiguration NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      PhysicalSharedChannelReconfigurationRequestTDD
    SUCCESSFUL OUTCOME      PhysicalSharedChannelReconfigurationResponseTDD
    UNSUCCESSFUL OUTCOME    PhysicalSharedChannelReconfigurationFailureTDD
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-physicalSharedChannelReconfiguration, ddMode tdd }
    CRITICALITY             reject
}

-- Class 2

-- *** ResourceStatusIndication ***
resourceStatusIndication NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      ResourceStatusIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-resourceStatusIndication, ddMode common }
    CRITICALITY             ignore
}

-- *** AuditRequired ***
auditRequired NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      AuditRequiredIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-auditRequired, ddMode common }
    CRITICALITY             ignore
}

-- *** CommonMeasurementReport ***
commonMeasurementReport NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CommonMeasurementReport
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-commonMeasurementReport, ddMode common }
    CRITICALITY             ignore
}

-- *** CommonMeasurementTermination ***
commonMeasurementTermination NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CommonMeasurementTerminationRequest
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-commonMeasurementTermination, ddMode common }
    CRITICALITY             ignore
}

```

```
-- *** CommonMeasurementFailure ***
commonMeasurementFailure NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CommonMeasurementFailureIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-commonMeasurementFailure, ddMode common }
    CRITICALITY             ignore
}

-- *** SynchronisedRadioLinkReconfirurationCommit ***
synchronisedRadioLinkReconfigurationCommit NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationCommit
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-synchronisedRadioLinkReconfigurationCommit, ddMode common }
    CRITICALITY             ignore
}

-- *** SynchronisedRadioReconfigurationCancellation ***
synchronisedRadioLinkReconfigurationCancellation NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationCancel
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-synchronisedRadioLinkReconfigurationCancellation, ddMode common }
    CRITICALITY             ignore
}

-- *** RadioLinkFailure ***
radioLinkFailure NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkFailureIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkFailure, ddMode common }
    CRITICALITY             ignore
}

-- *** RadioLinkPreemption ***
radioLinkPreemption NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkPreemptionRequiredIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkPreemption, ddMode common }
    CRITICALITY             ignore
}

-- *** RadioLinkRestoration ***
radioLinkRestoration NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkRestoreIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkRestoration, ddMode common }
    CRITICALITY             ignore
}

-- *** DedicatedMeasurementReport ***
dedicatedMeasurementReport NBAP-ELEMENTARY-PROCEDURE ::= {
```

```
INITIATING MESSAGE    DedicatedMeasurementReport
MESSAGE DISCRIMINATOR dedicated
PROCEDURE ID          { procedureCode id-dedicatedMeasurementReport, ddMode common }
CRITICALITY           ignore
}

-- *** DedicatedMeasurementTermination ***
dedicatedMeasurementTermination NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    DedicatedMeasurementTerminationRequest
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID          { procedureCode id-dedicatedMeasurementTermination, ddMode common }
  CRITICALITY           ignore
}

-- *** DedicatedMeasurementFailure ***
dedicatedMeasurementFailure NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    DedicatedMeasurementFailureIndication
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID          { procedureCode id-dedicatedMeasurementFailure, ddMode common }
  CRITICALITY           ignore
}

-- *** DLPowerControl (FDD only) ***
downlinkPowerControlFDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    DL-PowerControlRequest
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID          { procedureCode id-downlinkPowerControl, ddMode fdd }
  CRITICALITY           ignore
}

-- *** DLPowerTimeslotControl (TDD only) ***
downlinkPowerTimeslotControl NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    DL-PowerTimeslotControlRequest
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID          { procedureCode id-downlinkPowerTimeslotControl, ddMode tdd }
  CRITICALITY           ignore
}

-- *** CompressedModeCommand (FDD only) ***
compressedModeCommand NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    CompressedModeCommand
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID          { procedureCode id-compressedModeCommand, ddMode fdd }
  CRITICALITY           ignore
}

-- *** UnblockResourceIndication ***
unblockResource NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    UnblockResourceIndication
  MESSAGE DISCRIMINATOR common
  PROCEDURE ID          { procedureCode id-unblockResource, ddMode common }
  CRITICALITY           ignore
}
```



```

-- *** ErrorIndication for Dedicated procedures ***
errorIndicationForDedicated NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      ErrorIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-errorIndicationForDedicated, ddMode common }
    CRITICALITY             ignore
}

-- *** ErrorIndication for Common procedures ***
errorIndicationForCommon NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      ErrorIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-errorIndicationForCommon, ddMode common }
    CRITICALITY             ignore
}

-- *** PrivateMessage for Dedicated procedures ***
privateMessageForDedicated NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      PrivateMessage
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-privateMessageForDedicated, ddMode common }
    CRITICALITY             ignore
}

-- *** PrivateMessage for Common procedures ***
privateMessageForCommon NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      PrivateMessage
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-privateMessageForCommon, ddMode common }
    CRITICALITY             ignore
}

END

```

9.3.3 PDU Definitions

```

-- *****
--
-- PDU definitions for NBAP.
--
-- *****

NBAP-PDU-Contents {
    itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
    umts-Access (20) modules (3) nbap (2) version1 (1) nbap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

```

```
-- *****  
--  
-- IE parameter types from other modules.  
--  
-- *****
```

IMPORTS

```
Active-Pattern-Sequence-Information,  
AddorDeleteIndicator,  
AICH-Power,  
AICH-TransmissionTiming,  
AllocationRetentionPriority,  
APPreambleSignature,  
APSubChannelNumber,  
AvailabilityStatus,  
BCCH-ModificationTime,  
BindingID,  
BlockingPriorityIndicator,  
BlockSTTD-Indicator,  
Cause,  
CCTrCH-ID,  
CDSubChannelNumbers,  
CellParameterID,  
CFN,  
Channel-Assignment-Indication,  
ChipOffset,  
C-ID,  
Closedlooptimingadjustmentmode,  
CommonChannelsCapacityConsumptionLaw,  
Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD,  
CommonMeasurementType,  
CommonMeasurementValue,  
CommonMeasurementValueInformation,  
CommonPhysicalChannelID,  
Common-PhysicalChannel-Status-Information,  
Common-TransportChannel-Status-Information,  
CommonTransportChannelID,  
CommonTransportChannel-InformationResponse,  
CommunicationControlPortID,  
ConfigurationGenerationID,  
ConstantValue,  
CriticalityDiagnostics,  
CPCH-Allowed-Total-Rate,  
CPCHScramblingCodeNumber,  
CPCH-UL-DPCCH-SlotFormat,  
CRNC-CommunicationContextID,  
DCH-FDD-Information,  
DCH-InformationResponse,  
DCH-ID,  
FDD-DCHs-to-Modify,  
TDD-DCHs-to-Modify,  
DCH-TDD-Information,
```

DedicatedChannelsCapacityConsumptionLaw,
DedicatedMeasurementType,
DedicatedMeasurementValue,
DedicatedMeasurementValueInformation,
DiversityControlField,
DiversityMode,
DL-DPCH-SlotFormat,
DL-or-Global-CapacityCredit,
DL-Power,
DLPowerAveragingWindowSize,
DL-ScramblingCode,
DL-TimeslotISCP,
DL-Timeslot-Information,
DL-TimeslotISCPInfo,
DL-TPC-Pattern01Count,
DPCH-ID,
DSCH-ID,
DSCH-FDD-Information,
DSCH-InformationResponse,
DSCH-TDD-Information,
End-Of-Audit-Sequence-Indicator,
FDD-DL-ChannelisationCodeNumber,
FDD-DL-CodeInformation,
FDD-S-CCPCH-Offset,
FDD-TPC-DownlinkStepSize,
FirstRLS-Indicator,
FNReportingIndicator,
FrameHandlingPriority,
FrameOffset,
IB-OC-ID,
IB-SG-DATA,
IB-SG-POS,
IB-SG-REP,
IB-Type,
IndicationType,
InnerLoopDLPCStatus,
LimitedPowerIncrease,
Local-Cell-ID,
MaximumDL-PowerCapability,
MaximumTransmissionPower,
Max-Number-of-PCPCHes,
MaxNrOfUL-DPDCHs,
MaxPRACH-MidambleShifts,
MeasurementFilterCoefficient,
MeasurementID,
MidambleShiftAndBurstType,
MinimumDL-PowerCapability,
MinSpreadingFactor,
MinUL-ChannelisationCodeLength,
MultiplexingPosition,
NEOT,
NFmax,
N-INSYNC-IND,

N-OUTSYNC-IND,
NodeB-CommunicationContextID,
NStartMessage,
PagingIndicatorLength,
PayloadCRC-PresenceIndicator,
PCCPCH-Power,
PCP-Length,
PDSCH-CodeMapping,
PDSCHSet-ID,
PDSCH-ID,
PICH-Mode,
PICH-Power,
PowerAdjustmentType,
PowerOffset,
PowerRaiseLimit,
PRACH-Midamble,
PreambleSignatures,
PreambleThreshold,
PrimaryCPICH-Power,
PrimaryScramblingCode,
PropagationDelay,
SCH-TimeSlot,
PunctureLimit,
PUSCHSet-ID,
PUSCH-ID,
QE-Selector,
RACH-SlotFormat,
RACH-SubChannelNumbers,
RepetitionLength,
RepetitionPeriod,
ReportCharacteristics,
ResourceOperationalState,
RL-Set-ID,
RL-ID,
Received-total-wide-band-power-Value,
AdjustmentPeriod,
ScaledAdjustmentRatio,
MaxAdjustmentStep,
ScramblingCodeNumber,
SecondaryCCPCH-SlotFormat,
Segment-Type,
S-FieldLength,
SFN,
ShutdownTimer,
SIB-Originator,
SSDT-Cell-Identity,
SSDT-CellID-Length,
SSDT-Indication,
Start-Of-Audit-Sequence-Indicator,
STTD-Indicator,
SSDT-SupportIndicator,
SyncCase,
T-Cell,

```

T-RLFAILURE,
TDD-ChannelisationCode,
TDD-DPCHOffset,
TDD-TPC-DownlinkStepSize,
TDD-PhysicalChannelOffset,
TFCI2-BearerInformationResponse,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TFCS,
TimeSlot,
TimeSlotDirection,
TimeSlotStatus,
TimingAdvanceApplied,
ToAWE,
ToAWS,
TransmissionDiversityApplied,
TransmitDiversityIndicator,
TransmissionGapPatternSequenceCodeInformation,
Transmission-Gap-Pattern-Sequence-Information,
TransportBearerRequestIndicator,
TransportFormatSet,
TransportLayerAddress,
TSTD-Indicator,
UARFCN,
USCH-Information,
USCH-InformationResponse,
UL-CapacityCredit,
UL-DPCCH-SlotFormat,
UL-SIR,
UL-FP-Mode,
UL-PhysCH-SF-Variation,
UL-ScramblingCode,
UL-Timeslot-Information,
UL-TimeSlot-ISCP-Info,
UL-TimeslotISCP-Value,
UL-TimeslotISCP-Value-IncrDecrThres,
USCH-ID
FROM NBAP-IEs

PrivateIE-Container{},
ProtocolExtensionContainer{},
ProtocolIE-Container{},
ProtocolIE-Single-Container{},
ProtocolIE-ContainerList{},
NBAP-PRIVATE-IES,
NBAP-PROTOCOL-IES,
NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers

id-Active-Pattern-Sequence-Information,
id-AdjustmentRatio,

```

id-AICH-Information,
id-AICH-ParametersListIE-CTCH-ReconfRqstFDD,
id-AP-AICH-Information,
id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD,
id-BCH-Information,
id-BCCH-ModificationTime,
id-BlockingPriorityIndicator,
id-Cause,
id-CauseLevel-PSCH-ReconfFailureTDD,
id-CauseLevel-RL-AdditionFailureFDD,
id-CauseLevel-RL-AdditionFailureTDD,
id-CauseLevel-RL-ReconfFailure,
id-CauseLevel-RL-SetupFailureFDD,
id-CauseLevel-RL-SetupFailureTDD,
id-CCP-InformationItem-AuditRsp,
id-CCP-InformationList-AuditRsp,
id-CCP-InformationItem-ResourceStatusInd,
id-CDCA-ICH-Information,
id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD,
id-Cell-InformationItem-AuditRsp,
id-Cell-InformationItem-ResourceStatusInd,
id-Cell-InformationList-AuditRsp,
id-CellParameterID,
id-CFN,
id-CFNReportingIndicator,
id-C-ID,
id-Closed-Loop-Timing-Adjustment-Mode,
id-CommonMeasurementObjectType-CM-Rprt,
id-CommonMeasurementObjectType-CM-Rqst,
id-CommonMeasurementObjectType-CM-Rsp,
id-CommonMeasurementType,
id-CommonPhysicalChannelID,
id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD,
id-CommonPhysicalChannelType-CTCH-SetupRqstFDD,
id-CommonPhysicalChannelType-CTCH-SetupRqstTDD,
id-CommonTransportChannelType-CTCH-ReconfRqstTDD,
id-CommunicationContextInfoItem-Reset,
id-CommunicationControlPortID,
id-CommunicationControlPortInfoItem-Reset,
id-Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD,
id-ConfigurationGenerationID,
id-CPCH-Information,
id-CPCH-Parameters-CTCH-SetupRsp,
id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD,
id-CRNC-CommunicationContextID,
id-CriticalityDiagnostics,
id-DCHs-to-Add-FDD,
id-DCHs-to-Add-TDD,
id-DCH-AddList-RL-ReconfPrepTDD,
id-DCH-DeleteList-RL-ReconfPrepFDD,
id-DCH-DeleteList-RL-ReconfPrepTDD,
id-DCH-DeleteList-RL-ReconfRqstFDD,
id-DCH-DeleteList-RL-ReconfRqstTDD,

id-DCH-FDD-Information,
 id-DCH-TDD-Information,
 id-DCH-InformationResponse,
 id-FDD-DCHs-to-Modify,
 id-TDD-DCHs-to-Modify,
 id-DedicatedMeasurementObjectType-DM-Rprt,
 id-DedicatedMeasurementObjectType-DM-Rqst,
 id-DedicatedMeasurementObjectType-DM-Rsp,
 id-DedicatedMeasurementType,
 id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,
 id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,
 id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,
 id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,
 id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD,
 id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD,
 id-DL-CCTrCH-InformationList-RL-SetupRqstTDD,
 id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,
 id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,
 id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,
 id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD,
 id-DL-DPCH-InformationDeleteListIE-RL-ReconfPrepTDD,
 id-DL-DPCH-InformationItem-RL-AdditionRqstTDD,
 id-DL-DPCH-InformationList-RL-SetupRqstTDD,
 id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD,
 id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD,
 id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD,
 id-DL-DPCH-Information-RL-ReconfPrepFDD,
 id-DL-DPCH-Information-RL-ReconfRqstFDD,
 id-DL-DPCH-Information-RL-SetupRqstFDD,
 id-DL-ReferencePowerInformationItem-DL-PC-Rqst,
 id-DLReferencePower,
 id-DLReferencePowerList-DL-PC-Rqst,
 id-DL-TPC-Pattern01Count,
 id-DPCHConstant,
 id-DSCH-AddItem-RL-ReconfPrepFDD,
 id-DSCH-AddItem-RL-ReconfRqstFDD,
 id-DSCHs-to-Add-FDD,
 id-DSCH-DeleteItem-RL-ReconfPrepFDD,
 id-DSCH-DeleteItem-RL-ReconfRqstFDD,
 id-DSCH-DeleteList-RL-ReconfPrepFDD,
 id-DSCH-ID,
 id-DSCHs-to-Add-TDD,
 id-DSCH-Information-DeleteList-RL-ReconfPrepTDD,
 id-DSCH-Information-ModifyList-RL-ReconfPrepTDD,
 id-DSCH-InformationResponse,
 id-DSCH-FDD-Information,
 id-DSCH-TDD-Information,
 id-DSCH-ModifyItem-RL-ReconfPrepFDD,
 id-DSCH-ModifyItem-RL-ReconfRqstFDD,
 id-DSCH-ModifyList-RL-ReconfPrepFDD,
 id-End-Of-Audit-Sequence-Indicator,
 id-FACH-Information,
 id-FACHItem-CTCH-SetupRsp,

id-FACH-ParametersList-CTCH-ReconfRqstTDD,
id-FACH-ParametersList-CTCH-SetupRsp,
id-FACH-ParametersListIE-CTCH-ReconfRqstFDD,
id-FACH-ParametersListIE-CTCH-SetupRqstFDD,
id-FACH-ParametersListIE-CTCH-SetupRqstTDD,
id-IndicationType-ResourceStatusInd,
id-InnerLoopDLPCStatus,
id-Limited-power-increase-information-Cell-SetupRqstFDD,
id-Local-Cell-ID,
id-Local-Cell-Group-InformationItem-AuditRsp,
id-Local-Cell-Group-InformationItem-ResourceStatusInd,
id-Local-Cell-Group-InformationItem2-ResourceStatusInd,
id-Local-Cell-Group-InformationList-AuditRsp,
id-Local-Cell-InformationItem-AuditRsp,
id-Local-Cell-InformationItem-ResourceStatusInd,
id-Local-Cell-InformationItem2-ResourceStatusInd,
id-Local-Cell-InformationList-AuditRsp,
id-AdjustmentPeriod,
id-MaxAdjustmentStep,
id-MaximumTransmissionPower,
id-MeasurementFilterCoefficient,
id-MeasurementID,
id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst,
id-NodeB-CommunicationContextID,
id-P-CCPCH-Information,
id-P-CPICH-Information,
id-P-SCH-Information,
id-PCCPCH-Information-Cell-ReconfRqstTDD,
id-PCCPCH-Information-Cell-SetupRqstTDD,
id-PCH-Parameters-CTCH-ReconfRqstTDD,
id-PCH-Parameters-CTCH-SetupRsp,
id-PCH-ParametersItem-CTCH-ReconfRqstFDD,
id-PCH-ParametersItem-CTCH-SetupRqstFDD,
id-PCH-ParametersItem-CTCH-SetupRqstTDD,
id-PCH-Information,
id-PCPCH-Information,
id-PCPCH-ParametersList-CTCH-ReconfRqstFDD,
id-PICH-ParametersItem-CTCH-ReconfRqstFDD,
id-PD,
id-PDSCH-Information-AddListIE-PSCH-ReconfRqst,
id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst,
id-PDSCHSets-AddList-PSCH-ReconfRqst,
id-PDSCHSets-DeleteList-PSCH-ReconfRqst,
id-PDSCHSets-ModifyList-PSCH-ReconfRqst,
id-PICH-Information,
id-PICH-Parameters-CTCH-ReconfRqstTDD,
id-PICH-ParametersItem-CTCH-SetupRqstTDD,
id-PowerAdjustmentType,
id-PRACH-Information,
id-PRACHConstant,
id-PRACH-ParametersItem-CTCH-SetupRqstTDD,
id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD,
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD,

id-PrimaryCCPCH-Information-Cell-SetupRqstFDD,
id-PrimaryCPICH-Information-Cell-ReconfRqstFDD,
id-PrimaryCPICH-Information-Cell-SetupRqstFDD,
id-PrimarySCH-Information-Cell-ReconfRqstFDD,
id-PrimarySCH-Information-Cell-SetupRqstFDD,
id-PrimaryScramblingCode,
id-ProcedureScopeType-DL-PC-Rqst,
id-SCH-Information-Cell-ReconfRqstTDD,
id-SCH-Information-Cell-SetupRqstTDD,
id-PUSCH-Information-AddListIE-PSCH-ReconfRqst,
id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst,
id-PUSCHConstant,
id-PUSCHSets-AddList-PSCH-ReconfRqst,
id-PUSCHSets-DeleteList-PSCH-ReconfRqst,
id-PUSCHSets-ModifyList-PSCH-ReconfRqst,
id-RACH-Information,
id-RACHItem-CTCH-SetupRsp,
id-RACH-Parameters-CTCH-SetupRsp,
id-RACH-ParametersItem-CTCH-SetupRqstFDD,
id-RACH-ParameterItem-CTCH-SetupRqstTDD,
id-ReportCharacteristics,
id-Reporting-Object-RL-FailureInd,
id-Reporting-Object-RL-RestoreInd,
id-ResetIndicator,
id-RL-ID,
id-RL-InformationItem-DM-Rprt,
id-RL-InformationItem-DM-Rqst,
id-RL-InformationItem-DM-Rsp,
id-RL-InformationItem-RL-AdditionRqstFDD,
id-RL-informationItem-RL-DeletionRqst,
id-RL-InformationItem-RL-FailureInd,
id-RL-InformationItem-RL-PreemptRequiredInd,
id-RL-InformationItem-RL-ReconfPrepFDD,
id-RL-InformationItem-RL-ReconfRqstFDD,
id-RL-InformationItem-RL-RestoreInd,
id-RL-InformationItem-RL-SetupRqstFDD,
id-RL-InformationList-RL-AdditionRqstFDD,
id-RL-informationList-RL-DeletionRqst,
id-RL-InformationList-RL-PreemptRequiredInd,
id-RL-InformationList-RL-ReconfPrepFDD,
id-RL-InformationList-RL-ReconfRqstFDD,
id-RL-InformationList-RL-SetupRqstFDD,
id-RL-InformationResponseItem-RL-AdditionRspFDD,
id-RL-InformationResponseItem-RL-ReconfReady,
id-RL-InformationResponseItem-RL-ReconfRsp,
id-RL-InformationResponseItem-RL-SetupRspFDD,
id-RL-InformationResponseList-RL-AdditionRspFDD,
id-RL-InformationResponseList-RL-ReconfReady,
id-RL-InformationResponseList-RL-ReconfRsp,
id-RL-InformationResponseList-RL-SetupRspFDD,
id-RL-InformationResponse-RL-AdditionRspTDD,
id-RL-InformationResponse-RL-SetupRspTDD,
id-RL-Information-RL-AdditionRqstTDD,

id-RL-Information-RL-ReconfRqstTDD,
id-RL-Information-RL-ReconfPrepTDD,
id-RL-Information-RL-SetupRqstTDD,
id-RL-ReconfigurationFailureItem-RL-ReconfFailure,
id-RL-Set-InformationItem-DM-Rprt,
id-RL-Set-InformationItem-DM-Rsp,
id-RL-Set-InformationItem-RL-FailureInd,
id-RL-Set-InformationItem-RL-RestoreInd,
id-S-CCPCH-Information,
id-S-CPICH-Information,
id-SCH-Information,
id-S-SCH-Information,
id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD,
id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD,
id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD,
id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD,
id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD,
id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD,
id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD,
id-SecondarySCH-Information-Cell-ReconfRqstFDD,
id-SecondarySCH-Information-Cell-SetupRqstFDD,
id-SegmentInformationListIE-SystemInfoUpdate,
id-SFN,
id-SFNReportingIndicator,
id-ShutdownTimer,
id-Start-Of-Audit-Sequence-Indicator,
id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD,
id-Successful-RL-InformationRespItem-RL-SetupFailureFDD,
id-Successful-RL-InformationRespList-RL-AdditionFailureFDD,
id-Successful-RL-InformationRespList-RL-SetupFailureFDD,
id-Synchronisation-Configuration-Cell-ReconfRqst,
id-Synchronisation-Configuration-Cell-SetupRqst,
id-SyncCase,
id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH,
id-T-Cell,
id-TFCI2-Bearer-Information-RL-SetupRqstFDD,
id-TFCI2-BearerInformationResponse,
id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD,
id-Transmission-Gap-Pattern-Sequence-Information,
id-TimeSlotConfigurationList-Cell-ReconfRqstTDD,
id-TimeSlotConfigurationList-Cell-SetupRqstTDD,
id-TimeslotISCPInfoList-DL-PC-RqstTDD,
id-TimingAdvanceApplied,
id-TransmissionDiversityApplied,
id-UARFCNforNt,
id-UARFCNforNd,
id-UARFCNforNu,
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD,
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD,

id-UL-CCTrCH-InformationList-RL-SetupRqstTDD,
 id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,
 id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,
 id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,
 id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD,
 id-UL-DPCH-InformationItem-RL-AdditionRqstTDD,
 id-UL-DPCH-InformationList-RL-SetupRqstTDD,
 id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD,
 id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD,
 id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD,
 id-UL-DPCH-Information-RL-ReconfPrepFDD,
 id-UL-DPCH-Information-RL-ReconfRqstFDD,
 id-UL-DPCH-Information-RL-SetupRqstFDD,
 id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD,
 id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD,
 id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD,
 id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD,
 id-Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD,
 id-Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD,
 id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD,
 id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD,
 id-USCH-Information-Add,
 id-USCH-Information-AddList-RL-ReconfRqstTDD,
 id-USCH-Information-DeleteList-RL-ReconfPrepTDD,
 id-USCH-Information-DeleteList-RL-ReconfRqstTDD,
 id-USCH-Information-ModifyList-RL-ReconfPrepTDD,
 id-USCH-Information-ModifyList-RL-ReconfRqstTDD,
 id-USCH-InformationResponse,
 id-USCH-Information,

maxNrOfCCTrCHs,
 maxNrOfCodes,
 maxNrOfCPCHs,
 maxNrOfDCHs,
 maxNrOfDLCodes,
 maxNrOfDLTSs,
 maxNrOfDPCHs,
 maxNrOfDSCHs,
 maxNrOfFACHs,
 maxNrOfRLs,
 maxNrOfRLSets,
 maxNrOfPCPCHs,
 maxNrOfPDSCHs,
 maxNrOfPUSCHs,
 maxNrOfPDSCHSets,
 maxNrOfPUSCHSets,
 maxNrOfSCCPCHs,
 maxNrOfULTSs,
 maxNrOfUSCHs,
 maxAPSigNum,
 maxCPCHCell,
 maxFACHCell,
 maxNoofLen,

```

maxRACHCell,
maxPCPCHCell,
maxPRACHCell,
maxSCCPCHCell,
maxSCPICHCell,
maxCellinNodeB,
maxCCPinNodeB,
maxCommunicationContext,
maxLocalCellinNodeB,
maxNrOfSlotFormatsPRACH,
maxIB,
maxIBSEG
FROM NBAP-Constants;

-- *****
--
-- COMMON TRANSPORT CHANNEL SETUP REQUEST FDD
--
-- *****

CommonTransportChannelSetupRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CommonTransportChannelSetupRequestFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CommonTransportChannelSetupRequestFDD-Extensions}} OPTIONAL,
    ...
}

CommonTransportChannelSetupRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonTransportChannelSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-C-ID                                CRITICALITY  reject          TYPE  C-ID                PRESENCE
      mandatory  }|
    { ID      id-ConfigurationGenerationID          CRITICALITY  reject          TYPE  ConfigurationGenerationID          PRESENCE
      mandatory  }|
    { ID      id-CommonPhysicalChannelType-CTCH-SetupRqstFDD  CRITICALITY  ignore         TYPE  CommonPhysicalChannelType-CTCH-SetupRqstFDD
      PRESENCE  mandatory  },
    ...
}

CommonPhysicalChannelType-CTCH-SetupRqstFDD ::= CHOICE {
    secondary-CCPCH-parameters   Secondary-CCPCH-CTCH-SetupRqstFDD,
    PRACH-parameters             PRACH-CTCH-SetupRqstFDD,
    pCPCHes-parameters           PCPCH-CTCH-SetupRqstFDD,
    ...
}

Secondary-CCPCH-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    fdd-S-CCPCH-Offset           FDD-S-CCPCH-Offset,
    dl-ScramblingCode            DL-ScramblingCode OPTIONAL,
    -- This IE is present only if the PCH parameters IE-group is not present
    fdd-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,

```

```

    tFCS                TFCS,
    secondary-CCPCH-SlotFormat      SecondaryCCPCH-SlotFormat,
    tFCI-Presence                TFCI-Presence    OPTIONAL,
    -- This IE is present only if the Secondary CCPCH Slot Format is equal to any value 8 to 17
    multiplexingPosition          MultiplexingPosition,
    powerOffsetInformation        PowerOffsetInformation-CTCH-SetupRqstFDD,
    sTTD-Indicator                STTD-Indicator,
    fACH-Parameters              FACH-ParametersList-CTCH-SetupRqstFDD    OPTIONAL,
    -- One of the channels FACH or PCH or both must be present
    pCH-Parameters              PCH-Parameters-CTCH-SetupRqstFDD    OPTIONAL,
    -- One of the channels FACH or PCH or both must be present
    iE-Extensions                ProtocolExtensionContainer { { Secondary-CCPCHItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

Secondary-CCPCHItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PowerOffsetInformation-CTCH-SetupRqstFDD ::= SEQUENCE {
    p01-ForTFCI-Bits            PowerOffset,
    p03-ForPilotBits            PowerOffset,
    iE-Extensions                ProtocolExtensionContainer { { PowerOffsetInformation-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

PowerOffsetInformation-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-ParametersList-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container {{ FACH-ParametersListIEs-CTCH-SetupRqstFDD }}

FACH-ParametersListIEs-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-ParametersListIE-CTCH-SetupRqstFDD    CRITICALITY reject    TYPE FACH-ParametersListIE-CTCH-SetupRqstFDD    PRESENCE mandatory }
}

FACH-ParametersListIE-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF FACH-ParametersItem-CTCH-SetupRqstFDD

FACH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    transportFormatSet            TransportFormatSet,
    toAWS                          ToAWS,
    toAWE                          ToAWE,
    maxFACH-Power                 DL-Power,
    iE-Extensions                ProtocolExtensionContainer { { FACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

FACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCH-Parameters-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container {{ PCH-ParametersIE-CTCH-SetupRqstFDD }}

```

```
PCH-ParametersIE-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
  { ID id-PCH-ParametersItem-CTCH-SetupRqstFDD    CRITICALITY reject    TYPE PCH-ParametersItem-CTCH-SetupRqstFDD    PRESENCE mandatory }
}
```

```
PCH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
  commonTransportChannelID      CommonTransportChannelID,
  transportFormatSet            TransportFormatSet,
  toAWS                          ToAWS,
  toAWE                          ToAWE,
  pCH-Power                      DL-Power,
  pICH-Parameters                PICH-Parameters-CTCH-SetupRqstFDD,

  iE-Extensions                 ProtocolExtensionContainer { { PCH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs} }    OPTIONAL,
  ...
}
```

```
PCH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
PICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
  commonPhysicalChannelID      CommonPhysicalChannelID,
  fdd-dl-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
  pICH-Power                    PICH-Power,
  pICH-Mode                      PICH-Mode,
  sTTD-Indicator                STTD-Indicator,
  iE-Extensions                 ProtocolExtensionContainer { { PICH-Parameters-CTCH-SetupRqstFDD-ExtIEs} }    OPTIONAL,
  ...
}
```

```
PICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
PRACH-CTCH-SetupRqstFDD ::= SEQUENCE {
  commonPhysicalChannelID      CommonPhysicalChannelID,
  scramblingCodeNumber          ScramblingCodeNumber,
  tFCS                          TFCS,
  preambleSignatures            PreambleSignatures,
  allowedSlotFormatInformation  AllowedSlotFormatInformationList-CTCH-SetupRqstFDD,
  rACH-SubChannelNumbers        RACH-SubChannelNumbers,
  ul-punctureLimit              PunctureLimit,
  preambleThreshold              PreambleThreshold,
  rACH-Parameters                RACH-Parameters-CTCH-SetupRqstFDD,
  aICH-Parameters                AICH-Parameters-CTCH-SetupRqstFDD,
  iE-Extensions                 ProtocolExtensionContainer { { PRACHItem-CTCH-SetupRqstFDD-ExtIEs} }    OPTIONAL,
  ...
}
```

```
PRACHItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

AllowedSlotFormatInformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1.. maxNrOfSlotFormatsPRACH)) OF AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD

```
AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    rACHSlotFormat          RACH-SlotFormat,
    iE-Extensions          ProtocolExtensionContainer { { AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD-ExtIEs } }
    OPTIONAL,
    ...
}
```

```
AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

RACH-Parameters-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container {{ RACH-ParametersIE-CTCH-SetupRqstFDD }}

```
RACH-ParametersIE-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-RACH-ParametersItem-CTCH-SetupRqstFDD    CRITICALITY reject    TYPE RACH-ParametersItem-CTCH-SetupRqstFDD    PRESENCE mandatory }
}
```

```
RACH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    transportFormatSet            TransportFormatSet,
    iE-Extensions                 ProtocolExtensionContainer { { RACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}
```

```
RACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
AICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    aICH-TransmissionTiming      AICH-TransmissionTiming,
    fdd-dl-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    aICH-Power                   AICH-Power,
    sTTD-Indicator               STTD-Indicator,
    iE-Extensions                 ProtocolExtensionContainer { { AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}
```

```
AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
PCPCH-CTCH-SetupRqstFDD ::= SEQUENCE {
    cPCH-Parameters              CPCH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions                 ProtocolExtensionContainer { { PCPCHItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}
```

```
PCPCHItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```

}
...
}
CPCH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    transportFormatSet            TransportFormatSet,
    aPPreambleScramblingCode      CPCHScramblingCodeNumber,
    cDPreambleScramblingCode      CPCHScramblingCodeNumber,
    tFCS                          TFCS,
    cDSignatures                  PreambleSignatures          OPTIONAL,
    cDSubChannelNumbers          CDSUBCHANNELNUMBERS        OPTIONAL,
    -- this IE may be present only if the CD Signatures is present --
    punctureLimit                PunctureLimit,
    cPCH-UL-DPCCH-SlotFormat      CPCH-UL-DPCCH-SlotFormat,
    uL-SIR                        UL-SIR,
    initialDL-transmissionPower   DL-Power,
    maximumDLPower               DL-Power,
    minimumDLPower              DL-Power,
    p02-ForTPC-Bits              PowerOffset,
    p03-ForPilotBits             PowerOffset,
    fDD-TPC-DownlinkStepSize     FDD-TPC-DownlinkStepSize,
    nStartMessage                NStartMessage,
    nEOT                          NEOT,
    channel-Assignment-Indication Channel-Assignment-Indication,
    cPCH-Allowed-Total-Rate       CPCH-Allowed-Total-Rate,
    pCPCHChannelInformationList-CTCH-SetupRqstFDD,
    vCAMMapping-InformationList-CTCH-SetupRqstFDD          OPTIONAL,
    -- this IE is only present if the Channel Assignment Indication is equal to CA Active --
    aP-AICH-Parameters           AP-AICH-Parameters-CTCH-SetupRqstFDD,
    cDCA-ICH-Parameters          CDCA-ICH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions                ProtocolExtensionContainer { { CPCH-Parameters-CTCH-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

CPCH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCPCHChannelInformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfPCPCHs)) OF PCPCHChannelInformationItem-CTCH-SetupRqstFDD

PCPCHChannelInformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    cPCHScramblingCodeNumber     CPCHScramblingCodeNumber,
    dL-ScramblingCode            DL-ScramblingCode,
    fdd-dl-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    pCP-Length                   PCP-Length,
    uCSM-Information             UCSM-Information-CTCH-SetupRqstFDD          OPTIONAL,
    -- this IE is only present if the Channel Assignment Indication is equal to CA Inactive --
    iE-Extensions                ProtocolExtensionContainer { { PCPCHChannelInformationItem-CTCH-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

PCPCHChannelInformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```



```

}
...
}
UCSM-Information-CTCH-SetupRqstFDD ::= SEQUENCE {
    minUL-ChannelisationCodeLength    MinUL-ChannelisationCodeLength,
    nFmax                               NFmax,
    channelRequestParameters           ChannelRequestParametersList-CTCH-SetupRqstFDD    OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { UCSM-InformationItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}
UCSM-InformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
ChannelRequestParametersList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxAPSigNum)) OF ChannelRequestParametersItem-CTCH-SetupRqstFDD
ChannelRequestParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    aPPreambleSignature                APPreambleSignature,
    aPSubChannelNumber                 ASubChannelNumber    OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { ChannelRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}
ChannelRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
VCAMMapping-InformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNoofLen)) OF VCAMMapping-InformationItem-CTCH-SetupRqstFDD
VCAMMapping-InformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    minUL-ChannelisationCodeLength    MinUL-ChannelisationCodeLength,
    nFmax                               NFmax,
    max-Number-of-PCPCHes             Max-Number-of-PCPCHes,
    sFRequestParameters               SFRequestParametersList-CTCH-SetupRqstFDD,
    iE-Extensions                       ProtocolExtensionContainer { { VCAMMapping-InformationItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}
VCAMMapping-InformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
SFRequestParametersList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxAPSigNum)) OF SFRequestParametersItem-CTCH-SetupRqstFDD
SFRequestParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    aPPreambleSignature                APPreambleSignature,
    aPSubChannelNumber                 ASubChannelNumber    OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { SFRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}
SFRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
AP-AICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    fdd-dl-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
    aP-AICH-Power                    AICH-Power,
    cSICH-Power                      AICH-Power,
    sTTD-Indicator                   STTD-Indicator,
    iE-Extensions                    ProtocolExtensionContainer { { AP-AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}
AP-AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
CDCA-ICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    fdd-dl-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
    cDCA-ICH-Power                  AICH-Power,
    sTTD-Indicator                   STTD-Indicator,
    iE-Extensions                    ProtocolExtensionContainer { { CDCA-ICH-Parameters-CTCH-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}
CDCA-ICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
-- *****
--
-- COMMON TRANSPORT CHANNEL SETUP REQUEST TDD
--
-- *****

CommonTransportChannelSetupRequestTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{CommonTransportChannelSetupRequestTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer  {{CommonTransportChannelSetupRequestTDD-Extensions}} OPTIONAL,
    ...
}
CommonTransportChannelSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-C-ID          CRITICALITY reject          TYPE C-ID          PRESENCE
      mandatory }|
    { ID id-ConfigurationGenerationID  CRITICALITY reject          TYPE ConfigurationGenerationID          PRESENCE
      mandatory }|
    { ID id-CommonPhysicalChannelType-CTCH-SetupRqstTDD  CRITICALITY ignore          TYPE CommonPhysicalChannelType-CTCH-SetupRqstTDD
      PRESENCE mandatory },
    ...
}
CommonTransportChannelSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
CommonPhysicalChannelType-CTCH-SetupRqstTDD ::= CHOICE {
    secondary-CCPCH-parameters      Secondary-CCPCH-CTCH-SetupRqstTDD,
    pRACH-parameters                PRACH-CTCH-SetupRqstTDD,
    ...
}

Secondary-CCPCH-CTCH-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID                        CCTrCH-ID,
    tFCS                              TFCS,
    tFCI-Coding                      TFCI-Coding,
    punctureLimit                    PunctureLimit,
    secondaryCCPCH-parameterList     Secondary-CCPCH-parameterList-CTCH-SetupRqstTDD,
    fACH-ParametersList              FACH-ParametersList-CTCH-SetupRqstTDD    OPTIONAL,
    pCH-Parameters                   PCH-Parameters-CTCH-SetupRqstTDD    OPTIONAL,
    -- One of the channels FACH or PCH or both must be present
    iE-Extensions                    ProtocolExtensionContainer  {{Secondary-CCPCHItem-CTCH-SetupRqstTDD-ExtIEs}}  OPTIONAL,
    ...
}

Secondary-CCPCHItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-CCPCH-parameterList-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ Secondary-CCPCH-parameterListIEs-CTCH-SetupRqstTDD }}

Secondary-CCPCH-parameterListIEs-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD  CRITICALITY reject  TYPE Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD  PRESENCE
    mandatory }
}

Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD

Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    tdd-ChannelisationCode           TDD-ChannelisationCode,
    timeslot                         Timeslot,
    midambleShiftandBurstType        MidambleShiftAndBurstType,
    tdd-PhysicalChannelOffset        TDD-PhysicalChannelOffset,
    repetitionPeriod                 RepetitionPeriod,
    repetitionLength                 RepetitionLength,
    s-CCPCH-Power                    DL-Power,
    iE-Extensions                    ProtocolExtensionContainer { { Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD-ExtIEs } }  OPTIONAL,
    ...
}

Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-ParametersList-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ FACH-ParametersListIEs-CTCH-SetupRqstTDD }}

```

```
FACH-ParametersListIEs-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-FACH-ParametersListIE-CTCH-SetupRqstTDD  CRITICALITY reject  TYPE FACH-ParametersListIE-CTCH-SetupRqstTDD  PRESENCE mandatory }
}
```

```
FACH-ParametersListIE-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF FACH-ParametersItem-CTCH-SetupRqstTDD
```

```
FACH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonTransportChannelID          CommonTransportChannelID,
  cCTrCH-ID                          CCTrCH-ID,
  dl-TransportFormatSet              TransportFormatSet,
  toAWS                               ToAWS,
  toAWE                               ToAWE,
  iE-Extensions                      ProtocolExtensionContainer { { FACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs } }  OPTIONAL,
  ...
}
```

```
FACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
PCH-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container { { PCH-ParametersIE-CTCH-SetupRqstTDD } }
```

```
PCH-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-PCH-ParametersItem-CTCH-SetupRqstTDD  CRITICALITY reject  TYPE PCH-ParametersItem-CTCH-SetupRqstTDD  PRESENCE mandatory }
}
```

```
PCH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonTransportChannelID          CommonTransportChannelID,
  cCTrCH-ID                          CCTrCH-ID,
  dl-TransportFormatSet              TransportFormatSet,
  toAWS                               ToAWS,
  toAWE                               ToAWE,
  pICH-Parameters                    PICH-Parameters-CTCH-SetupRqstTDD,
  iE-Extensions                      ProtocolExtensionContainer { { PCH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs } }  OPTIONAL,
  ...
}
```

```
PCH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
PICH-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container { { PICH-ParametersIE-CTCH-SetupRqstTDD } }
```

```
PICH-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-PICH-ParametersItem-CTCH-SetupRqstTDD  CRITICALITY reject  TYPE PICH-ParametersItem-CTCH-SetupRqstTDD  PRESENCE mandatory }
}
```

```
PICH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonPhysicalChannelID          CommonPhysicalChannelID,
  tdd-ChannelisationCode            TDD-ChannelisationCode,
  timeSlot                          TimeSlot,
  midambleShiftAndBurstType         MidambleShiftAndBurstType,
}
```

```

tdd-PhysicalChannelOffset      TDD-PhysicalChannelOffset,
repetitionPeriod               RepetitionPeriod,
repetitionLength               RepetitionLength,
pagingIndicatorLength          PagingIndicatorLength,
pICH-Power                     PICH-Power,
iE-Extensions                  ProtocolExtensionContainer { { PICH-ParametersItem-CTCH-SetupRgstTDD-ExtIEs } } OPTIONAL,
...
}

PICH-ParametersItem-CTCH-SetupRgstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

PRACH-CTCH-SetupRgstTDD ::= SEQUENCE {
  pRACH-Parameters-CTCH-SetupRgstTDD      PRACH-Parameters-CTCH-SetupRgstTDD,
  iE-Extensions                          ProtocolExtensionContainer { { PRACH-CTCH-SetupRgstTDD-ExtIEs } } OPTIONAL,
...
}

PRACH-CTCH-SetupRgstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

PRACH-Parameters-CTCH-SetupRgstTDD ::= ProtocolIE-Single-Container {{ PRACH-ParametersIE-CTCH-SetupRgstTDD }}

PRACH-ParametersIE-CTCH-SetupRgstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-PRACH-ParametersItem-CTCH-SetupRgstTDD CRITICALITY reject TYPE PRACH-ParametersItem-CTCH-SetupRgstTDD PRESENCE mandatory }
}

PRACH-ParametersItem-CTCH-SetupRgstTDD ::= SEQUENCE {
  commonPhysicalChannelID      CommonPhysicalChannelID,
  tFCS                          TFCS,
  timeslot                      TimeSlot,
  tdd-ChannelisationCode       TDD-ChannelisationCode,
  maxPRACH-MidambleShifts      MaxPRACH-MidambleShifts,
  pRACH-Midamble                PRACH-Midamble,
  rACH                          RACH-Parameter-CTCH-SetupRgstTDD,
  iE-Extensions                ProtocolExtensionContainer { { PRACH-ParametersItem-CTCH-SetupRgstTDD-ExtIEs } } OPTIONAL,
...
}

PRACH-ParametersItem-CTCH-SetupRgstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

RACH-Parameter-CTCH-SetupRgstTDD ::= ProtocolIE-Single-Container {{ RACH-ParameterIE-CTCH-SetupRgstTDD }}

RACH-ParameterIE-CTCH-SetupRgstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-RACH-ParameterItem-CTCH-SetupRgstTDD CRITICALITY reject TYPE RACH-ParameterItem-CTCH-SetupRgstTDD PRESENCE mandatory }
}

RACH-ParameterItem-CTCH-SetupRgstTDD ::= SEQUENCE {
  commonTransportChannelID      CommonTransportChannelID,

```

```

    uL-TransportFormatSet      TransportFormatSet,
    iE-Extensions              ProtocolExtensionContainer { { RACH-ParameterItem-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

RACH-ParameterItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL SETUP RESPONSE
--
-- *****

CommonTransportChannelSetupResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CommonTransportChannelSetupResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CommonTransportChannelSetupResponse-Extensions}} OPTIONAL,
    ...
}

CommonTransportChannelSetupResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-ParametersList-CTCH-SetupRsp CRITICALITY ignore TYPE FACH-CommonTransportChannel-InformationResponse PRESENCE
    optional }|
    { ID id-PCH-Parameters-CTCH-SetupRsp CRITICALITY ignore TYPE CommonTransportChannel-InformationResponse PRESENCE
    optional }|
    { ID id-RACH-Parameters-CTCH-SetupRsp CRITICALITY ignore TYPE CommonTransportChannel-InformationResponse PRESENCE
    optional }|
    { ID id-CPCH-Parameters-CTCH-SetupRsp CRITICALITY ignore TYPE CommonTransportChannel-InformationResponse
    PRESENCE optional }|
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE
    optional },
    ...
}

CommonTransportChannelSetupResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-CommonTransportChannel-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF CommonTransportChannel-InformationResponse

-- *****
--
-- COMMON TRANSPORT CHANNEL SETUP FAILURE
--
-- *****

CommonTransportChannelSetupFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CommonTransportChannelSetupFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CommonTransportChannelSetupFailure-Extensions}} OPTIONAL,
    ...
}

```

```

CommonTransportChannelSetupFailure-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory }|
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional }|
  ...
}

CommonTransportChannelSetupFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST FDD
--
-- *****

CommonTransportChannelReconfigurationRequestFDD ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{CommonTransportChannelReconfigurationRequestFDD-IEs}},
  protocolExtensions ProtocolExtensionContainer {{CommonTransportChannelReconfigurationRequestFDD-Extensions}} OPTIONAL,
  ...
}

CommonTransportChannelReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-C-ID CRITICALITY reject TYPE C-ID PRESENCE mandatory }|
  { ID id-ConfigurationGenerationID CRITICALITY reject TYPE ConfigurationGenerationID PRESENCE mandatory }|
  { ID id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD CRITICALITY reject TYPE CommonPhysicalChannelType-CTCH-ReconfRqstFDD PRESENCE
  mandatory }|,
  ...
}

CommonTransportChannelReconfigurationRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CommonPhysicalChannelType-CTCH-ReconfRqstFDD ::= CHOICE {
  secondary-CCPCH-parameters Secondary-CCPCHList-CTCH-ReconfRqstFDD,
  pRACH-parameters PRACHList-CTCH-ReconfRqstFDD,
  cPCH-parameters CPCHList-CTCH-ReconfRqstFDD,
  ...
}

Secondary-CCPCHList-CTCH-ReconfRqstFDD ::= SEQUENCE {
  fACH-ParametersList-CTCH-ReconfRqstFDD FACH-ParametersList-CTCH-ReconfRqstFDD OPTIONAL,
  pCH-Parameters-CTCH-ReconfRqstFDD PCH-Parameters-CTCH-ReconfRqstFDD OPTIONAL,
  pICH-Parameters-CTCH-ReconfRqstFDD PICH-Parameters-CTCH-ReconfRqstFDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { Secondary-CCPCH-CTCH-ReconfRqstFDD-ExtIEs } } OPTIONAL,
  ...
}

Secondary-CCPCH-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

FACH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ FACH-ParametersListIEs-CTCH-ReconfRqstFDD }}

FACH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
  { ID id-FACH-ParametersListIE-CTCH-ReconfRqstFDD   CRITICALITY reject   TYPE FACH-ParametersListIE-CTCH-ReconfRqstFDD   PRESENCE mandatory }
}

FACH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxFACHCell)) OF FACH-ParametersItem-CTCH-ReconfRqstFDD

FACH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
  commonTransportChannelID      CommonTransportChannelID,
  maxFACH-Power                 DL-Power                OPTIONAL,
  toAWS                         ToAWS                  OPTIONAL,
  toAWE                          ToAWE                  OPTIONAL,
  iE-Extensions                 ProtocolExtensionContainer  { { FACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs } }   OPTIONAL,
  ...
}

FACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

PCH-Parameters-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ PCH-ParametersIE-CTCH-ReconfRqstFDD }}

PCH-ParametersIE-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
  { ID id-PCH-ParametersItem-CTCH-ReconfRqstFDD   CRITICALITY reject   TYPE PCH-ParametersItem-CTCH-ReconfRqstFDD   PRESENCE mandatory }
}

PCH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
  commonTransportChannelID      CommonTransportChannelID,
  pCH-Power                     DL-Power                OPTIONAL,
  toAWS                         ToAWS                  OPTIONAL,
  toAWE                          ToAWE                  OPTIONAL,
  iE-Extensions                 ProtocolExtensionContainer  { { PCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs } }   OPTIONAL,
  ...
}

PCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

PICH-Parameters-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ PICH-ParametersIE-CTCH-ReconfRqstFDD }}

PICH-ParametersIE-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
  { ID id-PICH-ParametersItem-CTCH-ReconfRqstFDD   CRITICALITY reject   TYPE PICH-ParametersItem-CTCH-ReconfRqstFDD   PRESENCE mandatory }
}

PICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
  commonPhysicalChannelID      CommonPhysicalChannelID,
  pICH-Power                   PICH-Power            OPTIONAL,
  iE-Extensions                 ProtocolExtensionContainer  { { PICH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs } }   OPTIONAL,
  ...
}

```



```

PICH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACHList-CTCH-ReconfRqstFDD ::= SEQUENCE {
    prachParametersList-CTCH-ReconfRqstFDD    PRACH-ParametersList-CTCH-ReconfRqstFDD OPTIONAL,
    aichParametersList-CTCH-ReconfRqstFDD    AICH-ParametersList-CTCH-ReconfRqstFDD OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { { PRACH-CTCH-ReconfRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

PRACH-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container { { PRACH-ParametersListIEs-CTCH-ReconfRqstFDD } }

PRACH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD    CRITICALITY reject    TYPE PRACH-ParametersListIE-CTCH-ReconfRqstFDD    PRESENCE mandatory }
}

PRACH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF PRACH-ParametersItem-CTCH-ReconfRqstFDD

PRACH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID        CommonPhysicalChannelID,
    preambleSignatures             PreambleSignatures    OPTIONAL,
    allowedSlotFormatInformation    AllowedSlotFormatInformationList-CTCH-ReconfRqstFDD    OPTIONAL,
    rachSubChannelNumbers          RACH-SubChannelNumbers    OPTIONAL,
    iE-Extensions                  ProtocolExtensionContainer { { PRACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

PRACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AllowedSlotFormatInformationList-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1.. maxNrOfSlotFormatsPRACH)) OF AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD

AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    rachSlotFormat                 RACH-SlotFormat,
    iE-Extensions                  ProtocolExtensionContainer { { AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD-ExtIEs } }
    OPTIONAL,
    ...
}

AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AICH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container { { AICH-ParametersListIEs-CTCH-ReconfRqstFDD } }

AICH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {

```

```

    { ID id-AICH-ParametersListIE-CTCH-ReconfRqstFDD    CRITICALITY reject    TYPE AICH-ParametersListIE-CTCH-ReconfRqstFDD    PRESENCE mandatory }
}

AICH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF AICH-ParametersItem-CTCH-ReconfRqstFDD

AICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    aICH-Power                  AICH-Power    OPTIONAL,
    iE-Extensions               ProtocolExtensionContainer { { AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CPCHList-CTCH-ReconfRqstFDD ::= SEQUENCE {
    cPCH-ParametersList-CTCH-ReconfRqstFDD    CPCH-ParametersList-CTCH-ReconfRqstFDD    OPTIONAL,
    aP-AICH-ParametersList-CTCH-ReconfRqstFDD    AP-AICH-ParametersList-CTCH-ReconfRqstFDD    OPTIONAL,
    cDCA-ICH-ParametersList-CTCH-ReconfRqstFDD    CDCA-ICH-ParametersList-CTCH-ReconfRqstFDD    OPTIONAL,
    iE-Extensions    ProtocolExtensionContainer { { CPCHListItem-CTCH-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

CPCHListItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CPCH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ CPCH-ParametersListIEs-CTCH-ReconfRqstFDD }}

CPCH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD    CRITICALITY reject    TYPE CPCH-ParametersListIE-CTCH-ReconfRqstFDD    PRESENCE mandatory }
}

CPCH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfCPCHs)) OF CPCH-ParametersItem-CTCH-ReconfRqstFDD

CPCH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonTransportChannelID    CommonTransportChannelID,
    uL-SIR                        UL-SIR    OPTIONAL,
    initialDL-transmissionPower    DL-Power    OPTIONAL,
    maximumDLPower                DL-Power    OPTIONAL,
    minimumDLPower                DL-Power    OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { CPCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

CPCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AP-AICH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ AP-AICH-ParametersListIEs-CTCH-ReconfRqstFDD }}

AP-AICH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {

```

```

    { ID id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD CRITICALITY reject TYPE AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD PRESENCE mandatory }
}

AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfCPCHs)) OF AP-AICH-ParametersItem-CTCH-ReconfRqstFDD

AP-AICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    aP-AICH-Power                    AICH-Power          OPTIONAL,
    cSICH-Power                      AICH-Power          OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { AP-AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

AP-AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CDCA-ICH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ CDCA-ICH-ParametersListIEs-CTCH-ReconfRqstFDD }}

CDCA-ICH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD CRITICALITY reject TYPE CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD PRESENCE mandatory }
}

CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfCPCHs)) OF AP-AICH-ParametersItem-CTCH-ReconfRqstFDD

CDCA-ICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    cDCA-ICH-Power                  AICH-Power          OPTIONAL,
    iE-Extensions                  ProtocolExtensionContainer { { CDCA-ICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

CDCA-ICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST TDD
--
-- *****

CommonTransportChannelReconfigurationRequestTDD ::= SEQUENCE {
    protocolIEs                    ProtocolIE-Container {{CommonTransportChannelReconfigurationRequestTDD-IEs}},
    protocolExtensions             ProtocolExtensionContainer {{CommonTransportChannelReconfigurationRequestTDD-Extensions}} OPTIONAL,
    ...
}

CommonTransportChannelReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-C-ID CRITICALITY reject TYPE C-ID PRESENCE
    mandatory }|
}

```

```

{ ID id-ConfigurationGenerationID          CRITICALITY reject   TYPE   ConfigurationGenerationID          PRESENCE
  mandatory }|
{ ID id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD          CRITICALITY reject   TYPE   Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD
  PRESENCE optional }|
{ ID id-PICH-Parameters-CTCH-ReconfRqstTDD          CRITICALITY reject   TYPE   PICH-Parameters-CTCH-ReconfRqstTDD          PRESENCE optional }|
{ ID id-FACH-ParametersList-CTCH-ReconfRqstTDD          CRITICALITY reject   TYPE   FACH-ParametersList-CTCH-ReconfRqstTDD          PRESENCE optional }|
{ ID id-PCH-Parameters-CTCH-ReconfRqstTDD          CRITICALITY reject   TYPE   PCH-Parameters-CTCH-ReconfRqstTDD          PRESENCE optional },
...
}

CommonTransportChannelReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  secondaryCCPCHList          Secondary-CCPCHList-CTCH-ReconfRqstTDD          OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { Secondary-CCPCH-CTCH-ReconfRqstTDD-ExtIEs } }          OPTIONAL,
  ...
}

Secondary-CCPCH-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Secondary-CCPCHList-CTCH-ReconfRqstTDD ::= ProtocolIE-Single-Container { { Secondary-CCPCHListIEs-CTCH-ReconfRqstTDD } }

Secondary-CCPCHListIEs-CTCH-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD          CRITICALITY reject   TYPE   Secondary-CCPCHListIE-CTCH-ReconfRqstTDD          PRESENCE mandatory }
}

Secondary-CCPCHListIE-CTCH-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF Secondary-CCPCHItem-CTCH-ReconfRqstTDD

Secondary-CCPCHItem-CTCH-ReconfRqstTDD ::= SEQUENCE {
  commonPhysicalChannelID          CommonPhysicalChannelID,
  sCCPCH-Power          DL-Power          OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { Secondary-CCPCHItem-CTCH-ReconfRqstTDD-ExtIEs } }          OPTIONAL,
  ...
}

Secondary-CCPCHItem-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

PICH-Parameters-CTCH-ReconfRqstTDD ::= SEQUENCE {
  commonPhysicalChannelID          CommonPhysicalChannelID,
  pICH-Power          PICH-Power          OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { PICH-Parameters-CTCH-ReconfRqstTDD-ExtIEs } }          OPTIONAL,
  ...
}

PICH-Parameters-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

}

FACH-ParametersList-CTCH-ReconfRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfFACHs)) OF FACH-ParametersItem-CTCH-ReconfRqstTDD

FACH-ParametersItem-CTCH-ReconfRqstTDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    toAWS                          ToAWS          OPTIONAL,
    toAWE                          ToAWE          OPTIONAL,
    iE-Extensions                  ProtocolExtensionContainer { { FACH-ParametersItem-CTCH-ReconfRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

FACH-ParametersItem-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCH-Parameters-CTCH-ReconfRqstTDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    toAWS                          ToAWS          OPTIONAL,
    toAWE                          ToAWE          OPTIONAL,
    iE-Extensions                  ProtocolExtensionContainer { { PCH-Parameters-CTCH-ReconfRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

PCH-Parameters-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE
--
-- *****

CommonTransportChannelReconfigurationResponse ::= SEQUENCE {
    protocolIEs                    ProtocolIE-Container   {{CommonTransportChannelReconfigurationResponse-IEs}},
    protocolExtensions              ProtocolExtensionContainer {{CommonTransportChannelReconfigurationResponse-Extensions}}    OPTIONAL,
    ...
}

CommonTransportChannelReconfigurationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CriticalityDiagnostics      CRITICALITY      ignore          TYPE      CriticalityDiagnostics      PRESENCE optional},
    ...
}

CommonTransportChannelReconfigurationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE
--

```

```

-- *****
CommonTransportChannelReconfigurationFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{CommonTransportChannelReconfigurationFailure-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{CommonTransportChannelReconfigurationFailure-Extensions}}    OPTIONAL,
    ...
}

CommonTransportChannelReconfigurationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-Cause          CRITICALITY ignore          TYPE      Cause          PRESENCE mandatory }|
    { ID      id-CriticalityDiagnostics CRITICALITY ignore          TYPE      CriticalityDiagnostics PRESENCE optional },
    ...
}

CommonTransportChannelReconfigurationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL DELETION REQUEST
--
-- *****

CommonTransportChannelDeletionRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{CommonTransportChannelDeletionRequest-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{CommonTransportChannelDeletionRequest-Extensions}}    OPTIONAL,
    ...
}

CommonTransportChannelDeletionRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-C-ID          CRITICALITY reject          TYPE      C-ID          PRESENCE mandatory }|
    { ID      id-CommonPhysicalChannelID CRITICALITY reject          TYPE      CommonPhysicalChannelID PRESENCE mandatory }|
    { ID      id-ConfigurationGenerationID CRITICALITY reject          TYPE      ConfigurationGenerationID PRESENCE mandatory },
    ...
}

CommonTransportChannelDeletionRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL DELETION RESPONSE
--
-- *****

CommonTransportChannelDeletionResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{CommonTransportChannelDeletionResponse-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{CommonTransportChannelDeletionResponse-Extensions}}    OPTIONAL,
    ...
}

```

```

CommonTransportChannelDeletionResponse-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-CriticalityDiagnostics      CRITICALITY      ignore      TYPE      CriticalityDiagnostics      PRESENCE optional},
  ...
}

CommonTransportChannelDeletionResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- BLOCK RESOURCE REQUEST
--
-- *****

BlockResourceRequest ::= SEQUENCE {
  protocolIEs      ProtocolIE-Container      {{BlockResourceRequest-IEs}},
  protocolExtensions      ProtocolExtensionContainer      {{BlockResourceRequest-Extensions}}      OPTIONAL,
  ...
}

BlockResourceRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-C-ID      CRITICALITY reject      TYPE      C-ID      PRESENCE mandatory }|
  { ID      id-BlockingPriorityIndicator      CRITICALITY reject      TYPE      BlockingPriorityIndicator      PRESENCE mandatory }|
  { ID      id-ShutdownTimer      CRITICALITY reject      TYPE      ShutdownTimer      PRESENCE conditional },
  -- The IE is present when the Blocking Priority IndicatorIE indicates 'Normal Priority'--
  ...
}

BlockResourceRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- BLOCK RESOURCE RESPONSE
--
-- *****

BlockResourceResponse ::= SEQUENCE {
  protocolIEs      ProtocolIE-Container      {{BlockResourceResponse-IEs}},
  protocolExtensions      ProtocolExtensionContainer      {{BlockResourceResponse-Extensions}}      OPTIONAL,
  ...
}

BlockResourceResponse-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-CriticalityDiagnostics      CRITICALITY      ignore      TYPE      CriticalityDiagnostics      PRESENCE optional},
  ...
}

BlockResourceResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

-- *****
--
-- BLOCK RESOURCE FAILURE
--
-- *****

BlockResourceFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{BlockResourceFailure-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{BlockResourceFailure-Extensions}}    OPTIONAL,
    ...
}

BlockResourceFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-Cause          CRITICALITY    ignore    TYPE    Cause          PRESENCE mandatory }|
    { ID    id-CriticalityDiagnostics    CRITICALITY    ignore    TYPE    CriticalityDiagnostics    PRESENCE optional },
    ...
}

BlockResourceFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- UNBLOCK RESOURCE INDICATION
--
-- *****

UnblockResourceIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{UnblockResourceIndication-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{UnblockResourceIndication-Extensions}}    OPTIONAL,
    ...
}

UnblockResourceIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID          CRITICALITY    ignore    TYPE    C-ID          PRESENCE    mandatory},
    ...
}

UnblockResourceIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- AUDIT REQUIRED INDICATION
--
-- *****

AuditRequiredIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{AuditRequiredIndication-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{AuditRequiredIndication-Extensions}}    OPTIONAL,

```



```

}
...
}
AuditRequiredIndication-IEs NBAP-PROTOCOL-IES ::= {
...
}
AuditRequiredIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- AUDIT REQUEST
--
-- *****

AuditRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{AuditRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{AuditRequest-Extensions}}    OPTIONAL,
    ...
}

AuditRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-Start-Of-Audit-Sequence-Indicator    CRITICALITY    reject    TYPE    Start-Of-Audit-Sequence-Indicator    PRESENCE    mandatory },
    ...
}

AuditRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- AUDIT RESPONSE
--
-- *****

AuditResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{AuditResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{AuditResponse-Extensions}}    OPTIONAL,
    ...
}

AuditResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-End-Of-Audit-Sequence-Indicator    CRITICALITY    ignore    TYPE    End-Of-Audit-Sequence-Indicator    PRESENCE    mandatory }|
    { ID    id-Cell-InformationList-AuditRsp    CRITICALITY    ignore    TYPE    Cell-InformationList-AuditRsp    PRESENCE
    optional    }|
    { ID    id-CCP-InformationList-AuditRsp    CRITICALITY    ignore    TYPE    CCP-InformationList-AuditRsp    PRESENCE    optional
    }|
    -- CCP (Communication Control Port) --
    { ID    id-Local-Cell-InformationList-AuditRsp    CRITICALITY    ignore    TYPE    Local-Cell-InformationList-AuditRsp    PRESENCE
    optional    }|

```

```

    { ID id-Local-Cell-Group-InformationList-AuditRsp CRITICALITY ignore TYPE Local-Cell-Group-InformationList-AuditRsp PRESENCE
      optional }|
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional
    },
    ...
  }

AuditResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Cell-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF ProtocolIE-Single-Container {{ Cell-InformationItemIE-AuditRsp}}

Cell-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-Cell-InformationItem-AuditRsp CRITICALITY ignore TYPE Cell-InformationItem-AuditRsp PRESENCE optional }
}

Cell-InformationItem-AuditRsp ::= SEQUENCE {
  c-ID ConfigurationGenerationID,
  configurationGenerationID ConfigurationGenerationID,
  resourceOperationalState ResourceOperationalState,
  availabilityStatus AvailabilityStatus,
  local-Cell-ID Local-Cell-ID,
  primary-SCH-Information P-SCH-Information-AuditRsp OPTIONAL,
  secondary-SCH-Information S-SCH-Information-AuditRsp OPTIONAL,
  primary-CPICH-Information P-CPICH-Information-AuditRsp OPTIONAL,
  secondary-CPICH-InformationList S-CPICH-InformationList-AuditRsp OPTIONAL,
  primary-CCPCH-Information P-CCPCH-Information-AuditRsp OPTIONAL,
  bCH-Information BCH-Information-AuditRsp OPTIONAL,
  secondary-CCPCH-InformationList S-CCPCH-InformationList-AuditRsp OPTIONAL,
  pCH-Information PCH-Information-AuditRsp OPTIONAL,
  pICH-Information PICH-Information-AuditRsp OPTIONAL,
  fACH-InformationList FACH-InformationList-AuditRsp OPTIONAL,
  pRACH-InformationList PRACH-InformationList-AuditRsp OPTIONAL,
  rACH-InformationList RACH-InformationList-AuditRsp OPTIONAL,
  aICH-InformationList AICH-InformationList-AuditRsp OPTIONAL,
  pCPCH-InformationList PCPCH-InformationList-AuditRsp OPTIONAL,
  cPCH-InformationList CPCH-InformationList-AuditRsp OPTIONAL,
  aP-AICH-InformationList AP-AICH-InformationList-AuditRsp OPTIONAL,
  cDCA-ICH-InformationList CDCA-ICH-InformationList-AuditRsp OPTIONAL,
  sCH-Information SCH-Information-AuditRsp OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { Cell-InformationItem-AuditRsp-ExtIEs} } OPTIONAL,
  ...
}

Cell-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

P-SCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ P-SCH-InformationIE-AuditRsp }}

P-SCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-P-SCH-Information CRITICALITY ignore TYPE Common-PhysicalChannel-Status-Information PRESENCE mandatory }
}

```

```

}

S-SCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ S-SCH-InformationIE-AuditRsp }}

S-SCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-S-SCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

P-CPICH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ P-CPICH-InformationIE-AuditRsp }}

P-CPICH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-P-CPICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

S-CPICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container {{ S-CPICH-InformationItemIE-AuditRsp }}

S-CPICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-S-CPICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

P-CCPCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ P-CCPCH-InformationIE-AuditRsp }}

P-CCPCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-P-CCPCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

BCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ BCH-InformationIE-AuditRsp }}

BCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-BCH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information  PRESENCE mandatory }
}

S-CCPCH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxSCCPCHCell)) OF ProtocolIE-Single-Container {{ S-CCPCH-InformationItemIE-AuditRsp }}

S-CCPCH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-S-CCPCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

PCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ PCH-InformationIE-AuditRsp }}

PCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-PCH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information  PRESENCE mandatory }
}

PICH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ PICH-InformationIE-AuditRsp }}

PICH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-PICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

FACH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxFACHCell)) OF ProtocolIE-Single-Container {{ FACH-InformationItemIE-AuditRsp }}

FACH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-FACH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information  PRESENCE mandatory }
}

```

```

}

PRACH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ PRACH-InformationItemIE-AuditRsp }}

PRACH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-PRACH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

RACH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxRACHCell)) OF ProtocolIE-Single-Container {{ RACH-InformationItemIE-AuditRsp }}

RACH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-RACH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information  PRESENCE mandatory }
}

AICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxRACHCell)) OF ProtocolIE-Single-Container {{ AICH-InformationItemIE-AuditRsp }}

AICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-AICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

PCPCH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxPCPCHCell)) OF ProtocolIE-Single-Container {{ PCPCH-InformationItemIE-AuditRsp }}

PCPCH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-PCPCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE optional }
}

CPCH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CPCH-InformationItemIE-AuditRsp }}

CPCH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-CPCH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information  PRESENCE optional }
}

AP-AICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ AP-AICH-InformationItemIE-AuditRsp }}

AP-AICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-AP-AICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

CDCA-ICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CDCA-ICH-InformationItemIE-AuditRsp }}

CDCA-ICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-CDCA-ICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

SCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ SCH-InformationIE-AuditRsp }}

SCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-SCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

CCP-InformationList-AuditRsp ::=SEQUENCE (SIZE (1..maxCCPinNodeB)) OF ProtocolIE-Single-Container {{ CCP-InformationItemIE-AuditRsp }}

CCP-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {

```

```

}
{ ID id-CCP-InformationItem-AuditRsp          CRITICALITY   ignore          TYPE   CCP-InformationItem-AuditRsp          PRESENCE mandatory}
}

CCP-InformationItem-AuditRsp ::= SEQUENCE {
  communicationControlPortID      CommunicationControlPortID,
  resourceOperationalState         ResourceOperationalState,
  availabilityStatus               AvailabilityStatus,
  iE-Extensions                    ProtocolExtensionContainer  {{ CCP-InformationItem-AuditRsp-ExtIEs }}  OPTIONAL,
  ...
}

CCP-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Local-Cell-InformationList-AuditRsp ::=SEQUENCE (SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-InformationItemIE-AuditRsp }}

Local-Cell-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID      id-Local-Cell-InformationItem-AuditRsp          CRITICALITY   ignore          TYPE   Local-Cell-InformationItem-AuditRsp          PRESENCE
    mandatory}
}

Local-Cell-InformationItem-AuditRsp ::= SEQUENCE {
  local-Cell-ID                    Local-Cell-ID,
  dl-or-global-capacityCredit      DL-or-Global-CapacityCredit,
  ul-capacityCredit                 UL-CapacityCredit          OPTIONAL,
  commonChannelsCapacityConsumptionLaw  CommonChannelsCapacityConsumptionLaw,
  dedicatedChannelsCapacityConsumptionLaw  DedicatedChannelsCapacityConsumptionLaw,
  maximumDL-PowerCapability         MaximumDL-PowerCapability   OPTIONAL,
  minSpreadingFactor                MinSpreadingFactor         OPTIONAL,
  minimumDL-PowerCapability         MinimumDL-PowerCapability   OPTIONAL,
  local-Cell-Group-ID              Local-Cell-ID              OPTIONAL,
  iE-Extensions                    ProtocolExtensionContainer  {{ Local-Cell-InformationItem-AuditRsp-ExtIEs}}  OPTIONAL,
  ...
}

Local-Cell-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Local-Cell-Group-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-Group-InformationItemIE-AuditRsp }}

Local-Cell-Group-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID      id-Local-Cell-Group-InformationItem-AuditRsp          CRITICALITY   ignore          TYPE   Local-Cell-Group-InformationItem-AuditRsp          PRESENCE
    mandatory}
}

Local-Cell-Group-InformationItem-AuditRsp ::= SEQUENCE {
  local-Cell-Group-ID              Local-Cell-ID,
  dl-or-global-capacityCredit      DL-or-Global-CapacityCredit,
  ul-capacityCredit                 UL-CapacityCredit          OPTIONAL,

```

```

commonChannelsCapacityConsumptionLaw      CommonChannelsCapacityConsumptionLaw,
dedicatedChannelsCapacityConsumptionLaw   DedicatedChannelsCapacityConsumptionLaw,
iE-Extensions                             ProtocolExtensionContainer  {{ Local-Cell-Group-InformationItem-AuditRsp-ExtIEs}}  OPTIONAL,
...
}

Local-Cell-Group-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- AUDIT FAILURE
--
-- *****

AuditFailure ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{AuditFailure-IEs}},
  protocolExtensions  ProtocolExtensionContainer  {{AuditFailure-Extensions}}  OPTIONAL,
  ...
}

AuditFailure-IEs NBAP-PROTOCOL-IES ::= {
  { ID    id-Cause          CRITICALITY    ignore      TYPE    Cause          PRESENCE mandatory }|
  { ID    id-CriticalityDiagnostics  CRITICALITY    ignore      TYPE    CriticalityDiagnostics  PRESENCE optional },
  ...
}

AuditFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- COMMON MEASUREMENT INITIATION REQUEST
--
-- *****

CommonMeasurementInitiationRequest ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{CommonMeasurementInitiationRequest-IEs}},
  protocolExtensions  ProtocolExtensionContainer  {{CommonMeasurementInitiationRequest-Extensions}}  OPTIONAL,
  ...
}

CommonMeasurementInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID    id-MeasurementID          CRITICALITY reject      TYPE    MeasurementID          PRESENCE mandatory
  }|
  { ID    id-CommonMeasurementObjectType-CM-Rqst          CRITICALITY reject      TYPE    CommonMeasurementObjectType-CM-Rqst          PRESENCE
  mandatory }|
  -- This IE represents both the Common Measurement Object Type IE and the choice based on the Common Measurement Object Type
  -- as described in the tabular message format in subclause 9.1.
  { ID    id-CommonMeasurementType          CRITICALITY reject      TYPE    CommonMeasurementType          PRESENCE mandatory
  }|
}

```

```

    { ID      id-MeasurementFilterCoefficient
      optional }|
    { ID      id-ReportCharacteristics
      }|
    { ID      id-SFNReportingIndicator
      }|
    { ID      id-SFN
      },
    ...
  }

CommonMeasurementInitiationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CommonMeasurementObjectType-CM-Rqst ::= CHOICE {
  cell          Cell-CM-Rqst,
  rACH          RACH-CM-Rqst,
  cPCH         CPCH-CM-Rqst,
  ...
}

Cell-CM-Rqst ::= SEQUENCE {
  c-ID          C-ID,
  timeSlot     TimeSlot OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { CellItem-CM-Rqst-ExtIEs } } OPTIONAL,
  ...
}

CellItem-CM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RACH-CM-Rqst ::= SEQUENCE {
  c-ID          C-ID,
  commonTransportChannelID CommonTransportChannelID,
  iE-Extensions ProtocolExtensionContainer { { RACHItem-CM-Rqst-ExtIEs } } OPTIONAL,
  ...
}

RACHItem-CM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CPCH-CM-Rqst ::= SEQUENCE {
  c-ID          C-ID,
  commonTransportChannelID CommonTransportChannelID,
  spreadingfactor MinUL-ChannelisationCodeLength OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { CPCHItem-CM-Rqst-ExtIEs } } OPTIONAL,
  ...
}

CPCHItem-CM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
-- *****
--
-- COMMON MEASUREMENT INITIATION RESPONSE
--
-- *****

CommonMeasurementInitiationResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CommonMeasurementInitiationResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer  {{CommonMeasurementInitiationResponse-Extensions}}  OPTIONAL,
    ...
}

CommonMeasurementInitiationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-MeasurementID          CRITICALITY ignore          TYPE      MeasurementID          PRESENCE mandatory }|
    { ID      id-CommonMeasurementObjectType-CM-Rsp  CRITICALITY ignore          TYPE      CommonMeasurementObjectType-CM-Rsp  PRESENCE optional
    }|
    { ID      id-SFN                    CRITICALITY ignore          TYPE      SFN                    PRESENCE optional }|
    { ID      id-CriticalityDiagnostics  CRITICALITY ignore          TYPE      CriticalityDiagnostics  PRESENCE optional },
    ...
}

CommonMeasurementInitiationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonMeasurementObjectType-CM-Rsp ::= CHOICE {
    cell                Cell-CM-Rsp,
    rACH                RACH-CM-Rsp,
    cPCH                CPCH-CM-Rsp,
    ...
}

Cell-CM-Rsp ::= SEQUENCE {
    commonMeasurementValue      CommonMeasurementValue,
    iE-Extensions               ProtocolExtensionContainer  { { CellItem-CM-Rsp-ExtIEs} }  OPTIONAL,
    ...
}

CellItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RACH-CM-Rsp ::= SEQUENCE {
    commonMeasurementValue      CommonMeasurementValue,
    iE-Extensions               ProtocolExtensionContainer  { { RACHItem-CM-Rsp-ExtIEs} }  OPTIONAL,
    ...
}

RACHItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```



```

}

CPCH-CM-Rsp ::= SEQUENCE {
    commonMeasurementValue      CommonMeasurementValue,
    iE-Extensions                ProtocolExtensionContainer  { { CPCHItem-CM-Rsp-ExtIEs} }    OPTIONAL,
    ...
}

CPCHItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON MEASUREMENT INITIATION FAILURE
--
-- *****

CommonMeasurementInitiationFailure ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container  {{CommonMeasurementInitiationFailure-IEs}},
    protocolExtensions          ProtocolExtensionContainer  {{CommonMeasurementInitiationFailure-Extensions}}    OPTIONAL,
    ...
}

CommonMeasurementInitiationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-MeasurementID          CRITICALITY  ignore          TYPE      MeasurementID          PRESENCE mandatory }|
    { ID      id-Cause                  CRITICALITY  ignore          TYPE      Cause                    PRESENCE mandatory }|
    { ID      id-CriticalityDiagnostics CRITICALITY  ignore          TYPE      CriticalityDiagnostics    PRESENCE optional },
    ...
}

CommonMeasurementInitiationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON MEASUREMENT REPORT
--
-- *****

CommonMeasurementReport ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container  {{CommonMeasurementReport-IEs}},
    protocolExtensions          ProtocolExtensionContainer  {{CommonMeasurementReport-Extensions}}    OPTIONAL,
    ...
}

CommonMeasurementReport-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-MeasurementID          CRITICALITY  ignore          TYPE      MeasurementID          PRESENCE mandatory }|
    { ID      id-CommonMeasurementObjectType-CM-Rprt CRITICALITY  ignore          TYPE      CommonMeasurementObjectType-CM-Rprt    PRESENCE mandatory }|
    }|
    { ID      id-SFN                    CRITICALITY  ignore          TYPE      SFN                    PRESENCE optional },
    ...
}

```

```

}

CommonMeasurementReport-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonMeasurementObjectType-CM-Rprt ::= CHOICE {
    cell                Cell-CM-Rprt,
    rACH                RACH-CM-Rprt,
    cPCH                CPCH-CM-Rprt,
    ...
}

Cell-CM-Rprt ::= SEQUENCE {
    commonMeasurementValueInformation    CommonMeasurementValueInformation,
    iE-Extensions                        ProtocolExtensionContainer {{ CellItem-CM-Rprt-ExtIEs }}    OPTIONAL,
    ...
}

CellItem-CM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RACH-CM-Rprt ::= SEQUENCE {
    commonMeasurementValueInformation    CommonMeasurementValueInformation,
    iE-Extensions                        ProtocolExtensionContainer {{ RACHItem-CM-Rprt-ExtIEs }}    OPTIONAL,
    ...
}

RACHItem-CM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CPCH-CM-Rprt ::= SEQUENCE {
    commonMeasurementValueInformation    CommonMeasurementValueInformation,
    iE-Extensions                        ProtocolExtensionContainer {{ CPCHItem-CM-Rprt-ExtIEs }}    OPTIONAL,
    ...
}

CPCHItem-CM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON MEASUREMENT TERMINATION REQUEST
--
-- *****

CommonMeasurementTerminationRequest ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{CommonMeasurementTerminationRequest-IEs}},

```

```

    protocolExtensions      ProtocolExtensionContainer  {{CommonMeasurementTerminationRequest-Extensions}}  OPTIONAL,
    ...
}

CommonMeasurementTerminationRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-MeasurementID          CRITICALITY  ignore          TYPE      MeasurementID          PRESENCE mandatory},
    ...
}

CommonMeasurementTerminationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON MEASUREMENT FAILURE INDICATION
--
-- *****

CommonMeasurementFailureIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CommonMeasurementFailureIndication-IEs}},
    protocolExtensions   ProtocolExtensionContainer  {{CommonMeasurementFailureIndication-Extensions}}  OPTIONAL,
    ...
}

CommonMeasurementFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-MeasurementID          CRITICALITY ignore          TYPE      MeasurementID          PRESENCE mandatory }|
    { ID      id-Cause                 CRITICALITY ignore          TYPE      Cause                PRESENCE mandatory }|
    ...
}

CommonMeasurementFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL SETUP REQUEST FDD
--
-- *****

CellSetupRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellSetupRequestFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer  {{CellSetupRequestFDD-Extensions}}  OPTIONAL,
    ...
}

CellSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-Local-Cell-ID          CRITICALITY  reject          TYPE      Local-Cell-ID
    PRESENCE  mandatory }|
    { ID      id-C-ID                  CRITICALITY  reject          TYPE      C-ID
    mandatory }|
    ...
}

```

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```

{ ID id-ConfigurationGenerationID
PRESENCE mandatory }|
{ ID id-T-Cell
PRESENCE mandatory }|
{ ID id-UARFCNforNu
PRESENCE mandatory }|
{ ID id-UARFCNforNd
PRESENCE mandatory }|
{ ID id-MaximumTransmissionPower
PRESENCE mandatory }|
{ ID id-Closed-Loop-Timing-Adjustment-Mode
PRESENCE optional }|
{ ID id-PrimaryScramblingCode
PRESENCE mandatory }|
{ ID id-Synchronisation-Configuration-Cell-SetupRqst
PRESENCE mandatory }|
{ ID id-DL-TPC-Pattern01Count
PRESENCE mandatory }|
{ ID id-PrimarySCH-Information-Cell-SetupRqstFDD
PRESENCE mandatory }|
{ ID id-SecondarySCH-Information-Cell-SetupRqstFDD
PRESENCE mandatory }|
{ ID id-PrimaryCPICH-Information-Cell-SetupRqstFDD
PRESENCE mandatory }|
{ ID id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD
PRESENCE optional }|
SetupRqstFDD { ID id-PrimaryCCPCH-Information-Cell-SetupRqstFDD
PRESENCE mandatory }|
{ ID id-Limited-power-increase-information-Cell-SetupRqstFDD
PRESENCE mandatory },
...
}

CellSetupRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
...
}

Synchronisation-Configuration-Cell-SetupRqst ::= SEQUENCE {
n-INSYNC-IND N-INSYNC-IND,
n-OUTSYNC-IND N-OUTSYNC-IND,
t-RLFFAILURE T-RLFFAILURE,
iE-Extensions ProtocolExtensionContainer { { Synchronisation-Configuration-Cell-SetupRqst-ExtIEs } } OPTIONAL,
...
}

Synchronisation-Configuration-Cell-SetupRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

PrimarySCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
commonPhysicalChannelID CommonPhysicalChannelID,
primarySCH-Power DL-Power,
tSTD-Indicator TSTD-Indicator,

```

```

    iE-Extensions          ProtocolExtensionContainer { { PrimarySCH-Information-Cell-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

PrimarySCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondarySCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    secondarySCH-Power           DL-Power,
    tSTD-Indicator               TSTD-Indicator,
    iE-Extensions               ProtocolExtensionContainer { { SecondarySCH-Information-Cell-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

SecondarySCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCPICH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    primaryCPICH-Power           PrimaryCPICH-Power,
    transmitDiversityIndicator   TransmitDiversityIndicator,
    iE-Extensions               ProtocolExtensionContainer { { PrimaryCPICH-Information-Cell-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

PrimaryCPICH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCPICH-InformationList-Cell-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container{{ SecondaryCPICH-
InformationItemIE-Cell-SetupRqstFDD }}

SecondaryCPICH-InformationItemIE-Cell-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD      CRITICALITY      reject      TYPE      SecondaryCPICH-InformationItem-Cell-
SetupRqstFDD      PRESENCE      mandatory}
}

SecondaryCPICH-InformationItem-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    dl-ScramblingCode           DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber      FDD-DL-ChannelisationCodeNumber,
    secondaryCPICH-Power         DL-Power,
    transmitDiversityIndicator   TransmitDiversityIndicator,
    iE-Extensions               ProtocolExtensionContainer { { SecondaryCPICH-InformationItem-Cell-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

SecondaryCPICH-InformationItem-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

PrimaryCCPCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    bCH-information               BCH-Information-Cell-SetupRqstFDD,
    sTTD-Indicator               STTD-Indicator,
    iE-Extensions                 ProtocolExtensionContainer { { PrimaryCCPCH-Information-Cell-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

PrimaryCCPCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

BCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    bCH-Power                     DL-Power,
    iE-Extensions                 ProtocolExtensionContainer { { BCH-Information-Cell-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

BCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Limited-power-increase-information-Cell-SetupRqstFDD ::= SEQUENCE {
    powerRaiseLimit               PowerRaiseLimit,
    dLPowerAveragingWindowSize    DLPowerAveragingWindowSize,
    iE-Extensions                 ProtocolExtensionContainer { { Limited-power-increase-information-Cell-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

Limited-power-increase-information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL SETUP REQUEST TDD
--
-- *****

CellSetupRequestTDD ::= SEQUENCE {
    protocolIEs                   ProtocolIE-Container  {{CellSetupRequestTDD-IEs}},
    protocolExtensions            ProtocolExtensionContainer  {{CellSetupRequestTDD-Extensions}} OPTIONAL,
    ...
}

CellSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-Local-Cell-ID      CRITICALITY    reject      TYPE Local-Cell-ID      PRESENCE
    mandatory  }|
    { ID      id-C-ID              CRITICALITY    reject      TYPE C-ID              PRESENCE
    mandatory  }|

```

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{ ID id-ConfigurationGenerationID mandatory }	CRITICALITY	reject	TYPE ConfigurationGenerationID	PRESENCE
{ ID id-UARFCNforNt mandatory }	CRITICALITY	reject	TYPE UARFCN	PRESENCE
{ ID id-CellParameterID mandatory }	CRITICALITY	reject	TYPE CellParameterID	PRESENCE
{ ID id-MaximumTransmissionPower mandatory }	CRITICALITY	reject	TYPE MaximumTransmissionPower	PRESENCE
{ ID id-TransmissionDiversityApplied mandatory }	CRITICALITY	reject	TYPE TransmissionDiversityApplied	PRESENCE
{ ID id-SyncCase mandatory }	CRITICALITY	reject	TYPE SyncCase	PRESENCE
{ ID id-Synchronisation-Configuration-Cell-SetupRqst PRESENCE mandatory }	CRITICALITY	reject	TYPE Synchronisation-Configuration-Cell-SetupRqst	
{ ID id-DPCHConstant mandatory }	CRITICALITY	reject	TYPE ConstantValue	PRESENCE
{ ID id-PUSCHConstant mandatory }	CRITICALITY	reject	TYPE ConstantValue	PRESENCE
{ ID id-PRACHConstant mandatory }	CRITICALITY	reject	TYPE ConstantValue	PRESENCE
{ ID id-TimingAdvanceApplied mandatory }	CRITICALITY	reject	TYPE TimingAdvanceApplied	PRESENCE
{ ID id-SCH-Information-Cell-SetupRqstTDD PRESENCE mandatory }	CRITICALITY	reject	TYPE SCH-Information-Cell-SetupRqstTDD	
{ ID id-PCCPCH-Information-Cell-SetupRqstTDD PRESENCE mandatory }	CRITICALITY	reject	TYPE PCCPCH-Information-Cell-SetupRqstTDD	
{ ID id-TimeSlotConfigurationList-Cell-SetupRqstTDD PRESENCE mandatory },	CRITICALITY	reject	TYPE TimeSlotConfigurationList-Cell-SetupRqstTDD	
...				
}				
CellSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {				
...				
}				
SCH-Information-Cell-SetupRqstTDD ::= SEQUENCE {				
commonPhysicalChannelID	CommonPhysicalChannelID,			
syncCaseIndicator	SyncCaseIndicator-Cell-SetupRqstTDD-PSCH,			
sCH-Power	DL-Power,			
tSTD-Indicator	TSTD-Indicator,			
iE-Extensions	ProtocolExtensionContainer { { SCH-Information-Cell-SetupRqstTDD-ExtIEs } }	OPTIONAL,		
...				
}				
SCH-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {				
...				
}				
SyncCaseIndicator-Cell-SetupRqstTDD-PSCH ::= ProtocolIE-Single-Container {{ SyncCaseIndicatorIE-Cell-SetupRqstTDD-PSCH }}				
SyncCaseIndicatorIE-Cell-SetupRqstTDD-PSCH NBAP-PROTOCOL-IES ::= {				

```

    { ID id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH CRITICALITY reject TYPE SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH PRESENCE
    mandatory }
}

```

```

SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH ::= CHOICE {
    case1 Case1-Cell-SetupRqstTDD,
    case2 Case2-Cell-SetupRqstTDD,
    ...
}

```

```

Case1-Cell-SetupRqstTDD ::= SEQUENCE {
    timeSlot TimeSlot,
    iE-Extensions ProtocolExtensionContainer { { Case1Item-Cell-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

Case1Item-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

Case2-Cell-SetupRqstTDD ::= SEQUENCE {
    sCH-TimeSlot SCH-TimeSlot,
    iE-Extensions ProtocolExtensionContainer { { Case2Item-Cell-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

Case2Item-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

PCCPCH-Information-Cell-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID,
    tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod RepetitionPeriod,
    repetitionLength RepetitionLength,
    pCCPCH-Power PCCPCH-Power,
    blockSTTD-Indicator BlockSTTD-Indicator,
    iE-Extensions ProtocolExtensionContainer { { PCCPCH-Information-Cell-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

PCCPCH-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

TimeSlotConfigurationList-Cell-SetupRqstTDD ::= SEQUENCE (SIZE (1..15)) OF TimeSlotConfigurationItem-Cell-SetupRqstTDD

```

```

TimeSlotConfigurationItem-Cell-SetupRqstTDD ::= SEQUENCE {
    timeSlot TimeSlot,
    timeSlotStatus TimeSlotStatus,
    timeSlotDirection TimeSlotDirection,
    iE-Extensions ProtocolExtensionContainer { { TimeSlotConfigurationItem-Cell-SetupRqstTDD-ExtIEs} } OPTIONAL,
}

```



```

}
...
}
TimeSlotConfigurationItem-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
-- *****
--
-- CELL SETUP RESPONSE
--
-- *****

CellSetupResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellSetupResponse-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{CellSetupResponse-Extensions}}    OPTIONAL,
    ...
}

CellSetupResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CriticalityDiagnostics      CRITICALITY      ignore          TYPE      CriticalityDiagnostics      PRESENCE optional},
    ...
}

CellSetupResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL SETUP FAILURE
--
-- *****

CellSetupFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellSetupFailure-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{CellSetupFailure-Extensions}}    OPTIONAL,
    ...
}

CellSetupFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-Cause          CRITICALITY      ignore          TYPE      Cause          PRESENCE mandatory }|
    { ID      id-CriticalityDiagnostics      CRITICALITY      ignore          TYPE      CriticalityDiagnostics      PRESENCE optional },
    ...
}

CellSetupFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL RECONFIGURATION REQUEST FDD

```

```

--
-- *****
CellReconfigurationRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellReconfigurationRequestFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CellReconfigurationRequestFDD-Extensions}}    OPTIONAL,
    ...
}

CellReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-C-ID                CRITICALITY reject          TYPE C-ID                PRESENCE
      mandatory }|
    { ID      id-ConfigurationGenerationID    CRITICALITY reject          TYPE ConfigurationGenerationID
      PRESENCE mandatory }|
    { ID      id-MaximumTransmissionPower     CRITICALITY reject          TYPE MaximumTransmissionPower
      PRESENCE optional }|
    { ID      id-Synchronisation-Configuration-Cell-ReconfRqst    CRITICALITY reject          TYPE Synchronisation-Configuration-Cell-ReconfRqst
      PRESENCE optional }|
    { ID      id-PrimarySCH-Information-Cell-ReconfRqstFDD         CRITICALITY reject          TYPE PrimarySCH-Information-Cell-ReconfRqstFDD
      PRESENCE optional }|
    { ID      id-SecondarySCH-Information-Cell-ReconfRqstFDD       CRITICALITY reject          TYPE SecondarySCH-Information-Cell-ReconfRqstFDD
      PRESENCE optional }|
    { ID      id-PrimaryCPICH-Information-Cell-ReconfRqstFDD       CRITICALITY reject          TYPE PrimaryCPICH-Information-Cell-ReconfRqstFDD
      PRESENCE optional }|
    { ID      id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD CRITICALITY reject          TYPE SecondaryCPICH-InformationList-Cell-
      ReconfRqstFDD PRESENCE optional }|
    { ID      id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD       CRITICALITY reject          TYPE PrimaryCCPCH-Information-Cell-ReconfRqstFDD
      PRESENCE optional },
    ...
}

CellReconfigurationRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Synchronisation-Configuration-Cell-ReconfRqst ::= SEQUENCE {
    n-INSYNC-IND          N-INSYNC-IND,
    n-OUTSYNC-IND         N-OUTSYNC-IND,
    t-RLFFAILURE          T-RLFFAILURE,
    iE-Extensions         ProtocolExtensionContainer { { Synchronisation-Configuration-Cell-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}

Synchronisation-Configuration-Cell-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimarySCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    primarySCH-Power            DL-Power,
    iE-Extensions               ProtocolExtensionContainer { { PrimarySCH-Information-Cell-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

```

```

PrimarySCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondarySCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    secondarySCH-Power           DL-Power,
    iE-Extensions                ProtocolExtensionContainer { { SecondarySCH-Information-Cell-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

SecondarySCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCPICH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    primaryCPICH-Power           DL-Power,
    iE-Extensions                ProtocolExtensionContainer { { PrimaryCPICH-Information-Cell-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

PrimaryCPICH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCPICH-InformationList-Cell-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container{{ SecondaryCPICH-
InformationItemIE-Cell-ReconfRqstFDD }}

SecondaryCPICH-InformationItemIE-Cell-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD      CRITICALITY      reject      TYPE      SecondaryCPICH-InformationItem-Cell-
ReconfRqstFDD      PRESENCE      mandatory}
}

SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    secondaryCPICH-Power         DL-Power,
    iE-Extensions                ProtocolExtensionContainer { { SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD-ExtIEs} }
    OPTIONAL,
    ...
}

SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCCPCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    bCH-information              BCH-information-Cell-ReconfRqstFDD,
    iE-Extensions                ProtocolExtensionContainer { { PrimaryCCPCH-Information-Cell-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

```

```

PrimaryCCPCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

BCH-information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonTransportChannelID          CommonTransportChannelID,
    bCH-Power                          DL-Power,
    iE-Extensions                      ProtocolExtensionContainer { { BCH-information-Cell-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

BCH-information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL RECONFIGURATION REQUEST TDD
--
-- *****

CellReconfigurationRequestTDD ::= SEQUENCE {
    protocolIEs                      ProtocolIE-Container    {{CellReconfigurationRequestTDD-IEs}},
    protocolExtensions                ProtocolExtensionContainer {{CellReconfigurationRequestTDD-Extensions}}    OPTIONAL,
    ...
}

CellReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-C-ID                      CRITICALITY reject TYPE C-ID PRESENCE
      mandatory }|
    { ID id-ConfigurationGenerationID  CRITICALITY reject TYPE ConfigurationGenerationID PRESENCE
      mandatory }|
    { ID id-Synchronisation-Configuration-Cell-ReconfRqst CRITICALITY reject TYPE Synchronisation-Configuration-Cell-ReconfRqst
      PRESENCE optional }|
    { ID id-TimingAdvanceApplied       CRITICALITY reject TYPE TimingAdvanceApplied PRESENCE
      optional }|
    { ID id-SCH-Information-Cell-ReconfRqstTDD CRITICALITY reject TYPE SCH-Information-Cell-ReconfRqstTDD
      PRESENCE optional }|
    { ID id-PCCPCH-Information-Cell-ReconfRqstTDD CRITICALITY reject TYPE PCCPCH-Information-Cell-ReconfRqstTDD
      PRESENCE optional }|
    { ID id-MaximumTransmissionPower    CRITICALITY reject TYPE MaximumTransmissionPower PRESENCE
      optional }|
    { ID id-DPCHConstant                CRITICALITY reject TYPE ConstantValue PRESENCE
      optional }|
    { ID id-PUSCHConstant                CRITICALITY reject TYPE ConstantValue PRESENCE
      optional }|
    { ID id-PRACHConstant                CRITICALITY reject TYPE ConstantValue PRESENCE
      optional }|
    { ID id-TimeSlotConfigurationList-Cell-ReconfRqstTDD CRITICALITY reject TYPE TimeSlotConfigurationList-Cell-ReconfRqstTDD
      PRESENCE mandatory },
    ...
}

```

```

CellReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SCH-Information-Cell-ReconfRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    sCH-Power                        DL-Power,
    iE-Extensions                    ProtocolExtensionContainer { { PSCH-Information-Cell-ReconfRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

PSCH-Information-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCCPCH-Information-Cell-ReconfRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    pCCPCH-Power                    DL-Power,
    iE-Extensions                    ProtocolExtensionContainer { { PCCPCH-Information-Cell-ReconfRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

PCCPCH-Information-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TimeSlotConfigurationList-Cell-ReconfRqstTDD ::= SEQUENCE (SIZE (1..15)) OF TimeSlotConfigurationItem-Cell-ReconfRqstTDD

TimeSlotConfigurationItem-Cell-ReconfRqstTDD ::= SEQUENCE {
    timeSlot                        TimeSlot,
    timeSlotStatus                  TimeSlotStatus,
    timeSlotDirection               TimeSlotDirection,
    iE-Extensions                    ProtocolExtensionContainer { { TimeSlotConfigurationItem-Cell-ReconfRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

TimeSlotConfigurationItem-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL RECONFIGURATION RESPONSE
--
-- *****

CellReconfigurationResponse ::= SEQUENCE {
    protocolIEs                     ProtocolIE-Container    {{CellReconfigurationResponse-IEs}},
    protocolExtensions               ProtocolExtensionContainer {{CellReconfigurationResponse-Extensions}}    OPTIONAL,
    ...
}

CellReconfigurationResponse-IEs NBAP-PROTOCOL-IES ::= {

```

```

    { ID      id-CriticalityDiagnostics      CRITICALITY      ignore      TYPE      CriticalityDiagnostics      PRESENCE optional},
    ...
}

CellReconfigurationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL RECONFIGURATION FAILURE
--
-- *****

CellReconfigurationFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellReconfigurationFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CellReconfigurationFailure-Extensions}}    OPTIONAL,
    ...
}

CellReconfigurationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-Cause          CRITICALITY      ignore      TYPE      Cause          PRESENCE      mandatory }|
    { ID      id-CriticalityDiagnostics      CRITICALITY      ignore      TYPE      CriticalityDiagnostics      PRESENCE optional },
    ...
}

CellReconfigurationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL DELETION REQUEST
--
-- *****

CellDeletionRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellDeletionRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CellDeletionRequest-Extensions}}    OPTIONAL,
    ...
}

CellDeletionRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-C-ID          CRITICALITY      reject      TYPE      C-ID          PRESENCE      mandatory},
    ...
}

CellDeletionRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--

```

```

-- CELL DELETION RESPONSE
--
-- *****
CellDeletionResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellDeletionResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CellDeletionResponse-Extensions}}    OPTIONAL,
    ...
}

CellDeletionResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CriticalityDiagnostics          CRITICALITY      ignore          TYPE      CriticalityDiagnostics      PRESENCE optional},
    ...
}

CellDeletionResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RESOURCE STATUS INDICATION
--
-- *****

ResourceStatusIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{ResourceStatusIndication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{ResourceStatusIndication-Extensions}}    OPTIONAL,
    ...
}

ResourceStatusIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-IndicationType-ResourceStatusInd          CRITICALITY      ignore          TYPE      IndicationType-ResourceStatusInd          PRESENCE
      mandatory  }|
    { ID      id-Cause          CRITICALITY      ignore          TYPE      Cause          PRESENCE      optional
    },
    ...
}

ResourceStatusIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

IndicationType-ResourceStatusInd ::= CHOICE {
    no-Failure          No-Failure-ResourceStatusInd,
    serviceImpacting   ServiceImpacting-ResourceStatusInd,
    ...
}

No-Failure-ResourceStatusInd ::= SEQUENCE {
    local-Cell-InformationList      Local-Cell-InformationList-ResourceStatusInd,
    local-Cell-Group-InformationList Local-Cell-Group-InformationList-ResourceStatusInd OPTIONAL,
    IE-Extensions                   ProtocolExtensionContainer { { No-FailureItem-ResourceStatusInd-ExtIEs } } OPTIONAL,
}

```

```

}
...
}
No-FailureItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

Local-Cell-InformationList-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-
InformationItemIE-ResourceStatusInd }}

Local-Cell-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-Local-Cell-InformationItem-ResourceStatusInd  CRITICALITY ignore  TYPE Local-Cell-InformationItem-ResourceStatusInd  PRESENCE
mandatory }
}

Local-Cell-InformationItem-ResourceStatusInd ::= SEQUENCE {
  local-CellID                Local-Cell-ID,
  addorDeleteIndicator        AddorDeleteIndicator,
  dl-or-global-capacityCredit  DL-or-Global-CapacityCredit  OPTIONAL,
  -- This IE is present only if "AddorDeleteIndicator" equals add
  ul-capacityCredit            UL-CapacityCredit  OPTIONAL,
  commonChannelsCapacityConsumptionLaw  CommonChannelsCapacityConsumptionLaw  OPTIONAL,
  -- This IE is present only if "AddorDeleteIndicator" equals add
  dedicatedChannelsCapacityConsumptionLaw  DedicatedChannelsCapacityConsumptionLaw  OPTIONAL,
  -- This IE is present only if "AddorDeleteIndicator" equals add
  maximumDL-PowerCapability    MaximumDL-PowerCapability  OPTIONAL,
  -- This IE is present only if "AddorDeleteIndicator" equals add
  minSpreadingFactor           MinSpreadingFactor  OPTIONAL,
  -- This IE is present only if "AddorDeleteIndicator" equals add
  minimumDL-PowerCapability    MinimumDL-PowerCapability  OPTIONAL,
  -- This IE is present only if "AddorDeleteIndicator" equals add
  local-Cell-Group-ID          Local-Cell-ID  OPTIONAL,
  iE-Extensions                ProtocolExtensionContainer { { Local-Cell-InformationItem-ResourceStatusInd-ExtIEs } } OPTIONAL,
  ...
}

Local-Cell-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

Local-Cell-Group-InformationList-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-Group-
InformationItemIE-ResourceStatusInd }}

Local-Cell-Group-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-Local-Cell-Group-InformationItem-ResourceStatusInd  CRITICALITY ignore  TYPE Local-Cell-Group-InformationItem-ResourceStatusInd
PRESENCE mandatory }
}

Local-Cell-Group-InformationItem-ResourceStatusInd ::= SEQUENCE {
  local-Cell-Group-ID          Local-Cell-ID,
  dl-or-global-capacityCredit  DL-or-Global-CapacityCredit,
  ul-capacityCredit            UL-CapacityCredit  OPTIONAL,
  commonChannelsCapacityConsumptionLaw  CommonChannelsCapacityConsumptionLaw,

```



```

dedicatedChannelsCapacityConsumptionLaw    DedicatedChannelsCapacityConsumptionLaw,
iE-Extensions                               ProtocolExtensionContainer { { Local-Cell-Group-InformationItem-ResourceStatusInd-ExtIEs } } OPTIONAL,
...
}

```

```

Local-Cell-Group-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

ServiceImpacting-ResourceStatusInd ::= SEQUENCE {
local-Cell-InformationList                Local-Cell-InformationList2-ResourceStatusInd    OPTIONAL,
local-Cell-Group-InformationList          Local-Cell-Group-InformationList2-ResourceStatusInd OPTIONAL,
cCP-InformationList                       CCP-InformationList-ResourceStatusInd              OPTIONAL,
cell-InformationList                      Cell-InformationList-ResourceStatusInd              OPTIONAL,
iE-Extensions                             ProtocolExtensionContainer { { ServiceImpactingItem-ResourceStatusInd-ExtIEs } }    OPTIONAL,
...
}

```

```

ServiceImpactingItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

Local-Cell-InformationList2-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-InformationItemIE2-ResourceStatusInd }}

```

```

Local-Cell-InformationItemIE2-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
{ ID id-Local-Cell-InformationItem2-ResourceStatusInd    CRITICALITY ignore    TYPE Local-Cell-InformationItem2-ResourceStatusInd    PRESENCE
mandatory }
}

```

```

Local-Cell-InformationItem2-ResourceStatusInd ::= SEQUENCE {
local-Cell-ID                                Local-Cell-ID,
dl-or-global-capacityCredit                  DL-or-Global-CapacityCredit    OPTIONAL,
ul-capacityCredit                            UL-CapacityCredit              OPTIONAL,
commonChannelsCapacityConsumptionLaw        CommonChannelsCapacityConsumptionLaw    OPTIONAL,
dedicatedChannelsCapacityConsumptionLaw      DedicatedChannelsCapacityConsumptionLaw OPTIONAL,
maximum-DL-PowerCapability                   MaximumDL-PowerCapability        OPTIONAL,
minSpreadingFactor                           MinSpreadingFactor              OPTIONAL,
minimumDL-PowerCapability                     MinimumDL-PowerCapability        OPTIONAL,
iE-Extensions                               ProtocolExtensionContainer { { Local-Cell-InformationItem2-ResourceStatusInd-ExtIEs } }    OPTIONAL,
...
}

```

```

Local-Cell-InformationItem2-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

Local-Cell-Group-InformationList2-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-Group-InformationItemIE2-ResourceStatusInd }}

```

```

Local-Cell-Group-InformationItemIE2-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
{ ID id-Local-Cell-Group-InformationItem2-ResourceStatusInd    CRITICALITY ignore    TYPE Local-Cell-Group-InformationItem2-ResourceStatusInd
PRESENCE mandatory }
}

```

```

}

Local-Cell-Group-InformationItem2-ResourceStatusInd ::= SEQUENCE {
    local-Cell-Group-ID                Local-Cell-ID,
    dl-or-global-capacityCredit        DL-or-Global-CapacityCredit    OPTIONAL,
    ul-capacityCredit                  UL-CapacityCredit          OPTIONAL,
    commonChannelsCapacityConsumptionLaw    CommonChannelsCapacityConsumptionLaw    OPTIONAL,
    dedicatedChannelsCapacityConsumptionLaw    DedicatedChannelsCapacityConsumptionLaw    OPTIONAL,
    iE-Extensions                      ProtocolExtensionContainer { { Local-Cell-Group-InformationItem2-ResourceStatusInd-ExtIEs } }    OPTIONAL,
    ...
}

Local-Cell-Group-InformationItem2-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCP-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCCPinNodeB)) OF ProtocolIE-Single-Container {{ CCP-InformationItemIE-ResourceStatusInd }}

CCP-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-CCP-InformationItem-ResourceStatusInd    CRITICALITY ignore    TYPE CCP-InformationItem-ResourceStatusInd    PRESENCE mandatory }
}

CCP-InformationItem-ResourceStatusInd ::= SEQUENCE {
    communicationControlPortID        CommunicationControlPortID,
    resourceOperationalState          ResourceOperationalState,
    availabilityStatus                AvailabilityStatus,
    iE-Extensions                    ProtocolExtensionContainer { { CCP-InformationItem-ResourceStatusInd-ExtIEs } }    OPTIONAL,
    ...
}

CCP-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Cell-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF ProtocolIE-Single-Container {{ Cell-InformationItemIE-ResourceStatusInd }}

Cell-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-Cell-InformationItem-ResourceStatusInd    CRITICALITY ignore    TYPE Cell-InformationItem-ResourceStatusInd    PRESENCE mandatory }
}

Cell-InformationItem-ResourceStatusInd ::= SEQUENCE {
    c-ID                                C-ID,
    resourceOperationalState            ResourceOperationalState                OPTIONAL,
    availabilityStatus                  AvailabilityStatus                      OPTIONAL,
    primary-SCH-Information             P-SCH-Information-ResourceStatusInd    OPTIONAL,
    secondary-SCH-Information           S-SCH-Information-ResourceStatusInd    OPTIONAL,
    primary-CPICH-Information           P-CPICH-Information-ResourceStatusInd  OPTIONAL,
    secondary-CPICH-Information         S-CPICH-InformationList-ResourceStatusInd    OPTIONAL,
    primary-CCPCH-Information           P-CCPCH-Information-ResourceStatusInd  OPTIONAL,
    bCH-Information                    BCH-Information-ResourceStatusInd      OPTIONAL,
    secondary-CCPCH-InformationList     S-CCPCH-InformationList-ResourceStatusInd    OPTIONAL,
}

```

```

pCH-Information          PCH-Information-ResourceStatusInd          OPTIONAL,
pICH-Information          PICH-Information-ResourceStatusInd          OPTIONAL,
fACH-InformationList     FACH-InformationList-ResourceStatusInd     OPTIONAL,
pRACH-InformationList    PRACH-InformationList-ResourceStatusInd    OPTIONAL,
rACH-InformationList     RACH-InformationList-ResourceStatusInd     OPTIONAL,
aICH-InformationList     AICH-InformationList-ResourceStatusInd     OPTIONAL,
pCPCH-InformationList    PCPCH-InformationList-ResourceStatusInd    OPTIONAL,
cPCH-InformationList     CPCH-InformationList-ResourceStatusInd     OPTIONAL,
aP-AICH-InformationList  AP-AICH-InformationList-ResourceStatusInd  OPTIONAL,
cDCA-ICH-InformationList CDCA-ICH-InformationList-ResourceStatusInd OPTIONAL,
sCH-Information          SCH-Information-ResourceStatusInd          OPTIONAL,
iE-Extensions           ProtocolExtensionContainer { { Cell-InformationItem-ResourceStatusInd-ExtIEs } } OPTIONAL,
...
}
Cell-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
P-SCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ P-SCH-InformationIE-ResourceStatusInd }}
P-SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-P-SCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}
S-SCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ S-SCH-InformationIE-ResourceStatusInd }}
S-SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-S-SCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}
P-CPICH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ P-CPICH-InformationIE-ResourceStatusInd }}
P-CPICH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-P-CPICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}
S-CPICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container {{ S-CPICH-InformationItemIE-ResourceStatusInd }}
S-CPICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-S-CPICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}
P-CCPCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ P-CCPCH-InformationIE-ResourceStatusInd }}
P-CCPCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-P-CCPCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}
BCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ BCH-InformationIE-ResourceStatusInd }}
BCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {

```

```

    { ID id-BCH-Information    CRITICALITY ignore    TYPE Common-TransportChannel-Status-Information    PRESENCE mandatory }
  }

S-CCPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxSCCPCHCell)) OF ProtocolIE-Single-Container {{ S-CCPCH-InformationItemIE-ResourceStatusInd }}

S-CCPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-S-CCPCH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information    PRESENCE mandatory }
}

PCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ PCH-InformationIE-ResourceStatusInd }}

PCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-PCH-Information    CRITICALITY ignore    TYPE Common-TransportChannel-Status-Information    PRESENCE mandatory }
}

PICH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ PICH-InformationIE-ResourceStatusInd }}

PICH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-PICH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information    PRESENCE mandatory }
}

FACH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxFACHCell)) OF ProtocolIE-Single-Container {{ FACH-InformationItemIE-ResourceStatusInd }}

FACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-FACH-Information    CRITICALITY ignore    TYPE Common-TransportChannel-Status-Information    PRESENCE mandatory }
}

PRACH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ PRACH-InformationItemIE-ResourceStatusInd }}

PRACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-PRACH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information    PRESENCE mandatory }
}

RACH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ RACH-InformationItemIE-ResourceStatusInd }}

RACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-RACH-Information    CRITICALITY ignore    TYPE Common-TransportChannel-Status-Information    PRESENCE mandatory }
}

AICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ AICH-InformationItemIE-ResourceStatusInd }}

AICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-AICH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information    PRESENCE mandatory }
}

PCPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPCPCHCell)) OF ProtocolIE-Single-Container {{ PCPCH-InformationItemIE-ResourceStatusInd }}

```

```

PCPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-PCPCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE optional }
}

CPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CPCH-InformationItemIE-ResourceStatusInd }}

CPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-CPCH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information  PRESENCE optional }
}

AP-AICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ AP-AICH-InformationItemIE-ResourceStatusInd }}

AP-AICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-AP-AICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE optional }
}

CDCA-ICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CDCA-ICH-InformationItemIE-ResourceStatusInd }}

CDCA-ICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-CDCA-ICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE optional }
}

SCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ SCH-InformationIE-ResourceStatusInd }}

SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-SCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

-- *****
--
-- SYSTEM INFORMATION UPDATE REQUEST
--
-- *****

SystemInformationUpdateRequest ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{SystemInformationUpdateRequest-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{SystemInformationUpdateRequest-Extensions}}  OPTIONAL,
  ...
}

SystemInformationUpdateRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-C-ID          CRITICALITY reject  TYPE C-ID          PRESENCE mandatory }
  { ID id-BCCH-ModificationTime  CRITICALITY reject  TYPE BCCH-ModificationTime  PRESENCE optional }
  { ID id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst  CRITICALITY reject  TYPE MIB-SB-SIB-InformationList-SystemInfoUpdateRqst  PRESENCE mandatory },
  ...
}

```

```

SystemInformationUpdateRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

MIB-SB-SIB-InformationList-SystemInfoUpdateRqst ::= SEQUENCE (SIZE (1..maxIB)) OF MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst

MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst ::= SEQUENCE {
    iB-Type                IB-Type,
    iB-OC-ID               IB-OC-ID,
    deletionIndicator      DeletionIndicator-SystemInfoUpdate,
    iE-Extensions          ProtocolExtensionContainer { { MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst-ExtIEs } } OPTIONAL,
    ...
}

MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DeletionIndicator-SystemInfoUpdate ::= CHOICE {
    no-Deletion            No-Deletion-SystemInfoUpdate,
    yes-Deletion           NULL
}

No-Deletion-SystemInfoUpdate ::= SEQUENCE {
    sIB-Originator         SIB-Originator                OPTIONAL,
    -- This IE shall be present if the IB-Type is equal to "SIB"
    iB-SG-REP              IB-SG-REP                    OPTIONAL,
    segmentInformationList SegmentInformationList-SystemInfoUpdate,
    iE-Extensions          ProtocolExtensionContainer { { No-DeletionItem-SystemInfoUpdate-ExtIEs } } OPTIONAL,
    ...
}

No-DeletionItem-SystemInfoUpdate-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SegmentInformationList-SystemInfoUpdate ::= ProtocolIE-Single-Container {{ SegmentInformationListIEs-SystemInfoUpdate }}

SegmentInformationListIEs-SystemInfoUpdate NBAP-PROTOCOL-IES ::= {
    { ID id-SegmentInformationListIE-SystemInfoUpdate CRITICALITY reject TYPE SegmentInformationListIE-SystemInfoUpdate PRESENCE mandatory }
}

SegmentInformationListIE-SystemInfoUpdate ::= SEQUENCE (SIZE (1..maxIBSEG)) OF SegmentInformationItem-SystemInfoUpdate

SegmentInformationItem-SystemInfoUpdate ::= SEQUENCE {
    iB-SG-POS              IB-SG-POS                    OPTIONAL,
    segment-Type           Segment-Type                 OPTIONAL,
    -- This IE shall be present if the SIB Originator IE is set to "CRNC" or the IB-Type is "MIB", "SB1" or "SB2"
    iB-SG-DATA             IB-SG-DATA                   OPTIONAL,
    -- This IE shall be present if the SIB Originator IE is set to "CRNC" or the IB-Type is "MIB", "SB1" or "SB2"
    iE-Extensions          ProtocolExtensionContainer { { SegmentInformationItem-SystemInfoUpdate-ExtIEs } } OPTIONAL,
    ...
}

```

```

}

SegmentInformationItem-SystemInfoUpdate-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- SYSTEM INFORMATION UPDATE RESPONSE
--
-- *****

SystemInformationUpdateResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{SystemInformationUpdateResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{SystemInformationUpdateResponse-Extensions}}    OPTIONAL,
    ...
}

SystemInformationUpdateResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CriticalityDiagnostics          CRITICALITY      ignore          TYPE      CriticalityDiagnostics          PRESENCE optional},
    ...
}

SystemInformationUpdateResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- SYSTEM INFORMATION UPDATE FAILURE
--
-- *****

SystemInformationUpdateFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{SystemInformationUpdateFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{SystemInformationUpdateFailure-Extensions}}    OPTIONAL,
    ...
}

SystemInformationUpdateFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-Cause                          CRITICALITY      ignore          TYPE      Cause                          PRESENCE mandatory }|
    { ID      id-CriticalityDiagnostics          CRITICALITY      ignore          TYPE      CriticalityDiagnostics          PRESENCE optional },
    ...
}

SystemInformationUpdateFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP REQUEST FDD
--

```

```

-- *****

RadioLinkSetupRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{RadioLinkSetupRequestFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer  {{RadioLinkSetupRequestFDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID          CRITICALITY reject          TYPE CRNC-CommunicationContextID          PRESENCE
      mandatory }|
    { ID id-UL-DPCH-Information-RL-SetupRqstFDD   CRITICALITY reject          TYPE UL-DPCH-Information-RL-SetupRqstFDD   PRESENCE
      mandatory }|
    { ID id-DL-DPCH-Information-RL-SetupRqstFDD   CRITICALITY reject          TYPE DL-DPCH-Information-RL-SetupRqstFDD   PRESENCE
      mandatory }|
    { ID id-DCH-FDD-Information          CRITICALITY reject          TYPE DCH-FDD-Information          PRESENCE mandatory }|
    { ID id-DSCH-FDD-Information          CRITICALITY reject          TYPE DSCH-FDD-Information          PRESENCE optional }|
    { ID id-TFCI2-Bearer-Information-RL-SetupRqstFDD   CRITICALITY ignore          TYPE TFCI2-Bearer-Information-RL-SetupRqstFDD   PRESENCE
      optional }|
    { ID id-RL-InformationList-RL-SetupRqstFDD   CRITICALITY notify          TYPE RL-InformationList-RL-SetupRqstFDD   PRESENCE
      mandatory }|
    { ID id-Transmission-Gap-Pattern-Sequence-Information   CRITICALITY reject          TYPE Transmission-Gap-Pattern-Sequence-Information
      PRESENCE optional }|
    { ID id-Active-Pattern-Sequence-Information   CRITICALITY reject          TYPE Active-Pattern-Sequence-Information   PRESENCE
      optional },
    ...
}

RadioLinkSetupRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {
    ul-ScramblingCode          UL-ScramblingCode,
    minUL-ChannelisationCodeLength   MinUL-ChannelisationCodeLength,
    maxNrOfUL-DPDCHs            MaxNrOfUL-DPDCHs          OPTIONAL,
    -- This IE is present only if "Min UL Channelisation Code length" equals to 4 --
    ul-PunctureLimit           PunctureLimit,
    tFCS                        TFCS,
    ul-DPCCH-SlotFormat         UL-DPCCH-SlotFormat,
    ul-SIR-Target               UL-SIR,
    diversityMode               DiversityMode,
    sSDT-CellID-Length          SSDT-CellID-Length      OPTIONAL,
    s-FieldLength               S-FieldLength          OPTIONAL,
    iE-Extensions               ProtocolExtensionContainer { { UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {

```



```

tFCS                TFCS,
dl-DPCH-SlotFormat  DL-DPCH-SlotFormat,
tFCI-SignallingMode TFCI-SignallingMode,
tFCI-Presence       TFCI-Presence OPTIONAL,
-- this IE is only present if the DL DPCH slot format is equal to any of the value 12 to 16 --
multiplexingPosition MultiplexingPosition,
pDSCH-RL-ID         RL-ID OPTIONAL,
-- This IE is present only if the DSCH Information group is present --
pDSCH-CodeMapping  PDSCH-CodeMapping OPTIONAL,
-- This IE is present only if the DSCH Information group is present --
powerOffsetInformation PowerOffsetInformation-RL-SetupRqstFDD,
fdd-TPC-DownlinkStepSize FDD-TPC-DownlinkStepSize,
limitedPowerIncrease  LimitedPowerIncrease,
innerLoopDLPCStatus  InnerLoopDLPCStatus,
iE-Extensions       ProtocolExtensionContainer { { DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs } } OPTIONAL,
...
}

DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

PowerOffsetInformation-RL-SetupRqstFDD ::= SEQUENCE {
pO1-ForTFCI-Bits      PowerOffset,
pO2-ForTPC-Bits      PowerOffset,
pO3-ForPilotBits     PowerOffset,
iE-Extensions       ProtocolExtensionContainer { { PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs } } OPTIONAL,
...
}

PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

TFCI2-Bearer-Information-RL-SetupRqstFDD ::= SEQUENCE {
toAWS                ToAWS,
toAWE                ToAWE,
iE-Extensions       ProtocolExtensionContainer { { TFCI2-Bearer-Information-RL-SetupRqstFDD-ExtIEs } } OPTIONAL,
...
}

TFCI2-Bearer-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

RL-InformationList-RL-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF
ProtocolIE-Single-Container{{ RL-InformationItemIE-RL-SetupRqstFDD }}

RL-InformationItemIE-RL-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
{ ID id-RL-InformationItem-RL-SetupRqstFDD CRITICALITY notify TYPE RL-InformationItem-RL-SetupRqstFDD PRESENCE
mandatory}
}

```

```

RL-InformationItem-RL-SetupRqstFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    c-ID                C-ID,
    firstRLS-indicator  FirstRLS-Indicator,
    frameOffset         FrameOffset,
    chipOffset          ChipOffset,
    propagationDelay    PropagationDelay          OPTIONAL,
    diversityControlField DiversityControlField    OPTIONAL,
    -- This IE is present only if the RL is not the first one in the RL Information
    dl-CodeInformation  FDD-DL-CodeInformation,
    initialDL-transmissionPower DL-Power,
    maximumDL-power    DL-Power,
    minimumDL-power    DL-Power,
    sSDT-Cell-Identity SSDT-Cell-Identity        OPTIONAL,
    transmitDiversityIndicator TransmitDiversityIndicator    OPTIONAL,
    -- This IE is present unless Diversity Mode IE in UL DPCH Information group is "none"
    iE-Extensions      ProtocolExtensionContainer { { RL-InformationItem-RL-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

RL-InformationItem-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP REQUEST TDD
--
-- *****

RadioLinkSetupRequestTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkSetupRequestTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupRequestTDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CRNC-CommunicationContextID          CRITICALITY reject          TYPE  CRNC-CommunicationContextID
    PRESENCE mandatory }|
    { ID      id-UL-CCTrCH-InformationList-RL-SetupRqstTDD          CRITICALITY notify          TYPE  UL-CCTrCH-InformationList-RL-SetupRqstTDD
    PRESENCE optional }|
    { ID      id-DL-CCTrCH-InformationList-RL-SetupRqstTDD          CRITICALITY notify          TYPE  DL-CCTrCH-InformationList-RL-SetupRqstTDD
    PRESENCE optional }|
    { ID      id-DCH-TDD-Information                    CRITICALITY reject          TYPE  DCH-TDD-Information          PRESENCE optional }|
    { ID      id-DSCH-TDD-Information                    CRITICALITY reject          TYPE  DSCH-TDD-Information          PRESENCE optional }|
    { ID      id-USCH-Information                        CRITICALITY reject          TYPE  USCH-Information            PRESENCE optional }|
    { ID      id-RL-Information-RL-SetupRqstTDD          CRITICALITY reject          TYPE  RL-Information-RL-SetupRqstTDD
    PRESENCE mandatory },
    ...
}

RadioLinkSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

UL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE(1..maxNrOfCCTrCHs)) OF
  ProtocolIE-Single-Container{{ UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD }}

UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD CRITICALITY notify TYPE UL-CCTrCH-InformationItem-RL-SetupRqstTDD
  PRESENCE mandatory}
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
  cCtRch-ID CcTrCH-ID,
  tFCS TFCS,
  tFCI-Coding TFCI-Coding,
  punctureLimit PunctureLimit,
  uL-DPCH-Information UL-DPCH-Information-RL-SetupRqstTDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs } } OPTIONAL,
  ...
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-DPCH-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{{ UL-DPCH-InformationIE-RL-SetupRqstTDD }}

UL-DPCH-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationList-RL-SetupRqstTDD CRITICALITY notify TYPE UL-DPCH-InformationItem-RL-SetupRqstTDD PRESENCE mandatory }
}

UL-DPCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  tdd-DPCHOffset TDD-DPCHOffset,
  uL-Timeslot-Information UL-Timeslot-Information,
  iE-Extensions ProtocolExtensionContainer { { UL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs } } OPTIONAL,
  ...
}

UL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container{{ DL-CCTrCH-InformationItemIE-RL-SetupRqstTDD }}

DL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD CRITICALITY notify TYPE DL-CCTrCH-InformationItem-RL-SetupRqstTDD
  PRESENCE mandatory}
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
  cCtRch-ID CcTrCH-ID,

```

```

tFCS                TFCS,
tFCI-Coding          TFCI-Coding,
punctureLimit       PunctureLimit,
tdd-TPC-DownlinkStepSize TDD-TPC-DownlinkStepSize,
cCTrCH-TPCList      CCTrCH-TPCList-RL-SetupRqstTDD    OPTIONAL,
dL-DPCH-Information DL-DPCH-Information-RL-SetupRqstTDD  OPTIONAL,
iE-Extensions       ProtocolExtensionContainer { { DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs } }  OPTIONAL,
...
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

CCTrCH-TPCList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCItem-RL-SetupRqstTDD

CCTrCH-TPCItem-RL-SetupRqstTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  iE-Extensions      ProtocolExtensionContainer { { CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs } }  OPTIONAL,
  ...
}

CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

DL-DPCH-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{{ DL-DPCH-InformationIE-RL-SetupRqstTDD }}

DL-DPCH-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationList-RL-SetupRqstTDD    CRITICALITY notify  TYPE DL-DPCH-InformationItem-RL-SetupRqstTDD    PRESENCE mandatory  }
}

DL-DPCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
  repetitionPeriod      RepetitionPeriod,
  repetitionLength      RepetitionLength,
  tdd-DPCHOffset        TDD-DPCHOffset,
  dL-Timeslot-Information DL-Timeslot-Information,
  iE-Extensions         ProtocolExtensionContainer { { DL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs } }  OPTIONAL,
  ...
}

DL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

RL-Information-RL-SetupRqstTDD ::= SEQUENCE {
  rL-ID                RL-ID,
  c-ID                 C-ID,
  frameOffset          FrameOffset,
  initialDL-transmissionPower DL-Power,
  maximumDL-power      DL-Power,
  minimumDL-power      DL-Power,
  timeslotISCPInfoList TimeslotISCPInfoList-RL-SetupRqstTDD    OPTIONAL,
}

```

```

    iE-Extensions          ProtocolExtensionContainer { { RL-Information-RL-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

TimeslotISCPInfoList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSS)) OF TimeslotISCPInfoItem-RL-SetupRqstTDD

TimeslotISCPInfoItem-RL-SetupRqstTDD ::= SEQUENCE {
    timeSlot              TimeSlot,
    dL-TimeslotISCP      DL-TimeslotISCP,
    iE-Extensions        ProtocolExtensionContainer { {TimeslotISCPInfoItem-RL-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

TimeslotISCPInfoItem-RL-SetupRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-SetupRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- *****

RadioLinkSetupResponseFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkSetupResponseFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupResponseFDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkSetupResponseFDD-IEs  NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID          CRITICALITY ignore          TYPE  CRNC-CommunicationContextID
    PRESENCE  mandatory    }|
    { ID    id-NodeB-CommunicationContextID          CRITICALITY ignore          TYPE  NodeB-CommunicationContextID          PRESENCE
    mandatory    }|
    { ID    id-CommunicationControlPortID          CRITICALITY ignore          TYPE  CommunicationControlPortID          PRESENCE
    mandatory    }|
    { ID    id-RL-InformationResponseList-RL-SetupRspFDD          CRITICALITY ignore          TYPE  RL-InformationResponseList-RL-SetupRspFDD
    PRESENCE  mandatory    }|
    { ID    id-TFCI2-BearerInformationResponse          CRITICALITY ignore          TYPE  TFCI2-BearerInformationResponse PRESENCE optional }|
    { ID    id-CriticalityDiagnostics          CRITICALITY ignore          TYPE  CriticalityDiagnostics          PRESENCE
    optional    },
    ...
}

RadioLinkSetupResponseFDD-Extensions  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

RL-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container{{ RL-InformationResponseItemIE-RL-SetupRspFDD }}

RL-InformationResponseItemIE-RL-SetupRspFDD NBAP-PROTOCOL-IES ::= {
  { ID      id-RL-InformationResponseItem-RL-SetupRspFDD          CRITICALITY      ignore          TYPE RL-InformationResponseItem-RL-SetupRspFDD
    PRESENCE      mandatory}
}

RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
  rL-ID                RL-ID,
  rL-Set-ID            RL-Set-ID,
  received-total-wide-band-power          Received-total-wide-band-power-Value,
  diversityIndication      DiversityIndication-RL-SetupRspFDD,
  -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
  -- the tabular message format in subclause 9.1.
  dSCH-InformationResponseList      DSCH-InformationResponseList-RL-SetupRspFDD  OPTIONAL,
  sSDT-SupportIndicator              SSDT-SupportIndicator,
  iE-Extensions                      ProtocolExtensionContainer { { RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs } }  OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DiversityIndication-RL-SetupRspFDD ::= CHOICE {
  combining              Combining-RL-SetupRspFDD,
  nonCombiningOrFirstRL NonCombiningOrFirstRL-RL-SetupRspFDD
}

Combining-RL-SetupRspFDD ::= SEQUENCE {
  rL-ID                RL-ID,
  iE-Extensions        ProtocolExtensionContainer { { Combining-RL-SetupRspFDD-ExtIEs } }  OPTIONAL,
  ...
}

Combining-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

NonCombiningOrFirstRL-RL-SetupRspFDD ::= SEQUENCE {
  dCH-InformationResponse      DCH-InformationResponse,
  iE-Extensions                ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs } }  OPTIONAL,
  ...
}

NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DSCH-InformationResponseList-RL-SetupRspFDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-SetupRspFDD }}

DSCH-InformationResponseListIEs-RL-SetupRspFDD NBAP-PROTOCOL-IES ::= {

```

```

    { ID id-DSCH-InformationResponse CRITICALITY ignore TYPE DSCH-InformationResponse PRESENCE mandatory }
  }

-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****

RadioLinkSetupResponseTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkSetupResponseTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupResponseTDD-Extensions}} OPTIONAL,
    ...
}

RadioLinkSetupResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID CRITICALITY ignore TYPE CRNC-CommunicationContextID
    PRESENCE mandatory }|
    { ID id-NodeB-CommunicationContextID CRITICALITY ignore TYPE NodeB-CommunicationContextID
    PRESENCE mandatory }|
    { ID id-CommunicationControlPortID CRITICALITY ignore TYPE CommunicationControlPortID
    PRESENCE mandatory }|
    { ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore TYPE RL-InformationResponse-RL-SetupRspTDD
    PRESENCE mandatory }|
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
    PRESENCE optional },
    ...
}

RadioLinkSetupResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
    rL-ID RL-ID,
    uL-TimeSlot-ISCP-Info UL-TimeSlot-ISCP-Info,
    ul-PhysCH-SF-Variation UL-PhysCH-SF-Variation,
    dCH-InformationResponseList DCH-InformationResponseList-RL-SetupRspTDD OPTIONAL,
    dSCH-InformationResponseList DSCH-InformationResponseList-RL-SetupRspTDD OPTIONAL,
    uSCH-InformationResponseList USCH-InformationResponseList-RL-SetupRspTDD OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { RL-InformationResponseList-RL-SetupRspTDD-ExtIEs } } OPTIONAL,
    ...
}

RL-InformationResponseList-RL-SetupRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container{{ DCH-InformationResponseListIEs-RL-SetupRspTDD }}

DCH-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse CRITICALITY ignore TYPE DCH-InformationResponse PRESENCE mandatory}
}

```

```

DSCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-SetupRspTDD }}

DSCH-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-InformationResponse  CRITICALITY ignore  TYPE DSCH-InformationResponse  PRESENCE mandatory }
}

USCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{ USCH-InformationResponseListIEs-RL-SetupRspTDD }}

USCH-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {
  { ID id-USCH-InformationResponse  CRITICALITY ignore  TYPE USCH-InformationResponse  PRESENCE mandatory }
}

-- *****
--
-- RADIO LINK SETUP FAILURE FDD
--
-- *****

RadioLinkSetupFailureFDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container   {{RadioLinkSetupFailureFDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{RadioLinkSetupFailureFDD-Extensions}}  OPTIONAL,
  ...
}

RadioLinkSetupFailureFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID  CRITICALITY ignore  TYPE CRNC-CommunicationContextID
    PRESENCE mandatory }|
  { ID id-NodeB-CommunicationContextID  CRITICALITY ignore  TYPE NodeB-CommunicationContextID
    PRESENCE conditional }|
  -- This IE is present if at least one of the radio links has been successfully set up
  { ID id-CommunicationControlPortID  CRITICALITY ignore  TYPE CommunicationControlPortID
    PRESENCE optional }|
  { ID id-CauseLevel-RL-SetupFailureFDD  CRITICALITY ignore  TYPE CauseLevel-RL-SetupFailureFDD
    PRESENCE mandatory }|
  { ID id-CriticalityDiagnostics  CRITICALITY ignore  TYPE CriticalityDiagnostics
    PRESENCE optional },
  ...
}

RadioLinkSetupFailureFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CauseLevel-RL-SetupFailureFDD ::= CHOICE {
  generalCause          GeneralCauseList-RL-SetupFailureFDD,
  rLSpecificCause      RLSpecificCauseList-RL-SetupFailureFDD,
  ...
}

GeneralCauseList-RL-SetupFailureFDD ::= SEQUENCE {
  cause                Cause,
  iE-Extensions        ProtocolExtensionContainer { { GeneralCauseItem-RL-SetupFailureFDD-ExtIEs } }  OPTIONAL,
}

```



```

}
...
}
GeneralCauseItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
RLSpecificCauseList-RL-SetupFailureFDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespList-RL-SetupFailureFDD      Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD,
    successful-RL-InformationRespList-RL-SetupFailureFDD         Successful-RL-InformationRespList-RL-SetupFailureFDD OPTIONAL,
    iE-Extensions                                                ProtocolExtensionContainer { { RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,
    ...
}
RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ Unsuccessful-RL-
InformationRespItemIE-RL-SetupFailureFDD }}
Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD      CRITICALITY      ignore      TYPE      Unsuccessful-RL-InformationRespItem-RL-
SetupFailureFDD      PRESENCE      mandatory}
}
Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { { Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs } }
    OPTIONAL,
    ...
}
Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
Successful-RL-InformationRespList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1.. maxNrOfRLs)) OF ProtocolIE-Single-Container {{ Successful-RL-
InformationRespItemIE-RL-SetupFailureFDD }}
Successful-RL-InformationRespItemIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-Successful-RL-InformationRespItem-RL-SetupFailureFDD      CRITICALITY      ignore      TYPE      Successful-RL-InformationRespItem-RL-
SetupFailureFDD      PRESENCE      mandatory}
}
Successful-RL-InformationRespItem-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    rL-Set-ID            RL-Set-ID,
    received-total-wide-band-power                Received-total-wide-band-power-Value,
    diversityIndication                DiversityIndication-RL-SetupFailureFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
}

```

```

dSCH-InformationResponseList          DSCH-InformationRespList-RL-SetupFailureFDD    OPTIONAL,
tFCI2-BearerInformationResponse       TFCI2-BearerInformationResponse    OPTIONAL,
sSDT-SupportIndicator                SSDT-SupportIndicator,
iE-Extensions                         ProtocolExtensionContainer { { Successful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs } }
OPTIONAL,
...
}

Successful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

DiversityIndication-RL-SetupFailureFDD ::= CHOICE {
    combining                               Combining-RL-SetupFailureFDD,
    nonCombiningOrFirstRL                  NonCombiningOrFirstRL-RL-SetupFailureFDD
}

Combining-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                                   RL-ID,
    iE-Extensions                           ProtocolExtensionContainer { { CombiningItem-RL-SetupFailureFDD-ExtIEs } }    OPTIONAL,
    ...
}

CombiningItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

NonCombiningOrFirstRL-RL-SetupFailureFDD ::= SEQUENCE {
    dCH-InformationResponse                 DCH-InformationResponse,
    iE-Extensions                           ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs } }
    OPTIONAL,
    ...
}

NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

DSCH-InformationRespList-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ DSCH-InformationRespListIEs-RL-SetupFailureFDD }}

DSCH-InformationRespListIEs-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationResponse    CRITICALITY ignore    TYPE DSCH-InformationResponse    PRESENCE mandatory }
}

-- *****
--
-- RADIO LINK SETUP FAILURE TDD
--
-- *****

RadioLinkSetupFailureTDD ::= SEQUENCE {
    protocolIEs                            ProtocolIE-Container    {{RadioLinkSetupFailureTDD-IEs}},
    protocolExtensions                      ProtocolExtensionContainer {{RadioLinkSetupFailureTDD-Extensions}}    OPTIONAL,

```

```

}
...
}

RadioLinkSetupFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-CRNC-CommunicationContextID      CRITICALITY ignore      TYPE CRNC-CommunicationContextID
  PRESENCE mandatory }|
  { ID      id-CauseLevel-RL-SetupFailureTDD      CRITICALITY ignore      TYPE CauseLevel-RL-SetupFailureTDD
  PRESENCE mandatory }|
  { ID      id-CriticalityDiagnostics      CRITICALITY ignore      TYPE CriticalityDiagnostics
  PRESENCE optional },
  ...
}

RadioLinkSetupFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CauseLevel-RL-SetupFailureTDD ::= CHOICE {
  generalCause      GeneralCauseList-RL-SetupFailureTDD,
  rLSpecificCause   RLSpecificCauseList-RL-SetupFailureTDD,
  ...
}

GeneralCauseList-RL-SetupFailureTDD ::= SEQUENCE {
  cause              Cause,
  iE-Extensions     ProtocolExtensionContainer { { GeneralCauseItem-RL-SetupFailureTDD-ExtIEs } } OPTIONAL,
  ...
}

GeneralCauseItem-RL-SetupFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RLSpecificCauseList-RL-SetupFailureTDD ::= SEQUENCE {
  unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD  Unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD,
  iE-Extensions     ProtocolExtensionContainer { { RLSpecificCauseItem-RL-SetupFailureTDD-ExtIEs } }
  OPTIONAL,
  ...
}

RLSpecificCauseItem-RL-SetupFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD ::= ProtocolIE-Single-Container { {Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureTDD}
}

Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureTDD NBAP-PROTOCOL-IES ::= {
  { ID      id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD      CRITICALITY ignore      TYPE      Unsuccessful-RL-InformationResp-RL-
SetupFailureTDD      PRESENCE      mandatory }
}

Unsuccessful-RL-InformationResp-RL-SetupFailureTDD ::= SEQUENCE {

```

```

    rL-ID          RL-ID,
    cause          Cause,
    iE-Extensions ProtocolExtensionContainer { { Unsuccessful-RL-InformationResp-RL-SetupFailureTDD-ExtIEs } }
    OPTIONAL,
    ...
}

Unsuccessful-RL-InformationResp-RL-SetupFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION REQUEST FDD
--
-- *****

RadioLinkAdditionRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionRequestFDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{RadioLinkAdditionRequestFDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkAdditionRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID          CRITICALITY reject          TYPE NodeB-CommunicationContextID          PRESENCE
      mandatory } |
    { ID id-Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD          CRITICALITY reject          TYPE Compressed-Mode-Deactivation-Flag-RL-
      AdditionRqstFDD PRESENCE optional } |
    { ID id-RL-InformationList-RL-AdditionRqstFDD          CRITICALITY notify          TYPE RL-InformationList-RL-AdditionRqstFDD
      PRESENCE mandatory },
    ...
}

RadioLinkAdditionRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-AdditionRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-
AdditionRqstFDD}}

RL-InformationItemIE-RL-AdditionRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-AdditionRqstFDD          CRITICALITY notify          TYPE RL-InformationItem-RL-AdditionRqstFDD
      PRESENCE mandatory }
}

RL-InformationItem-RL-AdditionRqstFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    c-ID          C-ID,
    frameOffset   FrameOffset,
    chipOffset    ChipOffset,
    diversityControlField DiversityControlField,
    dl-CodeInformation FDD-DL-CodeInformation,
    initialDL-TransmissionPower DL-Power          OPTIONAL,

```

```

maximumDL-Power          DL-Power          OPTIONAL,
minimumDL-Power          DL-Power          OPTIONAL,
sSDT-CellIdentity        SSDT-Cell-Identity  OPTIONAL,
transmitDiversityIndicator TransmitDiversityIndicator OPTIONAL,
iE-Extensions            ProtocolExtensionContainer { { RL-InformationItem-RL-AdditionRqstFDD-ExtIEs} } OPTIONAL,
...
}

RL-InformationItem-RL-AdditionRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK ADDITION REQUEST TDD
--
-- *****

RadioLinkAdditionRequestTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container   {{RadioLinkAdditionRequestTDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkAdditionRequestTDD-Extensions}} OPTIONAL,
  ...
}

RadioLinkAdditionRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID   id-NodeB-CommunicationContextID          CRITICALITY   reject          TYPE   NodeB-CommunicationContextID
  PRESENCE   mandatory   }|
  { ID   id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD          CRITICALITY   reject          TYPE   UL-CCTrCH-InformationList-RL-AdditionRqstTDD
  PRESENCE   optional   }|
  { ID   id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD          CRITICALITY   reject          TYPE   DL-CCTrCH-InformationList-RL-AdditionRqstTDD
  PRESENCE   optional   }|
  { ID   id-RL-Information-RL-AdditionRqstTDD          CRITICALITY   reject          TYPE   RL-Information-RL-AdditionRqstTDD
  PRESENCE   mandatory   },
  ...
}

RadioLinkAdditionRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
...
}

UL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-RL-AdditionRqstTDD

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  uL-DPCH-Information UL-DPCH-InformationList-RL-AdditionRqstTDD OPTIONAL,
  iE-Extensions      ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

UL-DPCH-InformationList-RL-AdditionRqstTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationItemIE-RL-AdditionRqstTDD }}

UL-DPCH-InformationItemIE-RL-AdditionRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID      id-UL-DPCH-InformationItem-RL-AdditionRqstTDD      CRITICALITY      notify      TYPE      UL-DPCH-InformationItem-RL-AdditionRqstTDD
    PRESENCE      mandatory}
}

UL-DPCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
  repetitionPeriod      RepetitionPeriod,
  repetitionLength      RepetitionLength,
  tdd-DPCHOffset        TDD-DPCHOffset,
  uL-Timeslot-Information      UL-Timeslot-Information,
  iE-Extensions          ProtocolExtensionContainer { { UL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs } }      OPTIONAL,
  ...
}

UL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-RL-AdditionRqstTDD

DL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
  cCTrCH-ID      CCTrCH-ID,
  dL-DPCH-Information      DL-DPCH-InformationList-RL-AdditionRqstTDD      OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs } }      OPTIONAL,
  ...
}

DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-DPCH-InformationList-RL-AdditionRqstTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationItemIE-RL-AdditionRqstTDD }}

DL-DPCH-InformationItemIE-RL-AdditionRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID      id-DL-DPCH-InformationItem-RL-AdditionRqstTDD      CRITICALITY      notify      TYPE      DL-DPCH-InformationItem-RL-AdditionRqstTDD
    PRESENCE      mandatory}
}

DL-DPCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
  repetitionPeriod      RepetitionPeriod,
  repetitionLength      RepetitionLength,
  tdd-DPCHOffset        TDD-DPCHOffset,
  dL-Timeslot-Information      DL-Timeslot-Information,
  iE-Extensions          ProtocolExtensionContainer { { DL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs } }      OPTIONAL,
  ...
}

DL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    c-ID                C-ID,
    frameOffset         FrameOffset,
    diversityControlField DiversityControlField,
    initial-DL-Transmission-Power DL-Power OPTIONAL,
    maximumDL-Power     DL-Power OPTIONAL,
    minimumDL-Power     DL-Power OPTIONAL,
    timeslotISCPInfoList TimeslotISCPInfoList-RL-AdditionRqstTDD OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { { RL-information-RL-AdditionRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

RL-information-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TimeslotISCPInfoList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF TimeslotISCPInfoItem-RL-AdditionRqstTDD

TimeslotISCPInfoItem-RL-AdditionRqstTDD ::= SEQUENCE {
    timeSlot            TimeSlot,
    dL-TimeslotISCP     DL-TimeslotISCP,
    iE-Extensions       ProtocolExtensionContainer { {TimeslotISCPInfoItem-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

TimeslotISCPInfoItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

RadioLinkAdditionResponseFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{RadioLinkAdditionResponseFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkAdditionResponseFDD-Extensions}} OPTIONAL,
    ...
}

RadioLinkAdditionResponseFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID          CRITICALITY ignore          TYPE CRNC-CommunicationContextID
    PRESENCE mandatory }|
    { ID id-RL-InformationResponseList-RL-AdditionRspFDD CRITICALITY ignore          TYPE RL-InformationResponseList-RL-
AdditionRspFDD PRESENCE mandatory }|
    { ID id-CriticalityDiagnostics              CRITICALITY ignore          TYPE CriticalityDiagnostics
    PRESENCE optional },
    ...
}

RadioLinkAdditionResponseFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
RL-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationResponseItemIE-RL-AdditionRspFDD }}

RL-InformationResponseItemIE-RL-AdditionRspFDD NBAP-PROTOCOL-IES ::= {
  { ID      id-RL-InformationResponseItem-RL-AdditionRspFDD      CRITICALITY      ignore      TYPE      RL-InformationResponseItem-RL-AdditionRspFDD
  PRESENCE      mandatory}
}

RL-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
  rL-ID                    RL-ID,
  rL-Set-ID                RL-Set-ID,
  received-total-wide-band-power          Received-total-wide-band-power-Value,
  diversityIndication          DiversityIndication-RL-AdditionRspFDD,
  -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
  -- the tabular message format in subclause 9.1.
  sSDT-SupportIndicator          SSDT-SupportIndicator,
  iE-Extensions                ProtocolExtensionContainer { { RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} }
  OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DiversityIndication-RL-AdditionRspFDD ::= CHOICE {
  combining          Combining-RL-AdditionRspFDD,
  non-combining      Non-Combining-RL-AdditionRspFDD
}

Combining-RL-AdditionRspFDD ::= SEQUENCE {
  rL-ID                    RL-ID,
  iE-Extensions                ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspFDD-ExtIEs} }  OPTIONAL,
  ...
}

CombiningItem-RL-AdditionRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Non-Combining-RL-AdditionRspFDD ::= SEQUENCE {
  dCH-InformationResponse          DCH-InformationResponse,
  iE-Extensions                ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionRspFDD-ExtIEs} }  OPTIONAL,
  ...
}

Non-CombiningItem-RL-AdditionRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```



```

-- *****
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****

RadioLinkAdditionResponseTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionResponseTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkAdditionResponseTDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkAdditionResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID          CRITICALITY ignore          TYPE CRNC-CommunicationContextID
    PRESENCE mandatory    }|
    { ID    id-RL-InformationResponse-RL-AdditionRspTDD    CRITICALITY ignore          TYPE RL-InformationResponse-RL-AdditionRspTDD
    PRESENCE mandatory    }|
    { ID    id-CriticalityDiagnostics                CRITICALITY ignore          TYPE CriticalityDiagnostics          PRESENCE
    optional    },
    ...
}

RadioLinkAdditionResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    uL-TimeSlot-ISCP-Info    UL-TimeSlot-ISCP-Info,
    ul-PhysCH-SF-Variation    UL-PhysCH-SF-Variation,
    dCH-Information        DCH-Information-RL-AdditionRspTDD    OPTIONAL,
    dSCH-InformationResponseList    DSCH-InformationResponseList-RL-AdditionRspTDD    OPTIONAL,
    uSCH-InformationResponseList    USCH-InformationResponseList-RL-AdditionRspTDD    OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { { RL-InformationResponse-RL-AdditionRspTDD-ExtIEs} }    OPTIONAL,
    ...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-Information-RL-AdditionRspTDD ::= SEQUENCE {
    diversityIndication    DiversityIndication-RL-AdditionRspTDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    iE-Extensions        ProtocolExtensionContainer { { DCH-Information-RL-AdditionRspTDD-ExtIEs} }    OPTIONAL,
    ...
}

DCH-Information-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
DiversityIndication-RL-AdditionRspTDD ::= CHOICE {
    combining                Combining-RL-AdditionRspTDD,
    non-Combining            Non-Combining-RL-AdditionRspTDD
}

Combining-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID                    RL-ID,
    iE-Extensions            ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspTDD-ExtIEs } }    OPTIONAL,
    ...
}

CombiningItem-RL-AdditionRspTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Non-Combining-RL-AdditionRspTDD ::= SEQUENCE {
    dCH-InformationResponse  DCH-InformationResponse,
    iE-Extensions            ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionRspTDD-ExtIEs } }    OPTIONAL,
    ...
}

Non-CombiningItem-RL-AdditionRspTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-InformationResponseList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-AdditionRspTDD }}

DSCH-InformationResponseListIEs-RL-AdditionRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationResponse  CRITICALITY ignore  TYPE DSCH-InformationResponse  PRESENCE mandatory }
}

USCH-InformationResponseList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{ USCH-InformationResponseListIEs-RL-AdditionRspTDD }}

USCH-InformationResponseListIEs-RL-AdditionRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-USCH-InformationResponse  CRITICALITY ignore  TYPE USCH-InformationResponse  PRESENCE mandatory }
}

-- *****
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- *****

RadioLinkAdditionFailureFDD ::= SEQUENCE {
    protocolIEs              ProtocolIE-Container    {{RadioLinkAdditionFailureFDD-IEs}},
    protocolExtensions        ProtocolExtensionContainer {{RadioLinkAdditionFailureFDD-Extensions}}    OPTIONAL,
    ...
}

```

```

RadioLinkAdditionFailureFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID CRITICALITY ignore TYPE CRNC-CommunicationContextID PRESENCE mandatory }|
  { ID id-CauseLevel-RL-AdditionFailureFDD CRITICALITY ignore TYPE CauseLevel-RL-AdditionFailureFDD PRESENCE mandatory }|
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

RadioLinkAdditionFailureFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CauseLevel-RL-AdditionFailureFDD ::= CHOICE {
  generalCause GeneralCauseList-RL-AdditionFailureFDD,
  rLSpecificCause RLSpecificCauseList-RL-AdditionFailureFDD,
  ...
}

GeneralCauseList-RL-AdditionFailureFDD ::= SEQUENCE {
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { { GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RLSpecificCauseList-RL-AdditionFailureFDD ::= SEQUENCE {
  unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD,
  successful-RL-InformationRespList-RL-AdditionFailureFDD Successful-RL-InformationRespList-RL-AdditionFailureFDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { { Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureFDD } }

Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
  { ID id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD CRITICALITY ignore TYPE Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD PRESENCE mandatory}
}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID RL-ID,
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { { Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

```

```

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Successful-RL-InformationRespList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ Successful-RL-
InformationRespItemIE-RL-AdditionFailureFDD }}

Successful-RL-InformationRespItemIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD      CRITICALITY      ignore      TYPE      Successful-RL-InformationRespItem-RL-
AdditionFailureFDD      PRESENCE      mandatory}
}

Successful-RL-InformationRespItem-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    rL-Set-ID            RL-Set-ID,
    received-total-wide-band-power      Received-total-wide-band-power-Value,
    diversityIndication      DiversityIndication-RL-AdditionFailureFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator      SSDT-SupportIndicator,
    iE-Extensions              ProtocolExtensionContainer { { Successful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs} }
    OPTIONAL,
    ...
}

Successful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiversityIndication-RL-AdditionFailureFDD ::= CHOICE {
    combining              Combining-RL-AdditionFailureFDD,
    non-Combining          Non-Combining-RL-AdditionFailureFDD
}

Combining-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    iE-Extensions        ProtocolExtensionContainer { { CombiningItem-RL-AdditionFailureFDD-ExtIEs} }      OPTIONAL,
    ...
}

CombiningItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Non-Combining-RL-AdditionFailureFDD ::= SEQUENCE {
    dCH-InformationResponse      DCH-InformationResponse,
    iE-Extensions                ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionFailureFDD-ExtIEs} }      OPTIONAL,
    ...
}

Non-CombiningItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

-- *****
--
-- RADIO LINK ADDITION FAILURE TDD
--
-- *****

RadioLinkAdditionFailureTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionFailureTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkAdditionFailureTDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkAdditionFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CRNC-CommunicationContextID      CRITICALITY   ignore      TYPE      CRNC-CommunicationContextID
    PRESENCE  mandatory }|
    { ID      id-CauseLevel-RL-AdditionFailureTDD CRITICALITY   ignore      TYPE      CauseLevel-RL-AdditionFailureTDD
    PRESENCE  mandatory }|
    { ID      id-CriticalityDiagnostics          CRITICALITY   ignore      TYPE      CriticalityDiagnostics
    PRESENCE  optional   },
    ...
}

RadioLinkAdditionFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CauseLevel-RL-AdditionFailureTDD ::= CHOICE {
    generalCause          GeneralCauseList-RL-AdditionFailureTDD,
    rLSpecificCause      RLSpecificCauseList-RL-AdditionFailureTDD,
    ...
}

GeneralCauseList-RL-AdditionFailureTDD ::= SEQUENCE {
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { { GeneralCauseItem-RL-AdditionFailureTDD-ExtIEs} }    OPTIONAL,
    ...
}

GeneralCauseItem-RL-AdditionFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-AdditionFailureTDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD Unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD,
    iE-Extensions        ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureTDD-ExtIEs} }
    OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-AdditionFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD ::= ProtocolIE-Single-Container { {Unsuccessful-RL-InformationRespItemIE-RL-
AdditionFailureTDD} }

Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureTDD NBAP-PROTOCOL-IES ::= {
  { ID id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD    CRITICALITY ignore    TYPE Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD
  PRESENCE mandatory }
}

Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD ::= SEQUENCE {
  rL-ID                               RL-ID,
  cause                               Cause,
  iE-Extensions                       ProtocolExtensionContainer { { Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD-ExtIEs} }
  OPTIONAL,
  ...
}

Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE FDD
--
-- *****

RadioLinkReconfigurationPrepareFDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationPrepareFDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareFDD-Extensions}}    OPTIONAL,
  ...
}

RadioLinkReconfigurationPrepareFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-NodeB-CommunicationContextID          CRITICALITY reject          TYPE NodeB-CommunicationContextID          PRESENCE
  mandatory } |
  { ID id-UL-DPCH-Information-RL-ReconfPrepFDD          CRITICALITY reject          TYPE UL-DPCH-Information-RL-ReconfPrepFDD          PRESENCE
  optional } |
  { ID id-DL-DPCH-Information-RL-ReconfPrepFDD          CRITICALITY reject          TYPE DL-DPCH-Information-RL-ReconfPrepFDD          PRESENCE
  optional } |
  { ID id-FDD-DCHs-to-Modify          CRITICALITY reject          TYPE FDD-DCHs-to-Modify          PRESENCE optional } |
  { ID id-DCHs-to-Add-FDD          CRITICALITY reject          TYPE DCH-FDD-Information          PRESENCE optional } |
  { ID id-DCH-DeleteList-RL-ReconfPrepFDD          CRITICALITY reject          TYPE DCH-DeleteList-RL-ReconfPrepFDD          PRESENCE
  optional } |
  { ID id-DSCH-ModifyList-RL-ReconfPrepFDD          CRITICALITY reject          TYPE DSCH-ModifyList-RL-ReconfPrepFDD          PRESENCE
  optional } |
  { ID id-DSCHs-to-Add-FDD          CRITICALITY reject          TYPE DSCH-FDD-Information          PRESENCE optional } |
  { ID id-DSCH-DeleteList-RL-ReconfPrepFDD          CRITICALITY reject          TYPE DSCH-DeleteList-RL-ReconfPrepFDD          PRESENCE
  optional } |
  { ID id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD          CRITICALITY reject          TYPE TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD
  PRESENCE optional } |
}

```

```

    { ID id-RL-InformationList-RL-ReconfPrepFDD          CRITICALITY reject          TYPE RL-InformationList-RL-ReconfPrepFDD          PRESENCE
      optional }|
    { ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject          TYPE Transmission-Gap-Pattern-Sequence-Information
  PRESENCE optional },
  ...
}

RadioLinkReconfigurationPrepareFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
  ul-ScramblingCode          UL-ScramblingCode          OPTIONAL,
  ul-SIR-Target              UL-SIR                    OPTIONAL,
  minUL-ChannelisationCodeLength  MinUL-ChannelisationCodeLength  OPTIONAL,
  maxNrOfUL-DPDCHs          MaxNrOfUL-DPDCHs          OPTIONAL,
  -- This IE is present only if minUL-ChannelisationCodeLength equals to 4
  ul-PunctureLimit          PunctureLimit            OPTIONAL,
  tFCS                      TFCS                    OPTIONAL,
  ul-DPCCH-SlotFormat        UL-DPCCH-SlotFormat        OPTIONAL,
  diversityMode              DiversityMode              OPTIONAL,
  sSDT-CellIDLength          SSDT-CellID-Length        OPTIONAL,
  s-FieldLength              S-FieldLength            OPTIONAL,
  iE-Extensions              ProtocolExtensionContainer { { UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs } }  OPTIONAL,
  ...
}

UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
  tFCS                      TFCS                    OPTIONAL,
  dl-DPCH-SlotFormat        DL-DPCH-SlotFormat        OPTIONAL,
  tFCI-SignallingMode        TFCI-SignallingMode        OPTIONAL,
  tFCI-Presence              TFCI-Presence            OPTIONAL,
  -- This IE is only present if the DL DPCH Slot Format is equal to any of the value from 12 to 16
  multiplexingPosition        MultiplexingPosition        OPTIONAL,
  pDSCH-CodeMapping          PDSCH-CodeMapping          OPTIONAL,
  pDSCH-RL-ID                RL-ID                    OPTIONAL,
  limitedPowerIncrease        LimitedPowerIncrease        OPTIONAL,
  iE-Extensions              ProtocolExtensionContainer { { DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs } }  OPTIONAL,
  ...
}

DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-DeleteList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepFDD

DCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
  dCH-ID                    DCH-ID,

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```

    iE-Extensions          ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-ModifyList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF ProtocolIE-Single-Container {{DSCH-ModifyItemIE-RL-ReconfPrepFDD }}

DSCH-ModifyItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-DSCH-ModifyItem-RL-ReconfPrepFDD      CRITICALITY reject          TYPE      DSCH-ModifyItem-RL-ReconfPrepFDD      PRESENCE mandatory}
}

DSCH-ModifyItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    dl-TransportFormatSet  TransportFormatSet          OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority  FrameHandlingPriority        OPTIONAL,
    toAWS                  ToAWS                      OPTIONAL,
    toAWE                  ToAWE                      OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    iE-Extensions          ProtocolExtensionContainer { { DSCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
    ...
}

DSCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-DeleteList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF ProtocolIE-Single-Container {{DSCH-DeleteItemIE-RL-ReconfPrepFDD }}

DSCH-DeleteItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-DSCH-DeleteItem-RL-ReconfPrepFDD      CRITICALITY reject          TYPE      DSCH-DeleteItem-RL-ReconfPrepFDD      PRESENCE mandatory}
}

DSCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    iE-Extensions          ProtocolExtensionContainer { { DSCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
    ...
}

DSCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD ::= CHOICE {
    addOrModify          AddOrModify-TFCI2-RL-ReconfPrepFDD,
    delete              NULL
}

AddOrModify-TFCI2-RL-ReconfPrepFDD ::= SEQUENCE {
    toAWS                ToAWS,

```



```

toAWE
iE-Extensions
...
}

AddOrModify-TFCI2-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

RL-InformationList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-ReconfPrepFDD }}

RL-InformationItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
{ ID id-RL-InformationItem-RL-ReconfPrepFDD CRITICALITY reject TYPE RL-InformationItem-RL-ReconfPrepFDD PRESENCE
mandatory}
}

RL-InformationItem-RL-ReconfPrepFDD ::= SEQUENCE {
rL-ID RL-ID,
dl-CodeInformation FDD-DL-CodeInformation OPTIONAL,
maxDL-Power DL-Power OPTIONAL,
minDL-Power DL-Power OPTIONAL,
sSDT-Indication SSDT-Indication OPTIONAL,
sSDT-Cell-Identity SSDT-Cell-Identity OPTIONAL,
-- The IE may be present if the SSDT Indication is set to SSDT Active in the UE
transmitDiversityIndicator TransmitDiversityIndicator OPTIONAL,
-- This IE is present if Diversity Mode IE in UL DPCH Information group is present, unless it is equal to "none"
iE-Extensions ProtocolExtensionContainer {{ RL-InformationItem-RL-ReconfPrepFDD-ExtIEs }} OPTIONAL,
...
}

RL-InformationItem-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- *****

RadioLinkReconfigurationPrepareTDD ::= SEQUENCE {
protocolIEs ProtocolIE-Container {{RadioLinkReconfigurationPrepareTDD-IEs}},
protocolExtensions ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareTDD-Extensions}} OPTIONAL,
...
}

RadioLinkReconfigurationPrepareTDD-IEs NBAP-PROTOCOL-IES ::= {
{ ID id-NodeB-CommunicationContextID CRITICALITY reject TYPE NodeB-CommunicationContextID
PRESENCE mandatory }|
{ ID id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD CRITICALITY reject TYPE UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD
PRESENCE optional }|

```

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{ ID id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD
ReconfPrepTDD PRESENCE optional } |
{ ID id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD
ReconfPrepTDD PRESENCE optional } |
{ ID id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD
PRESENCE optional } |
{ ID id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD
ReconfPrepTDD PRESENCE optional } |
{ ID id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD
ReconfPrepTDD PRESENCE optional } |
{ ID id-TDD-DCHs-to-Modify CRITICALITY reject TYPE TDD-DCHs-to-Modify PRESENCE optional
} |
{ ID id-DCHs-to-Add-TDD CRITICALITY reject TYPE DCH-TDD-Information PRESENCE optional
} |
{ ID id-DCH-DeleteList-RL-ReconfPrepTDD CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfPrepTDD
PRESENCE optional } |
{ ID id-DSCH-Information-ModifyList-RL-ReconfPrepTDD CRITICALITY reject TYPE DSCH-Information-ModifyList-RL-ReconfPrepTDD
PRESENCE optional } |
{ ID id-DSCHs-to-Add-TDD CRITICALITY reject TYPE DSCH-TDD-Information PRESENCE optional } |
{ ID id-DSCH-Information-DeleteList-RL-ReconfPrepTDD CRITICALITY reject TYPE DSCH-Information-DeleteList-RL-ReconfPrepTDD
PRESENCE optional } |
{ ID id-USCH-Information-ModifyList-RL-ReconfPrepTDD CRITICALITY reject TYPE USCH-Information-ModifyList-RL-ReconfPrepTDD
PRESENCE optional } |
{ ID id-USCH-Information-Add CRITICALITY reject TYPE USCH-Information PRESENCE optional } |
{ ID id-USCH-Information-DeleteList-RL-ReconfPrepTDD CRITICALITY reject TYPE USCH-Information-DeleteList-RL-ReconfPrepTDD
PRESENCE optional } |
{ ID id-RL-Information-RL-ReconfPrepTDD CRITICALITY reject TYPE RL-Information-RL-ReconfPrepTDD
PRESENCE optional },
...
}

```

RadioLinkReconfigurationPrepareTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {

...
}

UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD

```

UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
cCTrCH-ID CCTrCH-ID,
tFCS TFCS,
tFCI-Coding TFCI-Coding,
punctureLimit PunctureLimit,
ul-DPCH-InformationList UL-DPCH-InformationAddList-RL-ReconfPrepTDD OPTIONAL,
iE-Extensions ProtocolExtensionContainer { { UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs } } OPTIONAL,
...
}

```

UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

...
}

UL-DPCH-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container { { UL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD } }

```

UL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD  CRITICALITY reject          TYPE UL-DPCH-InformationAddItem-RL-ReconfPrepTDD  PRESENCE
  mandatory }
}

UL-DPCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
  repetitionPeriod          RepetitionPeriod,
  repetitionLength          RepetitionLength,
  tdd-DPCHOffset            TDD-DPCHOffset,
  uL-Timeslot-Information   UL-Timeslot-Information,
  iE-Extensions              ProtocolExtensionContainer { { UL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }  OPTIONAL,
  ...
}

UL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID                  CCTrCH-ID,
  tFCS                       TFCS                                OPTIONAL,
  tFCI-Coding                 TFCI-Coding                        OPTIONAL,
  punctureLimit               PunctureLimit                      OPTIONAL,
  ul-DPCH-InformationAddList  UL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD  OPTIONAL,
  ul-DPCH-InformationModifyList  UL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD  OPTIONAL,
  ul-DPCH-InformationDeleteList  UL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD  OPTIONAL,
  iE-Extensions                ProtocolExtensionContainer { { UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs} }
  OPTIONAL,
  ...
}

UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD  CRITICALITY reject          TYPE UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD
  PRESENCE mandatory }
}

UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
  repetitionPeriod          RepetitionPeriod,
  repetitionLength          RepetitionLength,
  tdd-DPCHOffset            TDD-DPCHOffset,
  uL-Timeslot-Information   UL-Timeslot-Information,
  iE-Extensions              ProtocolExtensionContainer { { UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }
  OPTIONAL,
  ...
}

```

```

UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container { { UL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD } }

UL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD  CRITICALITY reject          TYPE UL-DPCH-InformationModify-ModifyItem-RL-
ReconfPrepTDD          PRESENCE mandatory }
}

UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod          OPTIONAL,
    repetitionLength          RepetitionLength          OPTIONAL,
    tdd-DPCHOffset            TDD-DPCHOffset            OPTIONAL,
    uL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD          UL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD          OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs } }
OPTIONAL,
    ...
}

UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD

UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    timeSlot                  TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType          OPTIONAL,
    tFCI-Presence              TFCI-Presence          OPTIONAL,
    uL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD          UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD          OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs } }
OPTIONAL,
    ...
}

UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                    DPCH-ID,
    tdd-ChannelisationCode      TDD-ChannelisationCode          OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs } }
OPTIONAL,
    ...
}

```

```

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container { { UL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD } }

UL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD  CRITICALITY reject          TYPE UL-DPCH-InformationModify-DeleteListIE-RL-
ReconfPrepTDD          PRESENCE mandatory }
}

UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationModify-DeleteItem-RL-
ReconfPrepTDD

UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    iE-Extensions          ProtocolExtensionContainer { { UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCtRch-ID              CCTrCH-ID,
    iE-Extensions          ProtocolExtensionContainer { { UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCtRch-ID              CCTrCH-ID,
    tFCS                   TFCS,
    tFCI-Coding            TFCI-Coding,
    punctureLimit          PunctureLimit,
    cCtRch-TPCList         CCTrCH-TPCAddList-RL-ReconfPrepTDD          OPTIONAL,
    dl-DPCH-InformationList DL-DPCH-InformationAddList-RL-ReconfPrepTDD  OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
CCTrCH-TPCAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCAddItem-RL-ReconfPrepTDD

CCTrCH-TPCAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCtRch-ID          CCTrCH-ID,
    iE-Extensions     ProtocolExtensionContainer { { CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs } } OPTIONAL,
    ...
}

CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container { { DL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD } }

DL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD CRITICALITY reject TYPE DL-DPCH-InformationAddItem-RL-ReconfPrepTDD PRESENCE
mandatory }
}

DL-DPCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod      RepetitionPeriod,
    repetitionLength      RepetitionLength,
    tdd-DPCHOffset        TDD-DPCHOffset,
    dl-Timeslot-Information DL-Timeslot-Information,
    iE-Extensions         ProtocolExtensionContainer { { DL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs } } OPTIONAL,
    ...
}

DL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCtRch-ID          CCTrCH-ID,
    tFCS               TFCS OPTIONAL,
    tFCI-Coding        TFCI-Coding OPTIONAL,
    punctureLimit      PunctureLimit OPTIONAL,
    cCtRch-TPCList     CCTrCH-TPCModifyList-RL-ReconfPrepTDD OPTIONAL,
    dl-DPCH-InformationAddList DL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD OPTIONAL,
    dl-DPCH-InformationModifyList DL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD OPTIONAL,
    dl-DPCH-InformationDeleteList DL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD OPTIONAL,
    iE-Extensions     ProtocolExtensionContainer { { DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs } }
OPTIONAL,
    ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

CCTrCH-TPCModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCModifyItem-RL-ReconfPrepTDD

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCCTrCH-ID          CCTrCH-ID,
    iE-Extensions      ProtocolExtensionContainer { { CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD  CRITICALITY reject          TYPE DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD
    PRESENCE mandatory }
}

DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tdd-DPCHOffset            TDD-DPCHOffset,
    dL-Timeslot-Information    DL-Timeslot-Information,
    iE-Extensions              ProtocolExtensionContainer { { DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD  CRITICALITY reject          TYPE DL-DPCH-InformationModify-ModifyItem-RL-
    ReconfPrepTDD          PRESENCE mandatory }
}

DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod          OPTIONAL,
    repetitionLength          RepetitionLength          OPTIONAL,
    tdd-DPCHOffset            TDD-DPCHOffset            OPTIONAL,
    dL-Timeslot-InformationAddModify-ModifyList-RL-ReconfPrepTDD    DL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD          OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}

DL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSS)) OF DL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD

DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType OPTIONAL,
    tFCI-Presence            TFCI-Presence OPTIONAL,
    dL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { { DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD

DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tdd-ChannelisationCode TDD-ChannelisationCode OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { { DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container { { DL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD } }

DL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD CRITICALITY reject TYPE DL-DPCH-InformationModify-DeleteListIE-RL-
ReconfPrepTDD PRESENCE mandatory }
}

DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationModify-DeleteItem-RL-
ReconfPrepTDD

DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    iE-Extensions            ProtocolExtensionContainer { { DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```



```

DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    iE-Extensions            ProtocolExtensionContainer { { DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs } }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepTDD

DCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    iE-Extensions            ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs } }
    OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-ModifyItem-RL-ReconfPrepTDD

DSCH-Information-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    cCTrCH-ID                CCTrCH-ID
    OPTIONAL,
    transportFormatSet      TransportFormatSet
    OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority
    OPTIONAL,
    frameHandlingPriority    FrameHandlingPriority
    OPTIONAL,
    toAWS                    ToAWS
    OPTIONAL,
    toAWE                    ToAWE
    OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    iE-Extensions            ProtocolExtensionContainer { { DSCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs } }
    OPTIONAL,
    ...
}

DSCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-Information-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-DeleteItem-RL-ReconfPrepTDD

DSCH-Information-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    iE-Extensions            ProtocolExtensionContainer { { DSCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs } }
    OPTIONAL,
    ...
}

```

```

DSCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-ModifyItem-RL-ReconfPrepTDD

USCH-Information-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    transportFormatSet     TransportFormatSet      OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    cCTrCH-ID              CCTrCH-ID              OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    iE-Extensions          ProtocolExtensionContainer { { USCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

USCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-Information-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-DeleteItem-RL-ReconfPrepTDD

USCH-Information-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    iE-Extensions          ProtocolExtensionContainer { { USCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

USCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    maxDL-Power          DL-Power          OPTIONAL,
    minDL-Power          DL-Power          OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { RL-Information-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION READY
--
-- *****

RadioLinkReconfigurationReady ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{RadioLinkReconfigurationReady-IEs}},

```

```

    protocolExtensions      ProtocolExtensionContainer  {{RadioLinkReconfigurationReady-Extensions}}  OPTIONAL,
    ...
}

RadioLinkReconfigurationReady-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID          CRITICALITY ignore TYPE CRNC-CommunicationContextID
    PRESENCE mandatory } |
    { ID id-RL-InformationResponseList-RL-ReconfReady  CRITICALITY ignore TYPE RL-InformationResponseList-RL-ReconfReady
    PRESENCE optional } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE
    optional },
    ...
}

RadioLinkReconfigurationReady-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationResponseList-RL-ReconfReady ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationResponseItemIE-RL-ReconfReady}}

RL-InformationResponseItemIE-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-ReconfReady          CRITICALITY ignore TYPE RL-InformationResponseItem-RL-ReconfReady
    PRESENCE mandatory}
}

RL-InformationResponseItem-RL-ReconfReady ::= SEQUENCE {
    rL-ID                                RL-ID,
    dCH-InformationResponseList-RL-ReconfReady  DCH-InformationResponseList-RL-ReconfReady OPTIONAL,
    dSCH-InformationResponseList-RL-ReconfReady  DSCH-InformationResponseList-RL-ReconfReady OPTIONAL,
    uSCH-InformationResponseList-RL-ReconfReady  USCH-InformationResponseList-RL-ReconfReady OPTIONAL,
    tFCI2-BearerInformationResponse            TFCI2-BearerInformationResponse OPTIONAL,
    iE-Extensions                             ProtocolExtensionContainer { { RL-InformationResponseItem-RL-ReconfReady-ExtIEs } } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-ReconfReady-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponseList-RL-ReconfReady ::= ProtocolIE-Single-Container {{ DCH-InformationResponseListIEs-RL-ReconfReady }}

DCH-InformationResponseListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse          CRITICALITY ignore TYPE DCH-InformationResponse PRESENCE mandatory }
}

DSCH-InformationResponseList-RL-ReconfReady ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-ReconfReady }}

DSCH-InformationResponseListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationResponse          CRITICALITY ignore TYPE DSCH-InformationResponse PRESENCE mandatory }
}

USCH-InformationResponseList-RL-ReconfReady ::= ProtocolIE-Single-Container {{ USCH-InformationResponseListIEs-RL-ReconfReady }}

```

```

USCH-InformationResponseListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
  { ID id-USCH-InformationResponse CRITICALITY ignore TYPE USCH-InformationResponse PRESENCE mandatory }
}

-- *****
--
-- RADIO LINK RECONFIGURATION FAILURE
--
-- *****

RadioLinkReconfigurationFailure ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{RadioLinkReconfigurationFailure-IEs}},
  protocolExtensions ProtocolExtensionContainer {{RadioLinkReconfigurationFailure-Extensions}} OPTIONAL,
  ...
}

RadioLinkReconfigurationFailure-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID CRITICALITY ignore TYPE CRNC-CommunicationContextID PRESENCE mandatory } |
  { ID id-CauseLevel-RL-ReconfFailure CRITICALITY ignore TYPE CauseLevel-RL-ReconfFailure PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

RadioLinkReconfigurationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CauseLevel-RL-ReconfFailure ::= CHOICE {
  generalCause GeneralCauseList-RL-ReconfFailure,
  rLSpecificCause RLSpecificCauseList-RL-ReconfFailure,
  ...
}

GeneralCauseList-RL-ReconfFailure ::= SEQUENCE {
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { { GeneralCauseItem-RL-ReconfFailure-ExtIEs} } OPTIONAL,
  ...
}

GeneralCauseItem-RL-ReconfFailure-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RLSpecificCauseList-RL-ReconfFailure ::= SEQUENCE {
  rL-ReconfigurationFailureList-RL-ReconfFailure RL-ReconfigurationFailureList-RL-ReconfFailure OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { RLSpecificCauseItem-RL-ReconfFailure-ExtIEs} } OPTIONAL,
  ...
}

RLSpecificCauseItem-RL-ReconfFailure-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}

RL-ReconfigurationFailureList-RL-ReconfFailure ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-
ReconfigurationFailureItemIE-RL-ReconfFailure}}

RL-ReconfigurationFailureItemIE-RL-ReconfFailure NBAP-PROTOCOL-IES ::= {
  { ID    id-RL-ReconfigurationFailureItem-RL-ReconfFailure      CRITICALITY    ignore    TYPE    RL-ReconfigurationFailureItem-RL-
ReconfFailure          PRESENCE    mandatory}
}

RL-ReconfigurationFailureItem-RL-ReconfFailure ::= SEQUENCE {
  rL-ID                RL-ID,
  cause                Cause,
  iE-Extensions        ProtocolExtensionContainer { { RL-ReconfigurationFailureItem-RL-ReconfFailure-ExtIEs} }
  OPTIONAL,
  ...
}

RL-ReconfigurationFailureItem-RL-ReconfFailure-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION COMMIT
--
-- *****

RadioLinkReconfigurationCommit ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{RadioLinkReconfigurationCommit-IEs}},
  protocolExtensions    ProtocolExtensionContainer  {{RadioLinkReconfigurationCommit-Extensions}}    OPTIONAL,
  ...
}

RadioLinkReconfigurationCommit-IEs NBAP-PROTOCOL-IES ::= {
  { ID    id-NodeB-CommunicationContextID      CRITICALITY    ignore    TYPE    NodeB-CommunicationContextID    PRESENCE mandatory } |
  { ID    id-CFN                               CRITICALITY    ignore    TYPE    CFN                               PRESENCE mandatory } |
  { ID    id-Active-Pattern-Sequence-Information CRITICALITY    ignore    TYPE    Active-Pattern-Sequence-Information PRESENCE optional },
  ...
}

RadioLinkReconfigurationCommit-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION CANCEL
--
-- *****

RadioLinkReconfigurationCancel ::= SEQUENCE {

```

```

    protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationCancel-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationCancel-Extensions}}    OPTIONAL,
    ...
}

RadioLinkReconfigurationCancel-IEs NBAP-PROTOCOL-IES ::= {
  { ID    id-NodeB-CommunicationContextID      CRITICALITY    ignore    TYPE    NodeB-CommunicationContextID      PRESENCE mandatory  },
  ...
}

RadioLinkReconfigurationCancel-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST FDD
--
-- *****

RadioLinkReconfigurationRequestFDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationRequestFDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationRequestFDD-Extensions}}    OPTIONAL,
  ...
}

RadioLinkReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID    id-NodeB-CommunicationContextID      CRITICALITY    reject    TYPE    NodeB-CommunicationContextID      PRESENCE
  mandatory  } |
  { ID    id-UL-DPCH-Information-RL-ReconfRqstFDD    CRITICALITY    reject    TYPE    UL-DPCH-Information-RL-ReconfRqstFDD      PRESENCE
  optional  } |
  { ID    id-DL-DPCH-Information-RL-ReconfRqstFDD    CRITICALITY    reject    TYPE    DL-DPCH-Information-RL-ReconfRqstFDD      PRESENCE
  optional  } |
  { ID    id-FDD-DCHs-to-Modify                    CRITICALITY    reject    TYPE    FDD-DCHs-to-Modify                    PRESENCE optional } |
  { ID    id-DCHs-to-Add-FDD                        CRITICALITY    reject    TYPE    DCH-FDD-Information                    PRESENCE optional } |
  { ID    id-DCH-DeleteList-RL-ReconfRqstFDD        CRITICALITY    reject    TYPE    DCH-DeleteList-RL-ReconfRqstFDD        PRESENCE
  optional  } |
  { ID    id-RL-InformationList-RL-ReconfRqstFDD    CRITICALITY    reject    TYPE    RL-InformationList-RL-ReconfRqstFDD      PRESENCE
  optional  } |
  { ID    id-Transmission-Gap-Pattern-Sequence-Information    CRITICALITY    reject    TYPE    Transmission-Gap-Pattern-Sequence-Information
  PRESENCE optional },
  ...
}

RadioLinkReconfigurationRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
  ul-TFCS              TFCS              OPTIONAL,
  iE-Extensions        ProtocolExtensionContainer { { UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
  ...
}

```

```

}

UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    dl-TFCS                TFCS                OPTIONAL,
    tFCI-SignallingMode    tFCI-SignallingMode    OPTIONAL,
    limitedPowerIncrease   LimitedPowerIncrease OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstFDD

DCH-DeleteItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    iE-Extensions          ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-ReconfRqstFDD}}

RL-InformationItemIE-RL-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-RL-InformationItem-RL-ReconfRqstFDD    CRITICALITY    reject    TYPE RL-InformationItem-RL-ReconfRqstFDD
    PRESENCE    mandatory}
}

RL-InformationItem-RL-ReconfRqstFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    maxDL-Power          DL-Power    OPTIONAL,
    minDL-Power          DL-Power    OPTIONAL,
    dl-CodeInformation   FDD-DL-CodeInformation    OPTIONAL,
    -- This IE is group present only if Downlink compressed mode method is set to "SF/2" in the Transmission Gap Pattern Sequence Information IE.
    iE-Extensions          ProtocolExtensionContainer { { RL-InformationItem-RL-ReconfRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

RL-InformationItem-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****

```

```

--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--
-- *****

RadioLinkReconfigurationRequestTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{RadioLinkReconfigurationRequestTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer  {{RadioLinkReconfigurationRequestTDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-NodeB-CommunicationContextID          CRITICALITY    reject          TYPE  NodeB-CommunicationContextID
      PRESENCE  mandatory } |
    { ID      id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD          CRITICALITY    notify          TYPE  UL-CCTrCH-InformationModifyList-RL-
      RECONF   PRESENCE  optional } |
    { ID      id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD          CRITICALITY    notify          TYPE  UL-CCTrCH-InformationDeleteList-RL-
      RECONF   PRESENCE  optional } |
    { ID      id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD          CRITICALITY    notify          TYPE  DL-CCTrCH-InformationModifyList-RL-
      RECONF   PRESENCE  optional } |
    { ID      id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD          CRITICALITY    notify          TYPE  DL-CCTrCH-InformationDeleteList-RL-
      RECONF   PRESENCE  optional } |
    { ID      id-TDD-DCHs-to-Modify          CRITICALITY    reject          TYPE  TDD-DCHs-to-Modify          PRESENCE optional } |
      { ID      id-DCHs-to-Add-TDD          CRITICALITY    reject          TYPE  DCH-TDD-Information          PRESENCE
      optional } |
    { ID      id-DCH-DeleteList-RL-ReconfRqstTDD          CRITICALITY    reject          TYPE  DCH-DeleteList-RL-ReconfRqstTDD
      PRESENCE  optional } |
    { ID      id-RL-Information-RL-ReconfRqstTDD          CRITICALITY    ignore          TYPE  RL-Information-RL-ReconfRqstTDD
      PRESENCE  optional },
    ...
}

RadioLinkReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ UL-CCTrCH-
InformationModifyItemIE-RL-ReconfRqstTDD}}

UL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID      id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD          CRITICALITY    notify          TYPE  UL-CCTrCH-InformationModifyItem-RL-
      RECONF   PRESENCE  mandatory}
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    tFCS              TFCS          OPTIONAL,
    punctureLimit     PunctureLimit  OPTIONAL,
    iE-Extensions     ProtocolExtensionContainer  { { UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

```



```

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ UL-CCTrCH-
InformationDeleteItemIE-RL-ReconfRqstTDD}}

UL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID      id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD          CRITICALITY    notify          TYPE  UL-CCTrCH-InformationDeleteItem-RL-
ReconfRqstTDD          PRESENCE      mandatory}
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    iE-Extensions     ProtocolExtensionContainer { { UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs } }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ DL-CCTrCH-
InformationModifyItemIE-RL-ReconfRqstTDD}}

DL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID      id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD          CRITICALITY    notify          TYPE  DL-CCTrCH-InformationModifyItem-RL-
ReconfRqstTDD          PRESENCE      mandatory}
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    tFCS              TFCS          OPTIONAL,
    punctureLimit     PunctureLimit  OPTIONAL,
    iE-Extensions     ProtocolExtensionContainer { { DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs } }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ DL-CCTrCH-
InformationDeleteItemIE-RL-ReconfRqstTDD}}

DL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID      id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD          CRITICALITY    notify          TYPE  DL-CCTrCH-InformationDeleteItem-RL-
ReconfRqstTDD          PRESENCE      mandatory}
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {

```

```

    cCTrCH-ID          CCTrCH-ID,
    iE-Extensions     ProtocolExtensionContainer { { DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs } }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstTDD

DCH-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID          DCH-ID,
    iE-Extensions  ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs } }      OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-ReconfRqstTDD ::= SEQUENCE {
    rL-ID          RL-ID,
    maxDL-Power   DL-Power      OPTIONAL,
    minDL-Power   DL-Power      OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { RL-InformationItem-RL-ReconfRqstTDD-ExtIEs } }      OPTIONAL,
    ...
}

RL-InformationItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE
--
-- *****

RadioLinkReconfigurationResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{RadioLinkReconfigurationResponse-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{RadioLinkReconfigurationResponse-Extensions}}  OPTIONAL,
    ...
}

RadioLinkReconfigurationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CRNC-CommunicationContextID          CRITICALITY ignore      TYPE   CRNC-CommunicationContextID          PRESENCE
      mandatory } |
    { ID   id-RL-InformationResponseList-RL-ReconfRsp  CRITICALITY ignore      TYPE   RL-InformationResponseList-RL-ReconfRsp          PRESENCE
      optional } |
    { ID   id-CriticalityDiagnostics                CRITICALITY ignore      TYPE   CriticalityDiagnostics                PRESENCE
      optional },

```

```

}
...
}
RadioLinkReconfigurationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
...
}
RL-InformationResponseList-RL-ReconfRsp ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{RL-InformationResponseItemIE-RL-
ReconfRsp}}
RL-InformationResponseItemIE-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
{ ID id-RL-InformationResponseItem-RL-ReconfRsp CRITICALITY ignore TYPE RL-InformationResponseItem-RL-ReconfRsp
PRESENCE mandatory}
}
RL-InformationResponseItem-RL-ReconfRsp ::= SEQUENCE {
rL-ID RL-ID,
dCH-InformationResponseList-RL-ReconfRsp DCH-InformationResponseList-RL-ReconfRsp OPTIONAL,
iE-Extensions ProtocolExtensionContainer { { RL-InformationResponseItem-RL-ReconfRsp-ExtIEs } } OPTIONAL,
...
}
RL-InformationResponseItem-RL-ReconfRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
DCH-InformationResponseList-RL-ReconfRsp ::= ProtocolIE-Single-Container { { DCH-InformationResponseListIEs-RL-ReconfRsp }}
DCH-InformationResponseListIEs-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
{ ID id-DCH-InformationResponse CRITICALITY ignore TYPE DCH-InformationResponse PRESENCE mandatory }
}
-- *****
--
-- RADIO LINK DELETION REQUEST
--
-- *****
RadioLinkDeletionRequest ::= SEQUENCE {
protocolIEs ProtocolIE-Container {{RadioLinkDeletionRequest-IEs}},
protocolExtensions ProtocolExtensionContainer {{RadioLinkDeletionRequest-Extensions}} OPTIONAL,
...
}
RadioLinkDeletionRequest-IEs NBAP-PROTOCOL-IES ::= {
{ ID id-NodeB-CommunicationContextID CRITICALITY reject TYPE NodeB-CommunicationContextID PRESENCE
mandatory } |
{ ID id-CRNC-CommunicationContextID CRITICALITY reject TYPE CRNC-CommunicationContextID PRESENCE
mandatory } |
}

```

```

    { ID      id-RL-informationList-RL-DeletionRqst      CRITICALITY      notify      TYPE      RL-informationList-RL-DeletionRqst      PRESENCE
      mandatory      } ,
    ...
}

RadioLinkDeletionRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-informationList-RL-DeletionRqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{RL-informationItemIE-RL-DeletionRqst}}

RL-informationItemIE-RL-DeletionRqst NBAP-PROTOCOL-IES ::= {
    { ID      id-RL-informationItem-RL-DeletionRqst      CRITICALITY      notify      TYPE      RL-informationItem-RL-DeletionRqst
      PRESENCE      mandatory}
}

RL-informationItem-RL-DeletionRqst ::= SEQUENCE {
    rL-ID      RL-ID,
    iE-Extensions      ProtocolExtensionContainer { { RL-informationItem-RL-DeletionRqst-ExtIEs} }      OPTIONAL,
    ...
}

RL-informationItem-RL-DeletionRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK DELETION RESPONSE
--
-- *****

RadioLinkDeletionResponse ::= SEQUENCE {
    protocolIEs      ProtocolIE-Container      {{RadioLinkDeletionResponse-IEs}},
    protocolExtensions      ProtocolExtensionContainer      {{RadioLinkDeletionResponse-Extensions}}      OPTIONAL,
    ...
}

RadioLinkDeletionResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CRNC-CommunicationContextID      CRITICALITY      ignore      TYPE      CRNC-CommunicationContextID      PRESENCE mandatory
    }|
    { ID      id-CriticalityDiagnostics      CRITICALITY      ignore      TYPE      CriticalityDiagnostics      PRESENCE optional },
    ...
}

RadioLinkDeletionResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DL POWER CONTROL REQUEST FDD

```

```

--
-- *****
DL-PowerControlRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DL-PowerControlRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{DL-PowerControlRequest-Extensions}}    OPTIONAL,
    ...
}

DL-PowerControlRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID          CRITICALITY ignore          TYPE          NodeB-CommunicationContextID          PRESENCE mandatory } |
    { ID id-PowerAdjustmentType                    CRITICALITY ignore          TYPE          PowerAdjustmentType                    PRESENCE mandatory } |
    { ID id-DLReferencePower                      CRITICALITY ignore          TYPE          DL-Power                                PRESENCE conditional } |
    -- This IE is present only 'Adjustment Type' equals to 'Common'
    { ID id-InnerLoopDLPCStatus                   CRITICALITY ignore          TYPE          InnerLoopDLPCStatus                   PRESENCE optional } |
    { ID id-DLReferencePowerList-DL-PC-Rqst       CRITICALITY ignore          TYPE          DL-ReferencePowerInformationList-DL-PC-Rqst    PRESENCE conditional } |
    -- This IE is present only 'Adjustment Type' equals to 'Individual'
    { ID id-MaxAdjustmentStep                     CRITICALITY ignore          TYPE          MaxAdjustmentStep                     PRESENCE conditional } |
    -- This IE is present only 'Adjustment Type " equals to 'Common' or 'Individual'
    { ID id-AdjustmentPeriod                      CRITICALITY ignore          TYPE          AdjustmentPeriod                      PRESENCE conditional } |
    -- This IE is present only 'Adjustment Type " equals to 'Common' or 'Individual'
    { ID id-AdjustmentRatio                      CRITICALITY ignore          TYPE          ScaledAdjustmentRatio                 PRESENCE conditional },
    -- This IE is present only 'Adjustment Type " equals to 'Common' or 'Individual'
    ...
}

DL-PowerControlRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-ReferencePowerInformationList-DL-PC-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{DL-ReferencePowerInformationItemIE-DL-PC-Rqst }}

DL-ReferencePowerInformationItemIE-DL-PC-Rqst NBAP-PROTOCOL-IES ::= {
    { ID id-DL-ReferencePowerInformationItem-DL-PC-Rqst          CRITICALITY          ignore          TYPE          DL-ReferencePowerInformationItem-DL-PC-Rqst
    PRESENCE          mandatory
    }
}

DL-ReferencePowerInformationItem-DL-PC-Rqst ::= SEQUENCE {
    rL-ID                RL-ID,
    dl-ReferencePower     DL-Power,
    iE-Extensions        ProtocolExtensionContainer { { DL-ReferencePowerInformationItem-DL-PC-Rqst-ExtIEs } }    OPTIONAL,
    ...
}

DL-ReferencePowerInformationItem-DL-PC-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DL POWER TIMESLOT CONTROL REQUEST TDD

```

```

--
-- *****
DL-PowerTimeslotControlRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DL-PowerTimeslotControlRequest-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{DL-PowerTimeslotControlRequest-Extensions}}    OPTIONAL,
    ...
}

DL-PowerTimeslotControlRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID          CRITICALITY ignore          TYPE          NodeB-CommunicationContextID          PRESENCE mandatory
    } |
    { ID id-TimeslotISCPInfoList-DL-PC-RqstTDD      CRITICALITY ignore          TYPE          TimeslotISCPInfoList-DL-PC-RqstTDD      PRESENCE mandatory },
    ...
}

TimeslotISCPInfoList-DL-PC-RqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF TimeslotISCPInfoItem-DL-PC-RqstTDD

TimeslotISCPInfoItem-DL-PC-RqstTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    timeSlot             TimeSlot,
    dL-TimeslotISCP      DL-TimeslotISCP,
    iE-Extensions        ProtocolExtensionContainer { {TimeslotISCPInfoItem-DL-PC-RqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

TimeslotISCPInfoItem-DL-PC-RqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-PowerTimeslotControlRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION REQUEST
--
-- *****
DedicatedMeasurementInitiationRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DedicatedMeasurementInitiationRequest-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{DedicatedMeasurementInitiationRequest-Extensions}}    OPTIONAL,
    ...
}

DedicatedMeasurementInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID          CRITICALITY reject          TYPE          NodeB-CommunicationContextID          PRESENCE
    mandatory } |
    { ID id-MeasurementID                          CRITICALITY reject          TYPE          MeasurementID                          PRESENCE mandatory
    } |
}

```

```

{ ID id-DedicatedMeasurementObjectType-DM-Rqst CRITICALITY reject TYPE DedicatedMeasurementObjectType-DM-Rqst PRESENCE
mandatory } |
-- This IE represents both the Dedicated Measurement Object Type IE and the choice based on the Dedicated Measurement Object Type
-- as described in the tabular message format in subclause 9.1.
{ ID id-DedicatedMeasurementType CRITICALITY reject TYPE DedicatedMeasurementType PRESENCE
mandatory } |
{ ID id-MeasurementFilterCoefficient CRITICALITY reject TYPE MeasurementFilterCoefficient PRESENCE
optional } |
{ ID id-ReportCharacteristics CRITICALITY reject TYPE ReportCharacteristics PRESENCE
mandatory } |
{ ID id-CFNReportingIndicator CRITICALITY reject TYPE FNReportingIndicator PRESENCE
mandatory } |
{ ID id-CFN CRITICALITY reject TYPE CFN PRESENCE
optional } ,
...
}

DedicatedMeasurementInitiationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
...
}

DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {
rL RL-DM-Rqst,
rLS RL-Set-DM-Rqst,
all-RL AllRL-DM-Rqst,
all-RLS AllRL-Set-DM-Rqst,
...
}

RL-DM-Rqst ::= SEQUENCE {
rL-InformationList RL-InformationList-DM-Rqst,
iE-Extensions ProtocolExtensionContainer { { RLItem-DM-Rqst-ExtIEs } } OPTIONAL,
...
}

RLItem-DM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

RL-InformationList-DM-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-DM-Rqst }}

RL-InformationItemIE-DM-Rqst NBAP-PROTOCOL-IES ::= {
{ ID id-RL-InformationItem-DM-Rqst CRITICALITY reject TYPE RL-InformationItem-DM-Rqst PRESENCE mandatory }
}

RL-InformationItem-DM-Rqst ::= SEQUENCE {
rL-ID RL-ID,
dPCH-ID DPCH-ID OPTIONAL,
iE-Extensions ProtocolExtensionContainer { { RL-InformationItem-DM-Rqst-ExtIEs } } OPTIONAL,
...
}

RL-InformationItem-DM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
RL-Set-DM-Rqst ::= SEQUENCE {
    rL-Set-InformationList-DM-Rqst      RL-Set-InformationList-DM-Rqst,
    iE-Extensions                       ProtocolExtensionContainer { { RL-SetItem-DM-Rqst-ExtIEs } } OPTIONAL,
    ...
}

RL-SetItem-DM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-DM-Rqst ::= SEQUENCE (SIZE(1..maxNrOfRLSets)) OF RL-Set-InformationItem-DM-Rqst

RL-Set-InformationItem-DM-Rqst ::= SEQUENCE {
    rL-Set-ID                          RL-Set-ID,
    iE-Extensions                       ProtocolExtensionContainer { { RL-Set-InformationItem-DM-Rqst-ExtIEs } } OPTIONAL,
    ...
}

RL-Set-InformationItem-DM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AllRL-DM-Rqst ::= NULL

AllRL-Set-DM-Rqst ::= NULL

-- *****
--
-- DEDICATED MEASUREMENT INITIATION RESPONSE
--
-- *****

DedicatedMeasurementInitiationResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DedicatedMeasurementInitiationResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{DedicatedMeasurementInitiationResponse-Extensions}} OPTIONAL,
    ...
}

DedicatedMeasurementInitiationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID          CRITICALITY    ignore    TYPE    CRNC-CommunicationContextID          PRESENCE
      mandatory } |
    { ID    id-MeasurementID                        CRITICALITY    ignore    TYPE    MeasurementID                          PRESENCE mandatory
      } |
    { ID    id-DedicatedMeasurementObjectType-DM-Rsp CRITICALITY    ignore    TYPE    DedicatedMeasurementObjectType-DM-Rsp    PRESENCE
      optional } |
    { ID    id-CriticalityDiagnostics                CRITICALITY    ignore    TYPE    CriticalityDiagnostics                    PRESENCE
      optional },
    ...
}

```



```

DedicatedMeasurementInitiationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementObjectType-DM-Rsp ::= CHOICE {
    rL                RL-DM-Rsp,
    rLS               RL-Set-DM-Rsp,
    all-RL            RL-DM-Rsp,
    all-RLS           RL-Set-DM-Rsp,
    ...
}

RL-DM-Rsp ::= SEQUENCE {
    rL-InformationList-DM-Rsp      RL-InformationList-DM-Rsp,
    iE-Extensions                  ProtocolExtensionContainer { { RLItem-DM-Rsp-ExtIEs } } OPTIONAL,
    ...
}

RLItem-DM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-DM-Rsp ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-DM-Rsp }}

RL-InformationItemIE-DM-Rsp NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rsp CRITICALITY ignore TYPE RL-InformationItem-DM-Rsp PRESENCE mandatory }
}

RL-InformationItem-DM-Rsp ::= SEQUENCE {
    rL-ID                RL-ID,
    dPCH-ID              DPCH-ID OPTIONAL,
    dedicatedMeasurementValue DedicatedMeasurementValue,
    cFN                  CFN OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { { RL-InformationItem-DM-Rsp-ExtIEs } } OPTIONAL,
    ...
}

RL-InformationItem-DM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-DM-Rsp ::= SEQUENCE {
    rL-Set-InformationList-DM-Rsp      RL-Set-InformationList-DM-Rsp,
    iE-Extensions                      ProtocolExtensionContainer { { RL-SetItem-DM-Rsp-ExtIEs } } OPTIONAL,
    ...
}

RL-SetItem-DM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-DM-Rsp ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-DM-Rsp }}

```

```

RL-Set-InformationItemIE-DM-Rsp NBAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-InformationItem-DM-Rsp          CRITICALITY ignore          TYPE          RL-Set-InformationItem-DM-Rsp PRESENCE mandatory}
}

RL-Set-InformationItem-DM-Rsp ::= SEQUENCE {
  rL-Set-ID          RL-Set-ID,
  dedicatedMeasurementValue    DedicatedMeasurementValue,
  cFN                CFN          OPTIONAL,
  iE-Extensions      ProtocolExtensionContainer { { RL-Set-InformationItem-DM-Rsp-ExtIEs } } OPTIONAL,
  ...
}

RL-Set-InformationItem-DM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION FAILURE
--
-- *****

DedicatedMeasurementInitiationFailure ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{DedicatedMeasurementInitiationFailure-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{DedicatedMeasurementInitiationFailure-Extensions}} OPTIONAL,
  ...
}

DedicatedMeasurementInitiationFailure-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID          CRITICALITY ignore          TYPE          CRNC-CommunicationContextID          PRESENCE mandatory } |
  { ID id-MeasurementID                        CRITICALITY ignore          TYPE          MeasurementID                        PRESENCE mandatory } |
  { ID id-Cause                                CRITICALITY ignore          TYPE          Cause                                PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics               CRITICALITY ignore          TYPE          CriticalityDiagnostics                PRESENCE optional },
  ...
}

DedicatedMeasurementInitiationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DEDICATED MEASUREMENT REPORT
--
-- *****

DedicatedMeasurementReport ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{DedicatedMeasurementReport-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{DedicatedMeasurementReport-Extensions}} OPTIONAL,
  ...
}

```

```

DedicatedMeasurementReport-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID          CRITICALITY ignore TYPE CRNC-CommunicationContextID          PRESENCE
    mandatory } |
  { ID id-MeasurementID                        CRITICALITY ignore TYPE MeasurementID                        PRESENCE
    mandatory } |
  { ID id-DedicatedMeasurementObjectType-DM-Rprt CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rprt PRESENCE
    mandatory } ,
  ...
}

DedicatedMeasurementReport-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
  rL          RL-DM-Rprt,
  rLS         RL-Set-DM-Rprt,
  all-RL      RL-DM-Rprt,
  all-RLS     RL-Set-DM-Rprt,
  ...
}

RL-DM-Rprt ::= SEQUENCE {
  rL-InformationList-DM-Rprt      RL-InformationList-DM-Rprt,
  iE-Extensions                   ProtocolExtensionContainer { { RLItem-DM-Rprt-ExtIEs } } OPTIONAL,
  ...
}

RLItem-DM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-InformationList-DM-Rprt ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-DM-Rprt }}

RL-InformationItemIE-DM-Rprt NBAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-DM-Rprt CRITICALITY ignore TYPE RL-InformationItem-DM-Rprt PRESENCE mandatory }
}

RL-InformationItem-DM-Rprt ::= SEQUENCE {
  rL-ID          RL-ID,
  dPCH-ID        DPCH-ID OPTIONAL,
  dedicatedMeasurementValueInformation DedicatedMeasurementValueInformation,
  iE-Extensions ProtocolExtensionContainer { { RL-InformationItem-DM-Rprt-ExtIEs } } OPTIONAL,
  ...
}

RL-InformationItem-DM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Set-DM-Rprt ::= SEQUENCE {
  rL-Set-InformationList-DM-Rprt RL-Set-InformationList-DM-Rprt,
  iE-Extensions                   ProtocolExtensionContainer { { RL-SetItem-DM-Rprt-ExtIEs } } OPTIONAL,
}

```

```

}
...
RL-SetItem-DM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-DM-Rprt ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-DM-Rprt }}

RL-Set-InformationItemIE-DM-Rprt NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-DM-Rprt CRITICALITY ignore TYPE RL-Set-InformationItem-DM-Rprt PRESENCE mandatory }
}

RL-Set-InformationItem-DM-Rprt ::= SEQUENCE {
    rL-Set-ID RL-Set-ID,
    dedicatedMeasurementValueInformation DedicatedMeasurementValueInformation,
    iE-Extensions ProtocolExtensionContainer { { RL-Set-InformationItem-DM-Rprt-ExtIEs } } OPTIONAL,
    ...
}

RL-Set-InformationItem-DM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT TERMINATION REQUEST
--
-- *****

DedicatedMeasurementTerminationRequest ::= SEQUENCE {
    protocolIEs ProtocolIE-Container {{DedicatedMeasurementTerminationRequest-IEs}},
    protocolExtensions ProtocolExtensionContainer {{DedicatedMeasurementTerminationRequest-Extensions}} OPTIONAL,
    ...
}

DedicatedMeasurementTerminationRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID CRITICALITY ignore TYPE NodeB-CommunicationContextID PRESENCE mandatory } |
    { ID id-MeasurementID CRITICALITY ignore TYPE MeasurementID PRESENCE mandatory },
    ...
}

DedicatedMeasurementTerminationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT FAILURE INDICATION
--
-- *****

DedicatedMeasurementFailureIndication ::= SEQUENCE {

```

```

    protocolIEs          ProtocolIE-Container    {{DedicatedMeasurementFailureIndication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{DedicatedMeasurementFailureIndication-Extensions}}  OPTIONAL,
    ...
}

DedicatedMeasurementFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
  { ID    id-CRNC-CommunicationContextID    CRITICALITY    ignore    TYPE    CRNC-CommunicationContextID    PRESENCE mandatory    } |
  { ID    id-MeasurementID                  CRITICALITY    ignore    TYPE    MeasurementID                PRESENCE mandatory    } |
  { ID    id-Cause                          CRITICALITY    ignore    TYPE    Cause                        PRESENCE mandatory    },
  ...
}

DedicatedMeasurementFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK FAILURE INDICATION
--
-- *****

RadioLinkFailureIndication ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{RadioLinkFailureIndication-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkFailureIndication-Extensions}}  OPTIONAL,
  ...
}

RadioLinkFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
  { ID    id-CRNC-CommunicationContextID    CRITICALITY    ignore    TYPE    CRNC-CommunicationContextID    PRESENCE
  mandatory    } |
  { ID    id-Reporting-Object-RL-FailureInd  CRITICALITY    ignore    TYPE    Reporting-Object-RL-FailureInd  PRESENCE mandatory
  },
  ...
}

RadioLinkFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Reporting-Object-RL-FailureInd ::= CHOICE {
  rL                    RL-RL-FailureInd,
  rL-Set                RL-Set-RL-FailureInd,
  ...
}

RL-RL-FailureInd ::= SEQUENCE {
  rL-InformationList-RL-FailureInd    RL-InformationList-RL-FailureInd,
  iE-Extensions                       ProtocolExtensionContainer { { RLItem-RL-FailureInd-ExtIEs } }  OPTIONAL,
  ...
}

RLItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
RL-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-FailureInd}}

RL-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-RL-FailureInd      CRITICALITY ignore          TYPE RL-InformationItem-RL-FailureInd      PRESENCE
    mandatory}
}

RL-InformationItem-RL-FailureInd ::= SEQUENCE {
  rL-ID          RL-ID,
  cause          Cause,
  iE-Extensions ProtocolExtensionContainer { { RL-InformationItem-RL-FailureInd-ExtIEs } } OPTIONAL,
  ...
}

RL-InformationItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Set-RL-FailureInd ::= SEQUENCE {
  rL-Set-InformationList-RL-FailureInd          RL-Set-InformationList-RL-FailureInd,
  iE-Extensions                               ProtocolExtensionContainer { { RL-SetItem-RL-FailureInd-ExtIEs } } OPTIONAL,
  ...
}

RL-SetItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Set-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-RL-FailureInd
}}

RL-Set-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-InformationItem-RL-FailureInd      CRITICALITY ignore          TYPE RL-Set-InformationItem-RL-FailureInd      PRESENCE mandatory }
}

RL-Set-InformationItem-RL-FailureInd ::= SEQUENCE {
  rL-Set-ID          RL-Set-ID,
  cause          Cause,
  iE-Extensions   ProtocolExtensionContainer { { RL-Set-InformationItem-RL-FailureInd-ExtIEs } } OPTIONAL,
  ...
}

RL-Set-InformationItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK PREEMPTION REQUIRED INDICATION

```

```

--
-- *****

RadioLinkPreemptionRequiredIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkPreemptionRequiredIndication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkPreemptionRequiredIndication-Extensions}} OPTIONAL,
    ...
}

RadioLinkPreemptionRequiredIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID          CRITICALITY ignore          TYPE CRNC-CommunicationContextID          PRESENCE
    mandatory } |
    { ID id-RL-InformationList-RL-PreemptRequiredInd CRITICALITY ignore TYPE RL-InformationList-RL-PreemptRequiredInd PRESENCE optional },
    ...
}

RadioLinkPreemptionRequiredIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-PreemptRequiredInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationItemIE-RL-PreemptRequiredInd}}

RL-InformationItemIE-RL-PreemptRequiredInd NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-PreemptRequiredInd          CRITICALITY ignore TYPE RL-InformationItem-RL-PreemptRequiredInd          PRESENCE mandatory
    },
    ...
}

RL-InformationItem-RL-PreemptRequiredInd ::= SEQUENCE {
    rL-ID              RL-ID,
    iE-Extensions      ProtocolExtensionContainer { {RL-InformationItem-RL-PreemptRequiredInd-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-RL-PreemptRequiredInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RESTORE INDICATION
--

```

```

-- *****
RadioLinkRestoreIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container   {{RadioLinkRestoreIndication-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{RadioLinkRestoreIndication-Extensions}} OPTIONAL,
    ...
}

RadioLinkRestoreIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CRNC-CommunicationContextID          CRITICALITY  ignore          TYPE  CRNC-CommunicationContextID          PRESENCE
      mandatory } |
    { ID      id-Reporting-Object-RL-RestoreInd       CRITICALITY  ignore          TYPE  Reporting-Object-RL-RestoreInd          PRESENCE mandatory
    },
    ...
}

RadioLinkRestoreIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Reporting-Object-RL-RestoreInd ::= CHOICE {
    rL                  RL-RL-RestoreInd,
    rL-Set              RL-Set-RL-RestoreInd,
    ...
}

RL-RL-RestoreInd ::= SEQUENCE {
    rL-InformationList-RL-RestoreInd          RL-InformationList-RL-RestoreInd,
    iE-Extensions                            ProtocolExtensionContainer { { RLItem-RL-RestoreInd-ExtIEs } } OPTIONAL,
    ...
}

RLItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{RL-InformationItemIE-RL-RestoreInd}}

RL-InformationItemIE-RL-RestoreInd NBAP-PROTOCOL-IES ::= {
    { ID      id-RL-InformationItem-RL-RestoreInd          CRITICALITY  ignore          TYPE  RL-InformationItem-RL-RestoreInd          PRESENCE
      mandatory}
}

RL-InformationItem-RL-RestoreInd ::= SEQUENCE {
    rL-ID              RL-ID,
    iE-Extensions      ProtocolExtensionContainer { { RL-InformationItem-RL-RestoreInd-ExtIEs } } OPTIONAL,
    ...
}

RL-InformationItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```



```

RL-Set-RL-RestoreInd ::= SEQUENCE {
    rL-Set-InformationList-RL-RestoreInd    RL-Set-InformationList-RL-RestoreInd,
    iE-Extensions                          ProtocolExtensionContainer { { RL-SetItem-RL-RestoreInd-ExtIEs } }    OPTIONAL,
    ...
}

RL-SetItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-RL-RestoreInd }}

RL-Set-InformationItemIE-RL-RestoreInd NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-RL-RestoreInd    CRITICALITY ignore          TYPE RL-Set-InformationItem-RL-RestoreInd PRESENCE mandatory }
}

RL-Set-InformationItem-RL-RestoreInd ::= SEQUENCE {
    rL-Set-ID          RL-Set-ID,
    iE-Extensions      ProtocolExtensionContainer { { RL-Set-InformationItem-RL-RestoreInd-ExtIEs } } OPTIONAL,
    ...
}

RL-Set-InformationItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMPRESSED MODE COMMAND FDD
--
-- *****

CompressedModeCommand ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CompressedModeCommand-IEs}},
    protocolExtensions    ProtocolExtensionContainer {{CompressedModeCommand-Extensions}}    OPTIONAL,
    ...
}

CompressedModeCommand-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID    CRITICALITY ignore          TYPE NodeB-CommunicationContextID    PRESENCE mandatory } |
    { ID id-Active-Pattern-Sequence-Information    CRITICALITY ignore          TYPE Active-Pattern-Sequence-Information    PRESENCE mandatory },
    ...
}

```

```

CompressedModeCommand-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- ERROR INDICATION
--
-- *****

ErrorIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{ErrorIndication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{ErrorIndication-Extensions}}    OPTIONAL,
    ...
}

ErrorIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CRNC-CommunicationContextID      CRITICALITY  ignore          TYPE      CRNC-CommunicationContextID      PRESENCE optional } |
    { ID      id-NodeB-CommunicationContextID     CRITICALITY  ignore          TYPE      NodeB-CommunicationContextID     PRESENCE optional } |
    { ID      id-Cause                            CRITICALITY  ignore          TYPE      Cause                            PRESENCE conditional } |
    -- At least either or Cause IE or Criticality Diagnostic IE shall be present--
    { ID      id-CriticalityDiagnostics          CRITICALITY  ignore          TYPE      CriticalityDiagnostics          PRESENCE conditional },
    -- At least either or Cause IE or Criticality Diagnostic IE shall be present--
    ...
}

ErrorIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PRIVATE MESSAGE
--
-- *****

PrivateMessage ::= SEQUENCE {
    privateIEs          PrivateIE-Container {{PrivateMessage-IEs}},
    ...
}

PrivateMessage-IEs NBAP-PRIVATE-IES ::= {
    ...
}

-- *****
--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST TDD
--
-- *****

```

```

PhysicalSharedChannelReconfigurationRequestTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{PhysicalSharedChannelReconfigurationRequestTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{PhysicalSharedChannelReconfigurationRequestTDD-Extensions}}  OPTIONAL,
    ...
}

PhysicalSharedChannelReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-C-ID          CRITICALITY  reject          TYPE      C-ID          PRESENCE
    mandatory } |
    { ID      id-SFN          CRITICALITY  reject          TYPE      SFN          PRESENCE
    optional} |
    { ID      id-PDSCHSets-AddList-PSCH-ReconfRqst  CRITICALITY  reject          TYPE      PDSCHSets-AddList-PSCH-ReconfRqst  PRESENCE
    optional } |
    { ID      id-PDSCHSets-ModifyList-PSCH-ReconfRqst  CRITICALITY  reject          TYPE      PDSCHSets-ModifyList-PSCH-ReconfRqst  PRESENCE
    optional } |
    { ID      id-PDSCHSets-DeleteList-PSCH-ReconfRqst  CRITICALITY  reject          TYPE      PDSCHSets-DeleteList-PSCH-ReconfRqst  PRESENCE
    optional } |
    { ID      id-PUSCHSets-AddList-PSCH-ReconfRqst  CRITICALITY  reject          TYPE      PUSCHSets-AddList-PSCH-ReconfRqst  PRESENCE
    optional } |
    { ID      id-PUSCHSets-ModifyList-PSCH-ReconfRqst  CRITICALITY  reject          TYPE      PUSCHSets-ModifyList-PSCH-ReconfRqst  PRESENCE
    optional } |
    { ID      id-PUSCHSets-DeleteList-PSCH-ReconfRqst  CRITICALITY  reject          TYPE      PUSCHSets-DeleteList-PSCH-ReconfRqst  PRESENCE
    optional },
    ...
}

PhysicalSharedChannelReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCHSets-AddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHSets)) OF PDSCHSets-AddItem-PSCH-ReconfRqst

PDSCHSets-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCHSet-ID          PDSCHSet-ID,
    pDSCH-InformationList PDSCH-Information-AddList-PSCH-ReconfRqst,
    iE-Extensions        ProtocolExtensionContainer { {PDSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs} }  OPTIONAL,
    ...
}

PDSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-Information-AddList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PDSCH-Information-AddListIEs-PSCH-ReconfRqst }}

PDSCH-Information-AddListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PDSCH-Information-AddListIE-PSCH-ReconfRqst  CRITICALITY  reject          TYPE      PDSCH-Information-AddItem-PSCH-ReconfRqst  PRESENCE
    mandatory}
}

PDSCH-Information-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod      RepetitionPeriod,

```

```

    repetitionLength                RepetitionLength,
    tdd-PhysicalChannelOffset        TDD-PhysicalChannelOffset,
    dl-Timeslot-InformationAddList-PSCH-ReconfRqst  DL-Timeslot-InformationAddList-PSCH-ReconfRqst,
    iE-Extensions                    ProtocolExtensionContainer { {PDSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}

PDSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTSs)) OF DL-Timeslot-InformationAddItem-PSCH-ReconfRqst

DL-Timeslot-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType  MidambleShiftAndBurstType,
    tFCI-Presence            TFCI-Presence,
    dl-Code-InformationAddList-PSCH-ReconfRqst  DL-Code-InformationAddList-PSCH-ReconfRqst,
    iE-Extensions            ProtocolExtensionContainer { { DL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}

DL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Code-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF DL-Code-InformationAddItem-PSCH-ReconfRqst

DL-Code-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCH-ID                PDSCH-ID,
    tdd-ChannelisationCode  TDD-ChannelisationCode,
    iE-Extensions            ProtocolExtensionContainer { { DL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}

DL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCHSets-ModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHSets)) OF PDSCHSets-ModifyItem-PSCH-ReconfRqst

PDSCHSets-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCHSet-ID                PDSCHSet-ID,
    pDSCH-InformationList      PDSCH-InformationModifyList-PSCH-ReconfRqst,
    iE-Extensions            ProtocolExtensionContainer { {PDSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}

PDSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-Information-ModifyList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PDSCH-Information-ModifyListIEs-PSCH-ReconfRqst }}

```

```

PDSCH-Information-ModifyListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
  {ID id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst  CRITICALITY reject      TYPE      PDSCH-Information-ModifyItem-PSCH-ReconfRqst
  PRESENCE      mandatory}
}

PDSCH-Information-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
  repetitionPeriod      RepetitionPeriod      OPTIONAL,
  repetitionLength      RepetitionLength      OPTIONAL,
  tdd-PhysicalChannelOffset      TDD-PhysicalChannelOffset      OPTIONAL,
  dl-Timeslot-InformationModifyList-PSCH-ReconfRqst      DL-Timeslot-InformationModifyList-PSCH-ReconfRqst      OPTIONAL,
  iE-Extensions      ProtocolExtensionContainer { {PDSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs} }      OPTIONAL,
  ...
}

PDSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-Timeslot-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTs)) OF DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst

DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
  timeSlot      TimeSlot,
  midambleShiftAndBurstType      MidambleShiftAndBurstType      OPTIONAL,
  tFCI-Presence      TFCI-Presence      OPTIONAL,
  dl-Code-InformationModifyList-PSCH-ReconfRqst      DL-Code-InformationModifyList-PSCH-ReconfRqst      OPTIONAL,
  iE-Extensions      ProtocolExtensionContainer { { DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }      OPTIONAL,
  ...
}

DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-Code-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF DL-Code-InformationModifyItem-PSCH-ReconfRqst

DL-Code-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
  pDSCH-ID      PDSCH-ID,
  tdd-ChannelisationCode      TDD-ChannelisationCode,
  iE-Extensions      ProtocolExtensionContainer { { DL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }      OPTIONAL,
  ...
}

DL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

PDSCHSets-DeleteList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHSets)) OF PDSCHSets-DeleteItem-PSCH-ReconfRqst

PDSCHSets-DeleteItem-PSCH-ReconfRqst ::= SEQUENCE {
  pDSCHSet-ID      PDSCHSet-ID,
  iE-Extensions      ProtocolExtensionContainer { {PDSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs} }      OPTIONAL,
  ...
}

```

```

}

PDSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCHSets-AddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-AddItem-PSCH-ReconfRqst

PUSCHSets-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCHSet-ID                PUSCHSet-ID,
    pUSCH-InformationList      PUSCH-Information-AddList-PSCH-ReconfRqst,
    iE-Extensions              ProtocolExtensionContainer { {PUSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
    ...
}

PUSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCH-Information-AddList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PUSCH-Information-AddListIEs-PSCH-ReconfRqst }}

PUSCH-Information-AddListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PUSCH-Information-AddListIE-PSCH-ReconfRqst CRITICALITY reject TYPE PUSCH-Information-AddItem-PSCH-ReconfRqst PRESENCE
    mandatory}
}

PUSCH-Information-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod            RepetitionPeriod,
    repetitionLength            RepetitionLength,
    tdd-PhysicalChannelOffset   TDD-PhysicalChannelOffset,
    uL-Timeslot-InformationAddList-PSCH-ReconfRqst UL-Timeslot-InformationAddList-PSCH-ReconfRqst,
    iE-Extensions              ProtocolExtensionContainer { {PUSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
    ...
}

PUSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationAddItem-PSCH-ReconfRqst

UL-Timeslot-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlot                    TimeSlot,
    midambleShiftAndBurstType   MidambleShiftAndBurstType,
    tFCI-Presence               TFCI-Presence,
    uL-Code-InformationAddList-PSCH-ReconfRqst UL-Code-InformationAddList-PSCH-ReconfRqst,
    iE-Extensions              ProtocolExtensionContainer { { UL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
    ...
}

UL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

UL-Code-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF UL-Code-InformationAddItem-PSCH-ReconfRqst

UL-Code-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCH-ID                PUSCH-ID,
    tdd-ChannelisationCode  TDD-ChannelisationCode,
    iE-Extensions           ProtocolExtensionContainer { { UL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
    ...
}

UL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCHSets-ModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-ModifyItem-PSCH-ReconfRqst

PUSCHSets-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCHSet-ID                PUSCHSet-ID,
    pUSCH-InformationList      PDSCH-Information-ModifyList-PSCH-ReconfRqst,
    iE-Extensions             ProtocolExtensionContainer { {PUSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
    ...
}

PUSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCH-Information-ModifyList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PUSCH-Information-ModifyListIEs-PSCH-ReconfRqst }}

PUSCH-Information-ModifyListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst  CRITICALITY reject      TYPE      PUSCH-Information-ModifyItem-PSCH-ReconfRqst
    PRESENCE      mandatory}
}

PUSCH-Information-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod                OPTIONAL,
    repetitionLength          RepetitionLength                OPTIONAL,
    tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset      OPTIONAL,
    uL-Timeslot-InformationModifyList-PSCH-ReconfRqst        UL-Timeslot-InformationModifyList-PSCH-ReconfRqst  OPTIONAL,
    iE-Extensions             ProtocolExtensionContainer { {PUSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs} }  OPTIONAL,
    ...
}

PUSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst

UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlot                  TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType  OPTIONAL,
    tFCI-Presence             TFCI-Presence  OPTIONAL,
}

```

```

    uL-Code-InformationModifyList-PSCH-ReconfRqst      UL-Code-InformationModifyList-PSCH-ReconfRqst  OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { { UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }  OPTIONAL,
    ...
}

UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHs)) OF UL-Code-InformationModifyItem-PSCH-ReconfRqst

UL-Code-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCH-ID          PUSCH-ID,
    tdd-ChannelisationCode  TDD-ChannelisationCode,
    iE-Extensions      ProtocolExtensionContainer { { UL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }  OPTIONAL,
    ...
}

UL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCHSets-DeleteList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-DeleteItem-PSCH-ReconfRqst

PUSCHSets-DeleteItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCHSet-ID          PUSCHSet-ID,
    iE-Extensions      ProtocolExtensionContainer { {PUSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs} }  OPTIONAL,
    ...
}

PUSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE TDD
--
-- *****

PhysicalSharedChannelReconfigurationResponseTDD ::= SEQUENCE {
    protocolIEs      ProtocolIE-Container {{PhysicalSharedChannelReconfigurationResponseTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{PhysicalSharedChannelReconfigurationResponseTDD-Extensions}}  OPTIONAL,
    ...
}

PhysicalSharedChannelReconfigurationResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CriticalityDiagnostics      CRITICALITY      ignore      TYPE      CriticalityDiagnostics      PRESENCE optional },
    ...
}

PhysicalSharedChannelReconfigurationResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```



```

}

-- *****
--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE TDD
--
-- *****

PhysicalSharedChannelReconfigurationFailureTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{PhysicalSharedChannelReconfigurationFailureTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{PhysicalSharedChannelReconfigurationFailureTDD-Extensions}}      OPTIONAL,
    ...
}

PhysicalSharedChannelReconfigurationFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CauseLevel-PSCH-ReconfFailureTDD      CRITICALITY ignore  TYPE CauseLevel-PSCH-ReconfFailureTDD  PRESENCE mandatory }|
    { ID      id-CriticalityDiagnostics                CRITICALITY ignore      TYPE   CriticalityDiagnostics  PRESENCE optional },
    ...
}

PhysicalSharedChannelReconfigurationFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CauseLevel-PSCH-ReconfFailureTDD ::= CHOICE {
    generalCause          GeneralCauseList-PSCH-ReconfFailureTDD,
    setSpecificCause      SetSpecificCauseList-PSCH-ReconfFailureTDD,
    ...
}

GeneralCauseList-PSCH-ReconfFailureTDD ::= SEQUENCE {
    cause                Cause,
    iE-Extensions       ProtocolExtensionContainer { { GeneralCauseItem-PSCH-ReconfFailureTDD-ExtIEs } }      OPTIONAL,
    ...
}

GeneralCauseItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SetSpecificCauseList-PSCH-ReconfFailureTDD ::= SEQUENCE {
    unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD  Unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD      OPTIONAL,
    unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD  Unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD      OPTIONAL,
    iE-Extensions                                     ProtocolExtensionContainer { { SetSpecificCauseItem-PSCH-ReconfFailureTDD-ExtIEs } }      OPTIONAL,
    ...
}

SetSpecificCauseItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

Unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD ::= SEQUENCE (SIZE (0.. maxNrOfPDSCHSets)) OF ProtocolIE-Single-Container {{ Unsuccessful-
PDSCHSetItemIE-PSCH-ReconfFailureTDD }}

Unsuccessful-PDSCHSetItemIE-PSCH-ReconfFailureTDD NBAP-PROTOCOL-IES ::= {
  { ID      id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD  CRITICALITY ignore  TYPE Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDDPRESENCE
mandatory}
}

Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
  pDSCHSet-ID          PDSCHSet-ID,
  cause                Cause,
  iE-Extensions       ProtocolExtensionContainer { {Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs} }  OPTIONAL,
  ...
}

Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD ::= SEQUENCE (SIZE (0.. maxNrOfPUSCHSets)) OF ProtocolIE-Single-Container {{ Unsuccessful-
PUSCHSetItemIE-PSCH-ReconfFailureTDD }}

Unsuccessful-PUSCHSetItemIE-PSCH-ReconfFailureTDD NBAP-PROTOCOL-IES ::= {
  { ID      id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD  CRITICALITY ignore  TYPE Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDDPRESENCE
mandatory}
}

Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
  pUSCHSet-ID          PUSCHSet-ID,
  cause                Cause,
  iE-Extensions       ProtocolExtensionContainer { {Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs} }  OPTIONAL,
  ...
}

Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RESET REQUEST
--
-- *****

ResetRequest ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{ResetRequest-IEs}},
  protocolExtensions   ProtocolExtensionContainer  {{ResetRequest-Extensions}}  OPTIONAL,
  ...
}

```

```

ResetRequest-IEs NBAP-PROTOCOL-IES ::= {
  {ID id-ResetIndicator      CRITICALITY ignore      TYPE      ResetIndicator      PRESENCE      mandatory},
  ...
}

ResetRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

ResetIndicator ::= CHOICE {
  communicationContext      CommunicationContextList-Reset,
  communicationControlPort  CommunicationControlPortList-Reset,
  nodeB                      NULL,
  ...
}

CommunicationContextList-Reset ::= SEQUENCE {
  communicationContextInfoList-Reset      CommunicationContextInfoList-Reset,
  iE-Extensions                          ProtocolExtensionContainer { {CommunicationContextItem-Reset-ExtIEs} } OPTIONAL,
  ...
}

CommunicationContextItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CommunicationContextInfoList-Reset ::= SEQUENCE (SIZE (1.. maxCommunicationContext)) OF ProtocolIE-Single-Container {{
  CommunicationContextInfoItemIE-Reset }}

CommunicationContextInfoItemIE-Reset NBAP-PROTOCOL-IES ::= {
  {ID id-CommunicationContextInfoItem-Reset      CRITICALITY reject      TYPE      CommunicationContextInfoItem-Reset      PRESENCE      mandatory}
}

CommunicationContextInfoItem-Reset ::= SEQUENCE {
  communicationContextType-Reset      CommunicationContextType-Reset,
  iE-Extensions                          ProtocolExtensionContainer { { CommunicationContextInfoItem-Reset-ExtIEs} } OPTIONAL,
  ...
}

```

```

CommunicationContextInfoItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationContextType-Reset ::= CHOICE {
    cRNC-CommunicationContextID          CRNC-CommunicationContextID,
    nodeB-CommunicationContextID        NodeB-CommunicationContextID,
    ...
}

CommunicationControlPortList-Reset ::= SEQUENCE {
    communicationControlPortInfoList-Reset      CommunicationControlPortInfoList-Reset,
    iE-Extensions                               ProtocolExtensionContainer { {CommunicationControlPortItem-Reset-ExtIEs} } OPTIONAL,
    ...
}

CommunicationControlPortItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationControlPortInfoList-Reset ::= SEQUENCE (SIZE (1.. maxCCPinNodeB)) OF ProtocolIE-Single-Container { {CommunicationControlPortInfoItemIE-Reset} }

CommunicationControlPortInfoItemIE-Reset NBAP-PROTOCOL-IES ::= {
    {ID id-CommunicationControlPortInfoItem-Reset          CRITICALITY reject          TYPE CommunicationControlPortInfoItem-Reset          PRESENCE mandatory}
}

CommunicationControlPortInfoItem-Reset ::= SEQUENCE {
    communicationControlPortID          CommunicationControlPortID,
    iE-Extensions                       ProtocolExtensionContainer { {CommunicationControlPortInfoItem-Reset-ExtIEs} } OPTIONAL,
    ...
}

CommunicationControlPortInfoItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RESET RESPONSE

```

```

--
-- *****
ResetResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{ResetResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{ResetResponse-Extensions}}    OPTIONAL,
    ...
}

ResetResponse-IEs NBAP-PROTOCOL-IES ::= {
    {ID id-CriticalityDiagnostics    CRITICALITY    ignore    TYPE    CriticalityDiagnostics    PRESENCE optional},
    ...
}

ResetResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

END

```

9.3.4 Information Elements Definitions

```

--*****
--
-- Information Element Definitions
--
--*****

NBAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS
    maxNrOfTFCS,
    maxNrOfErrors,
    maxCTFC,
    maxNrOfTFs,
    maxTTL-count,
    maxRateMatching,
    maxCodeNrComp-1,
    maxNrOfCodeGroups,
    maxNrOfTFCIGroups,
    maxNrOfTFCI1Combs,
    maxNrOfTFCI2Combs,
    maxNrOfTFCI2Combs-1,
    maxNrOfSF,
    maxTGPS,

```

```

    maxNrOfUSCHs,
    maxNrOfULTSs,
    maxNrOfDPCHs,
    maxNrOfCodes,
    maxNrOfDSCHs,
    maxNrOfDLTSSs,
    maxNrOfDCHs

FROM NBAP-Constants

    Criticality,
    ProcedureID,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM NBAP-CommonDataTypes

    NBAP-PROTOCOL-IES,
    ProtocolExtensionContainer{},
    ProtocolIE-Single-Container{},
    NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers;

-- =====
-- A
-- =====

Acknowledged-PCPCH-access-preambles ::= INTEGER (0..15,...)

Acknowledged-PRACH-preambles-Value ::= INTEGER(0..240,...)
-- The number of L1 acknowledged random access tries per every 20 ms period.

AddorDeleteIndicator ::= ENUMERATED {
    add,
    delete
}

Active-Pattern-Sequence-Information ::= SEQUENCE {
    cMConfigurationChangeCFN                CFN,
    transmission-Gap-Pattern-Sequence-Status  Transmission-Gap-Pattern-Sequence-Status-List  OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { {Active-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}

Active-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Transmission-Gap-Pattern-Sequence-Status-List ::= SEQUENCE (SIZE (0..maxTGPS)) OF
    SEQUENCE {

```

```

    tGPSID          TGPSID,
    tGPRC           TGPRC,
    tGCFN           CFN,
    iE-Extensions   ProtocolExtensionContainer { { Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs } } OPTIONAL,
    ...
}

Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AICH-Power ::= INTEGER (-22..5)
-- Offset in dB.

AICH-TransmissionTiming ::= ENUMERATED {
    v0,
    v1
}

AllocationRetentionPriority ::= SEQUENCE {
    priorityLevel          PriorityLevel,
    pre-emptionCapability  Pre-emptionCapability,
    pre-emptionVulnerability Pre-emptionVulnerability,
    iE-Extensions          ProtocolExtensionContainer { {AllocationRetentionPriority-ExtIEs} } OPTIONAL,
    ...
}

AllocationRetentionPriority-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

APPreambleSignature ::= INTEGER (0..15)

APSubChannelNumber ::= INTEGER (0..11)

AvailabilityStatus ::= ENUMERATED {
    empty,
    in-test,
    failed,
    power-off,
    off-line,
    off-duty,
    dependency,
    degraded,
    not-installed,
    log-full,
    ...
}

```

```

-- =====
-- B
-- =====

BCCH-ModificationTime ::= INTEGER (0..511)
-- Time = BCCH-ModificationTime * 8
-- Range 0 to 4088, step 8
-- All SFN values in which MIB may be mapped are allowed

BindingID ::= OCTET STRING (SIZE (1..4, ...))

BetaCD ::= INTEGER (0..15)

BlockingPriorityIndicator ::= ENUMERATED {
    high,
    normal,
    low,
    ...
}
-- High priority: Block resource immediately.
-- Normal priority: Block resource when idle or upon timer expiry.
-- Low priority: Block resource when idle.

BlockSTTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

-- =====
-- C
-- =====

Cause ::= CHOICE {
    radioNetwork      CauseRadioNetwork,
    transport         CauseTransport,
    protocol          CauseProtocol,
    misc              CauseMisc,
    ...
}

CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    oam-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    ...
}

CauseProtocol ::= ENUMERATED {
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,

```



```

    message-not-compatible-with-receiver-state,
    semantic-error,
    unspecified,
    abstract-syntax-error-falsely-constructed-message,
    ...
}

```

```

CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    rl-already-ActivatedOrAllocated,
    nodeB-Resources-unavailable,
    measurement-not-supported-for-the-object,
    combining-resources-not-available,
    requested-configuration-not-supported,
    synchronisation-failure,
    priority-transport-channel-established,
    sIB-Origination-in-Node-B-not-Supported,
    requested-tx-diversity-mode-not-supported,
    unspecified,
    bCCH-scheduling-error,
    measurement-temporarily-not-available,
    invalid-CM-settings,
    reconfiguration-CFN-not-elapsed,
    number-of-DL-codes-not-supported,
    s-cipch-not-supported,
    combining-not-supported,
    ul-sf-not-supported,
    dl-SF-not-supported,
    common-transport-channel-type-not-supported,
    dedicated-transport-channel-type-not-supported,
    downlink-shared-channel-type-not-supported,
    uplink-shared-channel-type-not-supported,
    cm-not-supported,
    tx-diversity-no-longer-supported,
    unknown-Local-Cell-ID,
    ...
}

```

```

CauseTransport ::= ENUMERATED {
    transport-resource-unavailable,
    unspecified,
    ...
}

```

```
CCTrCH-ID ::= INTEGER (0..15)
```

```
CDSUBChannelNumbers ::= BIT STRING (SIZE (12))
```

```
CellParameterID ::= INTEGER (0..127,...)
```

```

CFN ::= INTEGER (0..255)

Channel-Assignment-Indication ::= ENUMERATED {
    cA-Active,
    cA-Inactive
}

ChipOffset ::= INTEGER (0..38399)
-- Unit Chip

C-ID ::= INTEGER (0..65535)

Closedlooptimingadjustmentmode ::= ENUMERATED {
    adj-1-slot,
    adj-2-slot,
    ...
}

CommonChannelsCapacityConsumptionLaw ::= SEQUENCE (SIZE(1..maxNrOfSF)) OF
    SEQUENCE {
        dl-Cost      INTEGER (0..65535),
        ul-Cost      INTEGER (0..65535),
        iE-Extensions ProtocolExtensionContainer { { CommonChannelsCapacityConsumptionLaw-ExtIEs } } OPTIONAL,
        ...
    }

CommonChannelsCapacityConsumptionLaw-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonMeasurementType ::= ENUMERATED {
    received-total-wide-band-power,
    transmitted-carrier-power,
    acknowledged-prach-preambles,
    ul-timeslot-iscp,
    acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles,
    ...
}

CommonMeasurementValue ::= CHOICE {
    transmitted-carrier-power          Transmitted-Carrier-Power-Value,
    received-total-wide-band-power     Received-total-wide-band-power-Value,
    acknowledged-prach-preambles      Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                    UL-TimeslotISCP-Value,
    acknowledged-PCPCH-access-preambles Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles    Detected-PCPCH-access-preambles,
    ...
}

```

```

CommonMeasurementValueInformation ::= CHOICE {
    measurementAvailable      CommonMeasurementAvailable,
    measurementnotAvailable   CommonMeasurementnotAvailable
}

CommonMeasurementAvailable ::= SEQUENCE {
    commonmeasurementValue    CommonMeasurementValue,
    ie-Extensions              ProtocolExtensionContainer { { CommonMeasurementAvailableItem-ExtIEs} }    OPTIONAL,
    ...
}

CommonMeasurementAvailableItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonMeasurementnotAvailable ::= NULL

CommonPhysicalChannelID ::= INTEGER (0..255)

Common-PhysicalChannel-Status-Information ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    resourceOperationalState   ResourceOperationalState,
    availabilityStatus         AvailabilityStatus,
    iE-Extensions              ProtocolExtensionContainer { { Common-PhysicalChannel-Status-Information-ExtIEs} }    OPTIONAL,
    ...
}

Common-PhysicalChannel-Status-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonTransportChannelID ::= INTEGER (0..255)

Common-TransportChannel-Status-Information ::= SEQUENCE {
    commonTransportChannelID    CommonTransportChannelID,
    resourceOperationalState   ResourceOperationalState,
    availabilityStatus         AvailabilityStatus,
    iE-Extensions              ProtocolExtensionContainer { { Common-TransportChannel-Status-Information-ExtIEs} }    OPTIONAL,
    ...
}

Common-TransportChannel-Status-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationControlPortID ::= INTEGER (0..65535)

Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD ::= ENUMERATED {

```

```

    on,
    off
}
-- on=deactivate

ConfigurationGenerationID ::= INTEGER (0..255)
-- Value '0' means "No configuration"

ConstantValue ::= INTEGER (-10..10,...)
-- -10 dB - +10 dB
-- unit dB
-- step 1 dB

CPCH-Allowed-Total-Rate ::= ENUMERATED {
    v15,
    v30,
    v60,
    v120,
    v240,
    v480,
    v960,
    v1920,
    v2880,
    v3840,
    v4800,
    v5760,
    ...
}

CPCHScramblingCodeNumber ::= INTEGER (0..79)

CPCH-UL-DPCCH-SlotFormat ::= INTEGER (0..2,...)

CriticalityDiagnostics ::= SEQUENCE {
    procedureID          ProcedureID          OPTIONAL,
    triggeringMessage    TriggeringMessage    OPTIONAL,
    procedureCriticality Criticality          OPTIONAL,
    transactionID       TransactionID        OPTIONAL,
    iEsCriticalityDiagnostics CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

CriticalityDiagnostics-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
SEQUENCE {
    iECriticality    Criticality,
    iE-ID            ProtocolIE-ID,
    repetitionNumber RepetitionNumber    OPTIONAL,

```

```

        iE-Extensions      ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} }      OPTIONAL,
        ...
    }

CriticalityDiagnostics-IE-List-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CRNC-CommunicationContextID ::= INTEGER (0..1048575)

-- =====
-- D
-- =====

DCH-ID ::= INTEGER (0..255)

DCH-FDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-FDD-InformationItem

DCH-FDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator      PayloadCRC-PresenceIndicator,
    ul-FP-Mode                        UL-FP-Mode,
    toAWS                             ToAWS,
    toAWE                             ToAWE,
    dCH-SpecificInformationList       DCH-Specific-FDD-InformationList,
    iE-Extensions                     ProtocolExtensionContainer { { DCH-FDD-InformationItem-ExtIEs} }      OPTIONAL,
    ...
}

DCH-FDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-Specific-FDD-InformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-FDD-Item

DCH-Specific-FDD-Item ::= SEQUENCE {
    dCH-ID                            DCH-ID,
    ul-TransportFormatSet             TransportFormatSet,
    dl-TransportFormatSet             TransportFormatSet,
    allocationRetentionPriority       AllocationRetentionPriority,
    frameHandlingPriority             FrameHandlingPriority,
    qE-Selector                       QE-Selector,
    iE-Extensions                     ProtocolExtensionContainer { { DCH-Specific-FDD-Item-ExtIEs} }      OPTIONAL,
    ...
}

DCH-Specific-FDD-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem

DCH-InformationResponseItem ::= SEQUENCE {
    dCH-ID                            DCH-ID,

```

```

bindingID                               BindingID                               OPTIONAL,
transportLayerAddress                   TransportLayerAddress                   OPTIONAL,
iE-Extensions                           ProtocolExtensionContainer { { DCH-InformationResponseItem-ExtIEs } }   OPTIONAL,
...
}

DCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-TDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-TDD-InformationItem

DCH-TDD-InformationItem ::= SEQUENCE {
payloadCRC-PresenceIndicator           PayloadCRC-PresenceIndicator,
ul-FP-Mode                             UL-FP-Mode,
toAWS                                  ToAWS,
toAWE                                  ToAWE,
dCH-SpecificInformationList            DCH-Specific-TDD-InformationList,
iE-Extensions                          ProtocolExtensionContainer { { DCH-TDD-InformationItem-ExtIEs } }   OPTIONAL,
...
}

DCH-TDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-Specific-TDD-InformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-TDD-Item

DCH-Specific-TDD-Item ::= SEQUENCE {
dCH-ID                                 DCH-ID,
ul-CCTrCH-ID                          CCTrCH-ID,
dl-CCTrCH-ID                          CCTrCH-ID,
ul-TransportFormatSet                 TransportFormatSet,
dl-TransportFormatSet                 TransportFormatSet,
allocationRetentionPriority            AllocationRetentionPriority,
frameHandlingPriority                  FrameHandlingPriority                OPTIONAL,
qE-Selector                           QE-Selector                          OPTIONAL,
-- This IE is present only if DCH is part of set of Coordinated DCHs
iE-Extensions                          ProtocolExtensionContainer { { DCH-Specific-TDD-Item-ExtIEs } }   OPTIONAL,
...
}

DCH-Specific-TDD-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

FDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF FDD-DCHs-to-ModifyItem

FDD-DCHs-to-ModifyItem ::= SEQUENCE {
ul-FP-Mode                             UL-FP-Mode                OPTIONAL,
toAWS                                  ToAWS                     OPTIONAL,
toAWE                                  ToAWE                     OPTIONAL,
transportBearerRequestIndicator         TransportBearerRequestIndicator,

```

```

    dCH-SpecificInformationList      DCH-ModifySpecificInformation-TDD,
    iE-Extensions                    ProtocolExtensionContainer { { FDD-DCHs-to-ModifyItem-ExtIEs} }  OPTIONAL,
    ...
}

FDD-DCHs-to-ModifyItem-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifySpecificInformation-FDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-FDD

DCH-ModifySpecificItem-FDD ::= SEQUENCE {
    dCH-ID                          DCH-ID,
    ul-TransportFormatSet            TransportFormatSet      OPTIONAL,
    dl-TransportFormatSet            TransportFormatSet      OPTIONAL,
    allocationRetentionPriority       AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority             FrameHandlingPriority   OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { DCH-ModifySpecificItem-FDD-ExtIEs} }  OPTIONAL,
    ...
}

DCH-ModifySpecificItem-FDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-TDD

DCH-ModifyItem-TDD ::= SEQUENCE {
    ul-FP-Mode                       UL-FP-Mode      OPTIONAL,
    toAWS                             ToAWS          OPTIONAL,
    toAWE                             ToAWE          OPTIONAL,
    transportBearerRequestIndicator    TransportBearerRequestIndicator,
    dCH-SpecificInformationList        DCH-ModifySpecificInformation-TDD,
    iE-Extensions                    ProtocolExtensionContainer { { TDD-DCHs-to-ModifyItem-ExtIEs} }  OPTIONAL,
    ...
}

TDD-DCHs-to-ModifyItem-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifySpecificInformation-TDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-TDD

DCH-ModifySpecificItem-TDD ::= SEQUENCE {
    dCH-ID                          DCH-ID,
    ul-CCTrCH-ID                    CCTrCH-ID      OPTIONAL,
    dl-CCTrCH-ID                    CCTrCH-ID      OPTIONAL,
    ul-TransportFormatSet            TransportFormatSet      OPTIONAL,
    dl-TransportFormatSet            TransportFormatSet      OPTIONAL,
    allocationRetentionPriority       AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority             FrameHandlingPriority   OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { DCH-ModifySpecificItem-TDD-ExtIEs} }  OPTIONAL,

```

```

}
...
}
DCH-ModifySpecificItem-TDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
DedicatedChannelsCapacityConsumptionLaw ::= SEQUENCE ( SIZE(1..maxNrOfSF) ) OF
SEQUENCE {
dl-Cost-RLS      INTEGER (0..65535),
dl-Cost-RL       INTEGER (0..65535),
ul-Cost-RLS      INTEGER (0..65535),
ul-Cost-RL       INTEGER (0..65535),
iE-Extensions   ProtocolExtensionContainer { { DedicatedChannelsCapacityConsumptionLaw-ExtIEs } } OPTIONAL,
...
}
DedicatedChannelsCapacityConsumptionLaw-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
DedicatedMeasurementType ::= ENUMERATED {
sir,
sir-error,
transmitted-code-power,
rscp,
rx-timing-deviation,
round-trip-time,
...
}
DedicatedMeasurementValue ::= CHOICE {
sIR-Value          SIR-Value,
sIR-ErrorValue     SIR-Error-Value,
transmittedCodePowerValue Transmitted-Code-Power-Value,
rSCP               RSCP-Value,
rxTimingDeviationValue Rx-Timing-Deviation-Value,
roundTripTime      Round-Trip-Time-Value,
...
}
DedicatedMeasurementValueInformation ::= CHOICE {
measurementAvailable      DedicatedMeasurementAvailable,
measurementnotAvailable   DedicatedMeasurementnotAvailable
}
DedicatedMeasurementAvailable ::= SEQUENCE {
dedicatedmeasurementValue DedicatedMeasurementValue,
cFN                        CFN OPTIONAL,

```



```

    ie-Extensions          ProtocolExtensionContainer { { DedicatedMeasurementAvailableItem-ExtIEs } }    OPTIONAL,
    ...
}

DedicatedMeasurementAvailableItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementnotAvailable ::= NULL

Detected-PCPCH-access-preambles ::= INTEGER (0..240,...)

DeltaSIR                  ::= INTEGER (0..30)
-- Unit dB, Step 0.1 dB, Range 0..3 dB.

DiversityControlField ::= ENUMERATED {
    may,
    must,
    must-not,
    ...
}

DiversityMode ::= ENUMERATED {
    none,
    sTTD,
    closed-loop-mode1,
    closed-loop-mode2,
    ...
}

DL-DPCH-SlotFormat ::= INTEGER (0..16,...)

DL-Timeslot-Information ::= SEQUENCE (SIZE (1.. maxNrOfDLTSs)) OF DL-Timeslot-InformationItem

DL-Timeslot-InformationItem ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType,
    tFCI-Presence           TFCI-Presence,
    dL-Code-Information     TDD-DL-Code-Information,
    iE-Extensions          ProtocolExtensionContainer { { DL-Timeslot-InformationItem-ExtIEs } }    OPTIONAL,
    ...
}

DL-Timeslot-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-FrameType ::= ENUMERATED {
    typeA,
    typeB,

```

```

}
...
DL-or-Global-CapacityCredit ::= INTEGER (0..65535)

DL-Power ::= INTEGER (-350..150)
-- DL-Power = power * 10
-- If Power <=-35 DL-Power shall be set to -350
-- if Power >=15 DL-Power shall be set to 150
-- Unit dB, Range -35dB .. +15dB, Step +0.1dB

DLPowerAveragingWindowSize ::= INTEGER (1..60)

DL-ScramblingCode ::= INTEGER (0..15)
-- 0= Primary scrambling code of the cell, 1..15= Secondary scrambling code --

DL-TimeslotISCP ::= INTEGER (0..91)

DL-TimeslotISCPInfo ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF DL-TimeslotISCPInfoItem

DL-TimeslotISCPInfoItem ::= SEQUENCE {
    timeSlot                TimeSlot,
    dL-TimeslotISCP          DL-TimeslotISCP,
    iE-Extensions            ProtocolExtensionContainer { {DL-TimeslotISCPInfoItem-ExtIEs} }    OPTIONAL,
    ...
}

DL-TimeslotISCPInfoItem-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-TPC-Pattern01Count ::= INTEGER (0..30,...)

Downlink-Compressed-Mode-Method ::= ENUMERATED {
    puncturing,
    sFdiv2,
    higher-layer-scheduling,
    ...
}

DPCH-ID ::= INTEGER (0..239)

DSCH-ID ::= INTEGER (0..255)

DSCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-InformationResponseItem

DSCH-InformationResponseItem ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    bindingID              BindingID                OPTIONAL,
    transportLayerAddress  TransportLayerAddress    OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { DSCH-InformationResponseItem-ExtIEs } }    OPTIONAL,

```

```

}
...
}
DSCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
DSCH-FDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-FDD-InformationItem
DSCH-FDD-InformationItem ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    transportFormatSet     TransportFormatSet,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority  FrameHandlingPriority,
    toAWS                  ToAWS,
    toAWE                  ToAWE,
    iE-Extensions         ProtocolExtensionContainer { { DSCH-FDD-InformationItem-ExtIEs} } OPTIONAL,
    ...
}
DSCH-FDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
DSCH-TDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-TDD-InformationItem
DSCH-TDD-InformationItem ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    cCTrCH-ID             CCTrCH-ID,
    transportFormatSet     TransportFormatSet,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority  FrameHandlingPriority,
    toAWS                  ToAWS,
    toAWE                  ToAWE,
    iE-Extensions         ProtocolExtensionContainer { { DSCH-TDD-InformationItem-ExtIEs} } OPTIONAL,
    ...
}
DSCH-TDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
-- =====
-- E
-- =====
End-Of-Audit-Sequence-Indicator ::= ENUMERATED {
    end-of-audit-sequence,
    not-end-of-audit-sequence
}
-- =====

```

```

-- F
-- =====

FDD-DL-ChannelisationCodeNumber ::= INTEGER(0.. 511)
-- According to the mapping in [9]. The maximum value is equal to the DL spreading factor -1--

FDD-DL-CodeInformation ::= SEQUENCE (SIZE (1..maxNrOfCodes)) OF FDD-DL-CodeInformationItem

FDD-DL-CodeInformationItem ::= SEQUENCE {
    dl-ScramblingCode                DL-ScramblingCode,
    fdd-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
    transmissionGapPatternSequenceCodeInformation  TransmissionGapPatternSequenceCodeInformation  OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { FDD-DL-CodeInformationItem-ExtIEs } } OPTIONAL,
    ...
}

FDD-DL-CodeInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FDD-S-CCPCH-Offset ::= INTEGER (0..149)
-- 0: 0 chip, 1: 256 chip, 2: 512 chip, .. ,149: 38144 chip [7] --

FDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size0-5,
    step-size1,
    step-size1-5,
    step-size2,
    ...
}

FirstRLS-Indicator ::= ENUMERATED {
    first-RLS,
    not-first-RLS,
    ...
}

FNReportingIndicator ::= ENUMERATED {
    fN-reporting-required,
    fN-reporting-not-required
}

FrameHandlingPriority ::= INTEGER (0..15)
-- 0=lower priority, 15=higher priority --

FrameOffset ::= INTEGER (0..255)

-- =====
-- G
-- =====

```

```

GapLength          ::= INTEGER (1..14)
-- Unit slot

GapDuration        ::= INTEGER (1..144,...)
-- Unit frame

-- =====
-- H
-- =====

-- =====
-- I
-- =====

IB-OC-ID ::= INTEGER (1..16)

IB-SG-DATA ::= BIT STRING
-- Contains SIB data fixed" or "SIB data variable" in segment as encoded in ref.[18].

IB-SG-POS ::= INTEGER (0..4094)
-- Only even positions allowed

IB-SG-REP ::= ENUMERATED {rep4, rep8, rep16, rep32, rep64, rep128, rep256, rep512, rep1024, rep2048, rep4096}

IB-Type ::= ENUMERATED {
  mIB1,
  sB1,
  sB2,
  sIB1,
  sIB2,
  sIB3,
  sIB4,
  sIB5,
  sIB6,
  sIB7,
  sIB8,
  sIB9,
  sIB10,
  sIB11,
  sIB12,
  sIB13,
  sIB13dot1,
  sIB13dot2,
  sIB13dot3,
  sIB13dot4,
  sIB14,
  sIB15,
  sIB15dot1,
  sIB15dot2,
  sIB15dot3,
  sIB16,
  ...
}

```

```
}

IndicationType ::= ENUMERATED {
    noFailure,
    serviceImpacting,
    ...
}

InnerLoopDLPCStatus ::= ENUMERATED {
    active,
    inactive
}

-- =====
-- J
-- =====

-- =====
-- K
-- =====

-- =====
-- L
-- =====

Local-Cell-ID ::= INTEGER (0..268435455)

-- =====
-- M
-- =====

MaximumDL-PowerCapability ::= INTEGER(0..500)
-- Unit dBm, Range 0dBm .. 50dBm, Step +0.1dB

MaximumTransmissionPower ::= INTEGER(0..500)
-- Unit dBm, Range 0dBm .. 50dBm, Step +0.1dB

MaxNrOfUL-DPDCHs ::= INTEGER (1..6)

Max-Number-of-PCPCHes ::= INTEGER (1..64,...)

MaxPRACH-MidambleShifts ::= ENUMERATED {
    shift4,
    shift8,
    ...
}

MeasurementAvailabilityIndicator ::= ENUMERATED {
    measurementAvailable,
    measurementnotAvailable
}

MeasurementFilterCoefficient ::= ENUMERATED {k0, k1, k2, k3, k4, k5, k6, k7, k8, k9, k11, k13, k15, k17, k19,...}
```

```
-- Measurement Filter Coefficient to be used for measurement
```

```
MeasurementID ::= INTEGER (0..1048575)
```

```
MidambleShiftAndBurstType ::= CHOICE {
  type1 CHOICE {
    defaultMidamble NULL,
    commonMidamble NULL,
    ueSpecificMidamble MidambleShiftLong,
    ...
  },
  type2 CHOICE {
    defaultMidamble NULL,
    commonMidamble NULL,
    ueSpecificMidamble MidambleShiftShort,
    ...
  },
  type3 CHOICE {
    defaultMidamble NULL,
    ueSpecificMidamble MidambleShiftLong,
    ...
  },
  ...
}
```

```
MidambleShiftLong ::= INTEGER (0..15)
```

```
MidambleShiftShort ::= INTEGER (0..5)
```

```
MinimumDL-PowerCapability ::= INTEGER(0..800)
-- Unit dBm, Range -30dBm .. 50dBm, Step +0.1dB
```

```
MinSpreadingFactor ::= ENUMERATED {
  v4,
  v8,
  v16,
  v32,
  v64,
  v128,
  v256,
  v512
}
```

```
MinUL-ChannelisationCodeLength ::= ENUMERATED {
  v4,
  v8,
  v16,
  v32,
  v64,
  v128,
  v256,
  ...
}
```

```

}

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

-- =====
-- N
-- =====

NEOT ::= INTEGER (0..8)

NFmax ::= INTEGER (1..64,...)

N-INSYNC-IND ::= INTEGER (1..256)

N-OUTSYNC-IND ::= INTEGER (1..256)

NodeB-CommunicationContextID ::= INTEGER (0..1048575)

NStartMessage ::= INTEGER (1..8)

-- =====
-- O
-- =====

-- =====
-- P
-- =====

PagingIndicatorLength ::= ENUMERATED {
    v2,
    v4,
    v8,
    ...
}

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    cRC-Included,
    cRC-NotIncluded,
    ...
}

PCCPCH-Power ::= INTEGER (-150..400,...)
-- PCCPCH-power = power * 10
-- If power <= -15 PCCPCH shall be set to -150
-- If power >= 40 PCCPCH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step +0.1dBm

PCP-Length ::= ENUMERATED{
    v0,
    v8
}

```



```

}

PDSCH-CodeMapping ::= SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    signallingMethod           CHOICE {
        code-Range             PDSCH-CodeMapping-PDSCH-CodeMappingInformationList,
        tFCI-Range             PDSCH-CodeMapping-DSCH-MappingInformationList,
        explicit                PDSCH-CodeMapping-PDSCH-CodeInformationList,
        ...
    },
    iE-Extensions              ProtocolExtensionContainer { { PDSCH-CodeMapping-ExtIEs } } OPTIONAL,
    ...
}

PDSCH-CodeMapping-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-CodeMapping-CodeNumberComp ::= INTEGER (0..maxCodeNrComp-1)

PDSCH-CodeMapping-SpreadingFactor ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256,
    ...
}

PDSCH-CodeMapping-PDSCH-CodeMappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfCodeGroups)) OF
SEQUENCE {
    spreadingFactor            PDSCH-CodeMapping-SpreadingFactor,
    multi-CodeInfo            PDSCH-Multi-CodeInfo,
    start-CodeNumber          PDSCH-CodeMapping-CodeNumberComp,
    stop-CodeNumber           PDSCH-CodeMapping-CodeNumberComp,
    iE-Extensions             ProtocolExtensionContainer { { PDSCH-CodeMapping-PDSCH-CodeMappingInformationList-ExtIEs } } OPTIONAL,
    ...
}

PDSCH-CodeMapping-PDSCH-CodeMappingInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-CodeMapping-DSCH-MappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfTFCIGroups)) OF
SEQUENCE {
    maxTFCI-field2-Value      PDSCH-CodeMapping-MaxTFCI-Field2-Value,
    spreadingFactor           PDSCH-CodeMapping-SpreadingFactor,
    multi-CodeInfo            PDSCH-Multi-CodeInfo,
    codeNumber                PDSCH-CodeMapping-CodeNumberComp,
    iE-Extensions             ProtocolExtensionContainer { { PDSCH-CodeMapping-DSCH-MappingInformationList-ExtIEs } } OPTIONAL,
    ...
}

```

```

}

PDSCH-CodeMapping-DSCH-MappingInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-CodeMapping-MaxTFCI-Field2-Value ::= INTEGER (1..1023)

PDSCH-CodeMapping-PDSCH-CodeInformationList ::= SEQUENCE (SIZE (1..maxNrOfTFCI2Combs)) OF
    SEQUENCE {
        spreadingFactor          PDSCH-CodeMapping-SpreadingFactor,
        multi-CodeInfo           PDSCH-Multi-CodeInfo,
        codeNumber               PDSCH-CodeMapping-CodeNumberComp,
        iE-Extensions            ProtocolExtensionContainer { { PDSCH-CodeMapping-PDSCH-CodeInformationList-ExtIEs } } OPTIONAL,
        ...
    }

PDSCH-CodeMapping-PDSCH-CodeInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-Multi-CodeInfo ::= INTEGER (1..16)

PDSCH-ID ::= INTEGER (0..255)

PDSCHSet-ID ::= INTEGER (0..255)

PICH-Mode ::= ENUMERATED {
    v18,
    v36,
    v72,
    v144,
    ...
}

PICH-Power ::= INTEGER (-10..5)
-- Unit dB, Range -10dB .. +5dB, Step +1dB

PowerAdjustmentType ::= ENUMERATED {
    none,
    common,
    individual
}

PowerOffset ::= INTEGER (0..24)
-- PowerOffset = offset * 0.25
-- Unit dB, Range 0dB .. +6dB, Step +0.25dB

PowerRaiseLimit ::= INTEGER (0..10)

PRACH-Midamble ::= ENUMERATED {
    inverted,

```

```

    direct,
    ...
}

PreambleSignatures ::= BIT STRING (SIZE (16))
-- Bit 0=P0, Bit 1=P1, .. ,Bit 15=P15 [9] --

PreambleThreshold ::= INTEGER (0..72)
-- 0= -36.0dB, 1= -35.5dB, ... , 72= 0.0dB

Pre-emptionCapability ::= ENUMERATED {
    shall-not-trigger-pre-emption,
    may-trigger-pre-emption
}

Pre-emptionVulnerability ::= ENUMERATED {
    not-pre-emptable,
    pre-emptable
}

PrimaryCPICH-Power ::= INTEGER(-100..500)
-- step 0.1 (Range -10.0..50.0) Unit is dBm

PrimaryScramblingCode ::= INTEGER (0..511)

PriorityLevel ::= INTEGER (0..15)
-- 0 = spare, 1 = highest priority, ...14 = lowest priority and 15 = no priority

PropagationDelay ::= INTEGER (0..255)
-- Unit: chips, step size 3 chips
-- example: 0 = 0chip, 1 = 3chips

SCH-TimeSlot ::= INTEGER (0..6)

PunctureLimit ::= INTEGER (0..15)
-- 0: 40%; 1: 44%; ... 14: 96%; 15: 100%

PUSCH-ID ::= INTEGER (0..255)

PUSCHSet-ID ::= INTEGER (0..255)

-- =====
-- Q
-- =====

QE-Selector ::= ENUMERATED {
    selected,
    non-selected
}

-- =====
-- R
-- =====

```

```

RACH-SlotFormat ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    ...
}

RACH-SubChannelNumbers ::= BIT STRING (SIZE (12))
-- Bit 0=Sub Channel Number 0, Bit 1=Sub Channel Number 1, ..., Bit 11=Sub Channel Number 11

RepetitionLength ::= INTEGER (1..63)

RepetitionPeriod ::= ENUMERATED {
    v1,
    v2,
    v4,
    v8,
    v16,
    v32,
    v64,
    ...
}

RepetitionNumber ::= INTEGER (1..256)

RefTFCNumber ::= INTEGER (0..3)

ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          ReportCharacteristicsType-ReportPeriodicity,
    event-a           ReportCharacteristicsType-EventA,
    event-b           ReportCharacteristicsType-EventB,
    event-c           ReportCharacteristicsType-EventC,
    event-d           ReportCharacteristicsType-EventD,
    event-e           ReportCharacteristicsType-EventE,
    event-f           ReportCharacteristicsType-EventF,
    ...
}

ReportCharacteristicsType-EventA ::= SEQUENCE {
    measurementThreshold      ReportCharacteristicsType-MeasurementThreshold,
    measurementHysteresisTime ReportCharacteristicsType-ScaledMeasurementHysteresisTime OPTIONAL,
    IE-Extensions             ProtocolExtensionContainer { { ReportCharacteristicsType-EventA-ExtIEs } } OPTIONAL,
    ...
}

ReportCharacteristicsType-EventA-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventB ::= SEQUENCE {

```

```

measurementThreshold      ReportCharacteristicsType-MeasurementThreshold,
measurementHysteresisTime ReportCharacteristicsType-ScaledMeasurementHysteresisTime      OPTIONAL,
iE-Extensions             ProtocolExtensionContainer { { ReportCharacteristicsType-EventB-ExtIEs } }  OPTIONAL,
    ...
}

ReportCharacteristicsType-EventB-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventC ::= SEQUENCE {
    measurementIncreaseThreshold      ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime             ReportCharacteristicsType-ScaledMeasurementChangeTime,
    iE-Extensions                     ProtocolExtensionContainer { { ReportCharacteristicsType-EventC-ExtIEs } }  OPTIONAL,
    ...
}

ReportCharacteristicsType-EventC-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventD ::= SEQUENCE {
    measurementDecreaseThreshold      ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime             ReportCharacteristicsType-ScaledMeasurementChangeTime,
    iE-Extensions                     ProtocolExtensionContainer { { ReportCharacteristicsType-EventD-ExtIEs } }  OPTIONAL,
    ...
}

ReportCharacteristicsType-EventD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventE ::= SEQUENCE {
    measurementThreshold1             ReportCharacteristicsType-MeasurementThreshold,
    measurementThreshold2             ReportCharacteristicsType-MeasurementThreshold      OPTIONAL,
    measurementHysteresisTime         ReportCharacteristicsType-ScaledMeasurementHysteresisTime  OPTIONAL,
    reportPeriodicity                 ReportCharacteristicsType-ReportPeriodicity                 OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer { { ReportCharacteristicsType-EventE-ExtIEs } }  OPTIONAL,
    ...
}

ReportCharacteristicsType-EventE-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventF ::= SEQUENCE {
    measurementThreshold1             ReportCharacteristicsType-MeasurementThreshold,
    measurementThreshold2             ReportCharacteristicsType-MeasurementThreshold      OPTIONAL,
    measurementHysteresisTime         ReportCharacteristicsType-ScaledMeasurementHysteresisTime  OPTIONAL,
    reportPeriodicity                 ReportCharacteristicsType-ReportPeriodicity                 OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer { { ReportCharacteristicsType-EventF-ExtIEs } }  OPTIONAL,
    ...
}

```

```

ReportCharacteristicsType-EventF-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold ::= CHOICE {
    received-total-wide-band-power          Received-total-wide-band-power-Value-IncrDecrThres,
    transmitted-carrier-power               Transmitted-Carrier-Power-Value,
    acknowledged-prach-preambles           Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                         UL-TimeslotISCP-Value-IncrDecrThres,
    sir                                      SIR-Value-IncrDecrThres,
    sir-error                               SIR-Error-Value-IncrDecrThres,
    transmitted-code-power                 Transmitted-Code-Power-Value-IncrDecrThres,
    rscp                                    RSCP-Value-IncrDecrThres,
    round-trip-time                        Round-Trip-Time-IncrDecrThres,
    acknowledged-PCPCH-access-preambles    Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles        Detected-PCPCH-access-preambles,
    ...
}

ReportCharacteristicsType-MeasurementThreshold ::= CHOICE {
    received-total-wide-band-power          Received-total-wide-band-power-Value,
    transmitted-carrier-power               Transmitted-Carrier-Power-Value,
    acknowledged-prach-preambles           Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                         UL-TimeslotISCP-Value,
    sir                                      SIR-Value,
    sir-error                               SIR-Error-Value,
    transmitted-code-power                 Transmitted-Code-Power-Value,
    rscp                                    RSCP-Value,
    rx-timing-deviation                    Rx-Timing-Deviation-Value,
    round-trip-time                        Round-Trip-Time-Value,
    acknowledged-PCPCH-access-preambles    Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles        Detected-PCPCH-access-preambles,
    ...
}

ReportCharacteristicsType-ScaledMeasurementChangeTime ::= CHOICE {
    msec          MeasurementChangeTime-Scaledmsec,
    ...
}

MeasurementChangeTime-Scaledmsec ::= INTEGER (1..6000,...)
-- MeasurementChangeTime-Scaledmsec = Time * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms

ReportCharacteristicsType-ScaledMeasurementHysteresisTime ::= CHOICE {
    msec          MeasurementHysteresisTime-Scaledmsec,
    ...
}

MeasurementHysteresisTime-Scaledmsec ::= INTEGER (1..6000,...)
-- MeasurementHysteresisTime-Scaledmsec = Time * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms

```

```

ReportCharacteristicsType-ReportPeriodicity ::= CHOICE {
    msec          ReportPeriodicity-Scaledmsec,
    min           ReportPeriodicity-Scaledmin,
    ...
}

ReportPeriodicity-Scaledmsec ::= INTEGER (1..6000,...)
-- ReportPeriodicity-msec = ReportPeriodicity * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms

ReportPeriodicity-Scaledmin ::= INTEGER (1..60,...)
-- Unit min, Range 1min .. 60min(hour), Step 1min

ResourceOperationalState ::= ENUMERATED {
    enabled,
    disabled
}

CommonTransportChannel-InformationResponse ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    bindingID                     BindingID OPTIONAL,
    transportLayerAddress         TransportLayerAddress OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { { CommonTransportChannel-InformationResponse-ExtIEs} } OPTIONAL,
    ...
}

CommonTransportChannel-InformationResponse-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

LimitedPowerIncrease ::= ENUMERATED {
    used,
    not-used
}

RL-ID ::= INTEGER (0..31)

RL-Set-ID ::= INTEGER (0..31)

Round-Trip-Time-IncrDecrThres ::= INTEGER(0..32766)

Round-Trip-Time-Value ::= INTEGER(0..32767)
-- According to mapping in [22]

RSCP-Value ::= INTEGER (0..81)
-- According to mapping in [23]

RSCP-Value-IncrDecrThres ::= INTEGER (0..80)

Received-total-wide-band-power-Value ::= INTEGER(0..621)
-- According to mapping in [22]/[23]

```

```
Received-total-wide-band-power-Value-IncrDecrThres ::= INTEGER (0..620)

Rx-Timing-Deviation-Value ::= INTEGER (0..2047)

-- =====
-- S
-- =====

AdjustmentPeriod          ::= INTEGER(1..256)
-- Unit Frame

ScaledAdjustmentRatio     ::= INTEGER(0..100)
-- AdjustmentRatio = ScaledAdjustmentRatio / 100

MaxAdjustmentStep        ::= INTEGER(1..10)
-- Unit Slot

ScramblingCodeNumber ::= INTEGER (0..15)

SecondaryCCPCH-SlotFormat ::= INTEGER(0..17,...)

Segment-Type ::= ENUMERATED {
    first-segment,
    first-segment-short,
    subsequent-segment,
    last-segment,
    last-segment-short,
    complete-SIB,
    complete-SIB-short,
    ...
}

S-FieldLength ::= ENUMERATED {
    v1,
    v2,
    ...
}

SFN ::= INTEGER (0..4095)

ShutdownTimer ::= INTEGER (1..3600)
-- Unit sec

SIB-Originator ::= ENUMERATED {
    nodeB,
    cRNC,
    ...
}

SIR-Error-Value ::= INTEGER (0..125)

SIR-Error-Value-IncrDecrThres ::= INTEGER (0..124)
```



```
SIR-Value ::= INTEGER (0..63)
-- According to mapping in [22]/[23]

SIR-Value-IncrDecrThres ::= INTEGER (0..62)

SSDT-Cell-Identity ::= ENUMERATED {a, b, c, d, e, f, g, h}

SSDT-CellID-Length ::= ENUMERATED {
    short,
    medium,
    long
}

SSDT-Indication ::= ENUMERATED {
    ssdt-active-in-the-UE,
    ssdt-not-active-in-the-UE
}

Start-Of-Audit-Sequence-Indicator ::= ENUMERATED {
    start-of-audit-sequence,
    not-start-of-audit-sequence
}

STTD-Indicator ::= ENUMERATED {
    active,
    inactive,
    ...
}

SSDT-SupportIndicator ::= ENUMERATED {
    sSDT-Supported,
    sSDT-not-supported
}

SyncCase ::= INTEGER (1..2,...)

-- =====
-- T
-- =====

T-Cell ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    v4,
    v5,
    v6,
    v7,
    v8,
    v9
}
```

```
T-RLFFAILURE ::= INTEGER (0..255)
-- Unit seconds, Range 0s .. 25.5s, Step 0.1s
```

```
TDD-ChannelisationCode ::= ENUMERATED {
  chCode1div1,
  chCode2div1,
  chCode2div2,
  chCode4div1,
  chCode4div2,
  chCode4div3,
  chCode4div4,
  chCode8div1,
  chCode8div2,
  chCode8div3,
  chCode8div4,
  chCode8div5,
  chCode8div6,
  chCode8div7,
  chCode8div8,
  chCode16div1,
  chCode16div2,
  chCode16div3,
  chCode16div4,
  chCode16div5,
  chCode16div6,
  chCode16div7,
  chCode16div8,
  chCode16div9,
  chCode16div10,
  chCode16div11,
  chCode16div12,
  chCode16div13,
  chCode16div14,
  chCode16div15,
  chCode16div16,
  ...
}
```

```
TDD-DL-Code-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF TDD-DL-Code-InformationItem
```

```
TDD-DL-Code-InformationItem ::= SEQUENCE {
  dPCH-ID                DPCH-ID,
  tdd-ChannelisationCode TDD-ChannelisationCode,
  iE-Extensions          ProtocolExtensionContainer { { TDD-DL-Code-InformationItem-ExtIEs} } OPTIONAL,
  ...
}
```

```
TDD-DL-Code-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
TDD-DPCHoffset ::= CHOICE {
```

```

    initialOffset      INTEGER (0..255),
    noinitialOffset    INTEGER (0..63)
}

TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size1,
    step-size2,
    step-size3,
    ...
}

TransportFormatCombination-Beta ::= CHOICE {
    signalledGainFactors SEQUENCE {
        gainFactor CHOICE {
            fdd SEQUENCE {
                betaC BetaCD,
                betaD BetaCD,
                iE-Extensions ProtocolExtensionContainer { { GainFactorFDD-ExtIEs } } OPTIONAL,
                ...
            },
            tdd BetaCD,
            ...
        },
        refTFCNumber RefTFCNumber OPTIONAL,
        iE-Extensions ProtocolExtensionContainer { { SignalledGainFactors-ExtIEs } } OPTIONAL,
        ...
    },
    computedGainFactors RefTFCNumber,
    ...
}

GainFactorFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SignalledGainFactors-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-UL-Code-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF TDD-UL-Code-InformationItem

TDD-UL-Code-InformationItem ::= SEQUENCE {
    dPCH-ID DPCH-ID,
    tdd-ChannelisationCode TDD-ChannelisationCode,
    iE-Extensions ProtocolExtensionContainer { { TDD-UL-Code-InformationItem-ExtIEs } } OPTIONAL,
    ...
}

TDD-UL-Code-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}

TFCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    ...
}

TFCI-Presence ::= ENUMERATED {
    present,
    not-present
}

TFCI-SignallingMode ::= SEQUENCE {
    tFCI-SignallingOption      TFCI-SignallingMode-TFCI-SignallingOption,
    splitType                  TFCI-SignallingMode-SplitType             OPTIONAL,
    -- This IE is only present if TFCI signalling option is split --
    lengthOfTFCI2              TFCI-SignallingMode-LengthOfTFCI2       OPTIONAL,
    -- This IE is only present if split type is logical --
    iE-Extensions              ProtocolExtensionContainer { { TFCI-SignallingMode-ExtIEs} } OPTIONAL,
    ...
}

TFCI-SignallingMode-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCI-SignallingMode-LengthOfTFCI2 ::= INTEGER (1..10)

TFCI-SignallingMode-SplitType ::= ENUMERATED {
    hard,
    logical
}

TFCI-SignallingMode-TFCI-SignallingOption ::= ENUMERATED {
    normal,
    split
}

TFCI2-BearerInformationResponse ::= SEQUENCE {
    bindingID                  BindingID,
    transportLayerAddress      TransportLayerAddress,
    iE-Extensions              ProtocolExtensionContainer { { TFCI2-BearerInformationResponse-ExtIEs} } OPTIONAL,
    ...
}

TFCI2-BearerInformationResponse-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```
TGD ::= INTEGER (0..269)
-- 0 = Undefined, only one transmission gap in the transmission gap pattern sequence

TGPRC ::= INTEGER (0..63)
-- 0 = infinity

TGPSID ::= INTEGER (1.. maxTGPS)

TGSN ::= INTEGER (0..14)

TimeSlot ::= INTEGER (0..14)

TimeSlotDirection ::= ENUMERATED {
    ul,
    dl,
    ...
}

TimeSlotStatus ::= ENUMERATED {
    active,
    not-active,
    ...
}

TimingAdvanceApplied ::= ENUMERATED {
    yes,
    no
}

ToAWE ::= INTEGER (0..2559)
-- Unit ms

ToAWS ::= INTEGER (0..1279)
-- Unit ms

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGSN            TGSN,
        tGL1            GapLength,
        tGL2            GapLength OPTIONAL,
        tGD             TGD,
        tGPL1           GapDuration,
        tGPL2           GapDuration OPTIONAL,
```

```

uL-DL-mode          UL-DL-mode,
downlink-Compressed-Mode-Method  Downlink-Compressed-Mode-Method  OPTIONAL,
  -- This IE is only present if the value of the UL/DL mode IE is "DL only" or "UL/DL"
uplink-Compressed-Mode-Method    Uplink-Compressed-Mode-Method    OPTIONAL,
  -- This IE is only present if the value of the UL/DL mode IE is "UL only" or "UL/DL"
dL-FrameType        DL-FrameType,
delta-SIR1           DeltaSIR,
delta-SIR-after1    DeltaSIR,
delta-SIR2           DeltaSIR  OPTIONAL,
delta-SIR-after2    DeltaSIR  OPTIONAL,
iE-Extensions       ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
  ...
}

```

```

Transmission-Gap-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

TransmissionGapPatternSequenceCodeInformation ::= ENUMERATED{
  code-change,
  nocode-change
}

```

```

Transmitted-Carrier-Power-Value ::= INTEGER(0..100)
-- According to mapping in [4]/[5]

```

```

Transmitted-Code-Power-Value ::= INTEGER (0..127)
-- According to mapping in [4]/[5]

```

```

Transmitted-Code-Power-Value-IncrDecrThres ::= INTEGER (0..112,...)

```

```

TransmissionDiversityApplied ::= BOOLEAN
-- true: applied, false: not applied

```

```

TransmitDiversityIndicator ::= ENUMERATED {
  active,
  inactive
}

```

```

TFCS ::= SEQUENCE {
  tFCSvalues          CHOICE {
    no-Split-in-TFCI  TFCS-TFCSList,
    split-in-TFCI     SEQUENCE {
      transportFormatCombination-DCH  TFCS-DCHList,
      signallingMethod                 CHOICE {
        tFCI-Range                     TFCS-MappingOnDSCHList,

```

```

        explicit                TFCS-DSCHList,
        ...
    },
    iE-Extensions                ProtocolExtensionContainer { { Split-in-TFCI-ExtIEs } }    OPTIONAL,
    ...
},
...
},
iE-Extensions                ProtocolExtensionContainer { { TFCS-ExtIEs } }    OPTIONAL,
...
}

Split-in-TFCI-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-TFCSList ::= SEQUENCE (SIZE (1..maxNrOfTFCS)) OF
    SEQUENCE {
        cTFC                TFCS-CTFC,
        tFC-Beta            TransportFormatCombination-Beta    OPTIONAL,
        iE-Extensions        ProtocolExtensionContainer { { TFCS-TFCSList-ExtIEs } }    OPTIONAL,
        ...
    }

TFCS-TFCSList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-CTFC ::= CHOICE {
    ctfc2bit                INTEGER (0..3),
    ctfc4bit                INTEGER (0..15),
    ctfc6bit                INTEGER (0..63),
    ctfc8bit                INTEGER (0..255),
    ctfc12bit               INTEGER (0..4095),
    ctfc16bit               INTEGER (0..65535),
    ctfcmaxbit              INTEGER (0..maxCTFC)
}

TFCS-DCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCI1Combs)) OF
    SEQUENCE {
        cTFC                TFCS-CTFC,
        iE-Extensions        ProtocolExtensionContainer { { TFCS-DCHList-ExtIEs } }    OPTIONAL,
        ...
    }

TFCS-DCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

TFCS-MappingOnDSCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCIGroups)) OF
  SEQUENCE {
    maxTFCI-field2-Value      TFCS-MaxTFCI-field2-Value,
    cTFC-DSCH                TFCS-CTFC,
    iE-Extensions            ProtocolExtensionContainer { { TFCS-MappingOnDSCHList-ExtIEs } } OPTIONAL,
    ...
  }

TFCS-MappingOnDSCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

TFCS-MaxTFCI-field2-Value ::= INTEGER (1..maxNrOfTFCI2Combs-1)

TFCS-DSCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCI2Combs)) OF
  SEQUENCE {
    cTFC-DSCH                TFCS-CTFC,
    iE-Extensions            ProtocolExtensionContainer { { TFCS-DSCHList-ExtIEs } } OPTIONAL,
    ...
  }

TFCS-DSCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportBearerRequestIndicator ::= ENUMERATED {
  bearerRequested,
  bearerNotRequested,
  ...
}

TransportFormatSet ::= SEQUENCE {
  dynamicParts              TransportFormatSet-DynamicPartList,
  semi-staticPart          TransportFormatSet-Semi-staticPart,
  iE-Extensions            ProtocolExtensionContainer { { TransportFormatSet-ExtIEs } } OPTIONAL,
  ...
}

TransportFormatSet-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
  SEQUENCE {
    nrOfTransportBlocks      TransportFormatSet-NrOfTransportBlocks,
    transportBlockSize       TransportFormatSet-TransportBlockSize OPTIONAL,
    -- This IE is only present if "Number of Transport Blocks" is greater than 0
    mode                     TransportFormatSet-ModeDP,
    iE-Extensions            ProtocolExtensionContainer { { TransportFormatSet-DynamicPartList-ExtIEs } } OPTIONAL,
    ...
  }

```



```

TransportFormatSet-DynamicPartList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-TransportFormatSet-ModeDP ::= SEQUENCE {
    transmissionTimeIntervalInformation      TransmissionTimeIntervalInformation      OPTIONAL,
    -- This IE is mandatory if the "Transmission Time Interval" of the "Semi-static Transport Format Information" is "dynamic". Otherwise it is
absent.
    iE-Extensions                          ProtocolExtensionContainer { {TDD-TransportFormatSet-ModeDP-ExtIEs} } OPTIONAL,
    ...
}

TDD-TransportFormatSet-ModeDP-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransmissionTimeIntervalInformation ::= SEQUENCE (SIZE (1..maxTTI-count)) OF
SEQUENCE {
    transmissionTimeInterval                TransportFormatSet-TransmissionTimeIntervalDynamic,
    iE-Extensions                          ProtocolExtensionContainer { { TransmissionTimeIntervalInformation-ExtIEs} }      OPTIONAL,
    ...
}

TransmissionTimeIntervalInformation-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-Semi-staticPart ::= SEQUENCE {
    transmissionTimeInterval                TransportFormatSet-TransmissionTimeIntervalSemiStatic,
    channelCoding                          TransportFormatSet-ChannelCodingType,
    codingRate                              TransportFormatSet-CodingRate                OPTIONAL,
    -- This IE is only present if channelCoding is 'convolutional' or 'turbo'
    rateMatchingAttribute                  TransportFormatSet-RateMatchingAttribute,
    cRC-Size                               TransportFormatSet-CRC-Size,
    mode                                    TransportFormatSet-ModeSSP,
    iE-Extensions                          ProtocolExtensionContainer { { TransportFormatSet-Semi-staticPart-ExtIEs} }      OPTIONAL,
    ...
}

TransportFormatSet-Semi-staticPart-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ChannelCodingType ::= ENUMERATED {
    no-coding,
    convolutional-coding,
    turbo-coding,
    ...
}

```

```
TransportFormatSet-CodingRate ::= ENUMERATED {
    half,
    third,
    ...
}

TransportFormatSet-CRC-Size ::= ENUMERATED {
    v0,
    v8,
    v12,
    v16,
    v24,
    ...
}

TransportFormatSet-ModeDP ::= CHOICE {
    tdd                TDD-TransportFormatSet-ModeDP,
    notApplicable      NULL,
    ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
    tdd                TransportFormatSet-SecondInterleavingMode,
    notApplicable      NULL,
    ...
}

TransportFormatSet-NrOfTransportBlocks ::= INTEGER (0..512)

TransportFormatSet-RateMatchingAttribute ::= INTEGER (1..maxRateMatching)

TransportFormatSet-SecondInterleavingMode ::= ENUMERATED {
    frame-related,
    timeSlot-related,
    ...
}

TransportFormatSet-TransmissionTimeIntervalDynamic ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80,
    ...
}

TransportFormatSet-TransmissionTimeIntervalSemiStatic ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80,
    dynamic,
    ...
}
```

```

}

TransportFormatSet-TransportBlockSize ::= INTEGER (0..5000)

TransportLayerAddress ::= BIT STRING (SIZE (1..160, ...))

TSTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

-- =====
-- U
-- =====

UARFCN ::= INTEGER (0..16383, ...)
-- corresponds to 1885.2MHz .. 2024.8MHz

UL-CapacityCredit ::= INTEGER (0..65535)

UL-DL-mode ::= ENUMERATED {
    ul-only,
    dl-only,
    both-ul-and-dl
}

Uplink-Compressed-Mode-Method ::= ENUMERATED {
    sFdiv2,
    higher-layer-scheduling,
    ...
}

UL-Timeslot-Information ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationItem

UL-Timeslot-InformationItem ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType,
    tFCI-Presence           TFCI-Presence,
    uL-Code-InformationList TDD-UL-Code-Information,
    iE-Extensions          ProtocolExtensionContainer { { UL-Timeslot-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

UL-Timeslot-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCCH-SlotFormat ::= INTEGER (0..5,...)

UL-SIR ::= INTEGER (-82..173)

```

```

-- According to mapping in [16]

UL-FP-Mode ::= ENUMERATED {
    normal,
    silent,
    ...
}

UL-PhysCH-SF-Variation ::= ENUMERATED {
    sf-variation-supported,
    sf-variation-not-supported
}

UL-ScramblingCode ::= SEQUENCE {
    uL-ScramblingCodeNumber      UL-ScramblingCodeNumber,
    uL-ScramblingCodeLength      UL-ScramblingCodeLength,
    iE-Extensions                ProtocolExtensionContainer { { UL-ScramblingCode-ExtIEs } } OPTIONAL,
    ...
}

UL-ScramblingCode-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-ScramblingCodeNumber ::= INTEGER (0..16777215)

UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long
}

UL-TimeSlot-ISCP-Info ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-TimeSlot-ISCP-InfoItem

UL-TimeSlot-ISCP-InfoItem ::= SEQUENCE {
    timeSlot                    TimeSlot,
    iSCP                        UL-TimeSlotISCP-Value,
    iE-Extensions                ProtocolExtensionContainer { { UL-TimeSlot-ISCP-InfoItem-ExtIEs } } OPTIONAL,
    ...
}

UL-TimeSlot-ISCP-InfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-Information ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationItem

USCH-InformationItem ::= SEQUENCE {
    uSCH-ID                    USCH-ID,
    cCTrCH-ID                  CCTrCH-ID,
    transportFormatSet          TransportFormatSet,
    allocationRetentionPriority AllocationRetentionPriority,
    iE-Extensions                ProtocolExtensionContainer { { USCH-InformationItem-ExtIEs } } OPTIONAL,
    ...
}

```

```

}

USCH-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

USCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationResponseItem

USCH-InformationResponseItem ::= SEQUENCE {
  uSCH-ID                USCH-ID,
  bindingID              BindingID                OPTIONAL,
  transportLayerAddress  TransportLayerAddress    OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { USCH-InformationResponseItem-ExtIEs } }  OPTIONAL,
  ...
}

USCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-TimeslotISCP-Value ::= INTEGER (0..81)
-- According to mapping in [23]

UL-TimeslotISCP-Value-IncrDecrThres ::= INTEGER (0..80)

USCH-ID ::= INTEGER (0..255)

-- =====
-- V
-- =====

-- =====
-- W
-- =====

-- =====
-- X
-- =====

-- =====
-- Y
-- =====

-- =====
-- Z
-- =====

END

```

9.3.5 Common Definitions

```

-- *****
--
-- Common definitions
--
-- *****

NBAP-CommonDataTypes {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-CommonDataTypes (3) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- Extension constants
--
-- *****

maxPrivateIEs          INTEGER ::= 65535
maxProtocolExtensions  INTEGER ::= 65535
maxProtocolIEs         INTEGER ::= 65535

-- *****
--
-- Common Data Types
--
-- *****

Criticality      ::= ENUMERATED { reject, ignore, notify }
MessageDiscriminator ::= ENUMERATED { common, dedicated }
Presence         ::= ENUMERATED { optional, conditional, mandatory }

PrivateIE-ID     ::= CHOICE {
    local          INTEGER (0..maxPrivateIEs),
    global         OBJECT IDENTIFIER
}

ProcedureCode    ::= INTEGER (0..255)

ProcedureID      ::= SEQUENCE {
    procedureCode  ProcedureCode,
    ddMode        ENUMERATED { tdd, fdd, common, ... }
}

```

```

ProtocolExtensionID ::= INTEGER (0..maxProtocolExtensions)

ProtocolIE-ID      ::= INTEGER (0..maxProtocolIEs)

TransactionID     ::= CHOICE {
    shortTransActionId    INTEGER (0..127),
    longTransActionId     INTEGER (0..32767)
}

TriggeringMessage ::= ENUMERATED { initiating-message, successful-outcome, unsuccessful-outcome, outcome }

END

```

9.3.6 Constant Definitions

```

-- *****
--
-- Constant definitions
--
-- *****

NBAP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-Constants (4)}

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    ProcedureCode,
    ProtocolIE-ID
FROM NBAP-CommonDataTypes;

-- *****
--
-- Elementary Procedures
--
-- *****

id-audit                ProcedureCode ::= 0
id-auditRequired        ProcedureCode ::= 1
id-blockResource        ProcedureCode ::= 2
id-cellDeletion         ProcedureCode ::= 3
id-cellReconfiguration  ProcedureCode ::= 4
id-cellSetup            ProcedureCode ::= 5
id-commonMeasurementFailure ProcedureCode ::= 6
id-commonMeasurementInitiation ProcedureCode ::= 7
id-commonMeasurementReport ProcedureCode ::= 8
id-commonMeasurementTermination ProcedureCode ::= 9
id-commonTransportChannelDelete ProcedureCode ::= 10

```

id-commonTransportChannelReconfigure	ProcedureCode ::= 11
id-commonTransportChannelSetup	ProcedureCode ::= 12
id-compressedModeCommand	ProcedureCode ::= 14
id-dedicatedMeasurementFailure	ProcedureCode ::= 16
id-dedicatedMeasurementInitiation	ProcedureCode ::= 17
id-dedicatedMeasurementReport	ProcedureCode ::= 18
id-dedicatedMeasurementTermination	ProcedureCode ::= 19
id-downlinkPowerControl	ProcedureCode ::= 20
id-downlinkPowerTimeslotControl	ProcedureCode ::= 38
id-errorIndicationForCommon	ProcedureCode ::= 35
id-errorIndicationForDedicated	ProcedureCode ::= 21
id-physicalSharedChannelReconfiguration	ProcedureCode ::= 37
id-privateMessageForCommon	ProcedureCode ::= 36
id-privateMessageForDedicated	ProcedureCode ::= 22
id-radioLinkAddition	ProcedureCode ::= 23
id-radioLinkDeletion	ProcedureCode ::= 24
id-radioLinkFailure	ProcedureCode ::= 25
id-radioLinkPreemption	ProcedureCode ::= 39
id-radioLinkRestoration	ProcedureCode ::= 26
id-radioLinkSetup	ProcedureCode ::= 27
id-reset	ProcedureCode ::= 13
id-resourceStatusIndication	ProcedureCode ::= 28
id-synchronisedRadioLinkReconfigurationCancellation	ProcedureCode ::= 29
id-synchronisedRadioLinkReconfigurationCommit	ProcedureCode ::= 30
id-synchronisedRadioLinkReconfigurationPreparation	ProcedureCode ::= 31
id-systemInformationUpdate	ProcedureCode ::= 32
id-unblockResource	ProcedureCode ::= 33
id-unSynchronisedRadioLinkReconfiguration	ProcedureCode ::= 34

```
-- *****
--
-- Lists
--
-- *****
```

maxNrOfCodes	INTEGER ::= 10
maxNrOfDLTSS	INTEGER ::= 15
maxNrOfDLCodes	INTEGER ::= 8
maxNrOfErrors	INTEGER ::= 256
maxNrOfTFs	INTEGER ::= 32
maxNrOfTFCs	INTEGER ::= 1024
maxNrOfRLs	INTEGER ::= 16
maxNrOfRLSets	INTEGER ::= maxNrOfRLs
maxNrOfDPCHs	INTEGER ::= 240
maxNrOfSCCPCHs	INTEGER ::= 8
maxNrOfCPCHs	INTEGER ::= 4
maxNrOfPCPCHs	INTEGER ::= 64
maxNrOfDCHs	INTEGER ::= 128
maxNrOfDSCHs	INTEGER ::= 32
maxNrOfFACHs	INTEGER ::= 8
maxNrOfCCTrCHs	INTEGER ::= 16
maxNrOfPDSCHs	INTEGER ::= 256
maxNrOfPUSCHs	INTEGER ::= 256


```

maxNrOfPDSCHSets          INTEGER ::= 256
maxNrOfPUSCHSets          INTEGER ::= 256
maxNrOfULTSs              INTEGER ::= 15
maxNrOfUSCHs              INTEGER ::= 32
maxAPSigNum               INTEGER ::= 16
maxNrOfSlotFormatsPRACH  INTEGER ::= 8
maxCellInNodeB            INTEGER ::= 256
maxCCPinNodeB             INTEGER ::= 256
maxCPCHCell               INTEGER ::= maxNrOfCPCHs
maxCTFC                   INTEGER ::= 16777215
maxLocalCellInNodeB      INTEGER ::= maxCellInNodeB
maxNoofLen                INTEGER ::= 7
maxRACHCell               INTEGER ::= maxPRACHCell
maxPRACHCell              INTEGER ::= 16
maxPCPCHCell              INTEGER ::= 64
maxSCCPCHCell             INTEGER ::= 32
maxSPICHCell              INTEGER ::= 32
maxTTI-count              INTEGER ::= 4
maxIBSEG                  INTEGER ::= 16
maxIB                      INTEGER ::= 64
maxFACHCell               INTEGER ::= 256 -- maxNrOfFACHs * maxSCCPCHCell
maxRateMatching           INTEGER ::= 256
maxCodeNrComp-1           INTEGER ::= 256
maxNrOfCodeGroups         INTEGER ::= 256
maxNrOfTFClGroups         INTEGER ::= 256
maxNrOfTFCl1Combs         INTEGER ::= 512
maxNrOfTFCl2Combs         INTEGER ::= 1024
maxNrOfTFCl2Combs-1       INTEGER ::= 1023
maxNrOfSF                  INTEGER ::= 8
maxTGPS                   INTEGER ::= 6
maxCommunicationContext   INTEGER ::= 1048575

-- *****
--
-- IEs
--
-- *****

id-AICH-Information          ProtocolIE-ID ::= 0
id-AICH-InformationItem-ResourceStatusInd ProtocolIE-ID ::= 1
id-BCH-Information          ProtocolIE-ID ::= 7
id-BCH-InformationItem-ResourceStatusInd ProtocolIE-ID ::= 8
id-BCC-ModificationTime     ProtocolIE-ID ::= 9
id-BlockingPriorityIndicator ProtocolIE-ID ::= 10
id-Cause                     ProtocolIE-ID ::= 13
id-CCP-InformationItem-AuditRsp ProtocolIE-ID ::= 14
id-CCP-InformationList-AuditRsp ProtocolIE-ID ::= 15
id-CCP-InformationItem-ResourceStatusInd ProtocolIE-ID ::= 16
id-Cell-InformationItem-AuditRsp ProtocolIE-ID ::= 17
id-Cell-InformationItem-ResourceStatusInd ProtocolIE-ID ::= 18
id-Cell-InformationList-AuditRsp ProtocolIE-ID ::= 19
id-CellParameterID          ProtocolIE-ID ::= 23
id-CFN                       ProtocolIE-ID ::= 24

```

id-C-ID	ProtocolIE-ID ::= 25
id-CommonMeasurementObjectType-CM-Rprt	ProtocolIE-ID ::= 31
id-CommonMeasurementObjectType-CM-Rqst	ProtocolIE-ID ::= 32
id-CommonMeasurementObjectType-CM-Rsp	ProtocolIE-ID ::= 33
id-CommonMeasurementType	ProtocolIE-ID ::= 34
id-CommonPhysicalChannelID	ProtocolIE-ID ::= 35
id-CommonPhysicalChannelType-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 36
id-CommonPhysicalChannelType-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 37
id-CommonTransportChannelType-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 38
id-CommunicationControlPortID	ProtocolIE-ID ::= 40
id-ConfigurationGenerationID	ProtocolIE-ID ::= 43
id-CRNC-CommunicationContextID	ProtocolIE-ID ::= 44
id-CriticalityDiagnostics	ProtocolIE-ID ::= 45
id-DCHs-to-Add-FDD	ProtocolIE-ID ::= 48
id-DCH-AddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 49
id-DCHs-to-Add-TDD	ProtocolIE-ID ::= 50
id-DCH-DeleteList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 52
id-DCH-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 53
id-DCH-DeleteList-RL-ReconfRqstFDD	ProtocolIE-ID ::= 54
id-DCH-DeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 55
id-DCH-FDD-Information	ProtocolIE-ID ::= 56
id-DCH-TDD-Information	ProtocolIE-ID ::= 57
id-DCH-InformationResponse	ProtocolIE-ID ::= 59
id-FDD-DCHs-to-Modify	ProtocolIE-ID ::= 62
id-TDD-DCHs-to-Modify	ProtocolIE-ID ::= 63
id-DCH-ModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 65
id-DedicatedMeasurementObjectType-DM-Rprt	ProtocolIE-ID ::= 67
id-DedicatedMeasurementObjectType-DM-Rqst	ProtocolIE-ID ::= 68
id-DedicatedMeasurementObjectType-DM-Rsp	ProtocolIE-ID ::= 69
id-DedicatedMeasurementType	ProtocolIE-ID ::= 70
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD	ProtocolIE-ID ::= 72
id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD	ProtocolIE-ID ::= 73
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 76
id-DL-DPCH-InformationItem-RL-AdditionRqstTDD	ProtocolIE-ID ::= 77
id-DL-DPCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 79
id-DL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 81
id-DL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 82
id-DL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 83
id-DL-ReferencePowerInformationItem-DL-PC-Rqst	ProtocolIE-ID ::= 84
id-DLReferencePower	ProtocolIE-ID ::= 85
id-DLReferencePowerList-DL-PC-Rqst	ProtocolIE-ID ::= 86
id-DSCH-AddItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 87
id-DSCH-AddItem-RL-ReconfRqstFDD	ProtocolIE-ID ::= 88
id-DSCHs-to-Add-FDD	ProtocolIE-ID ::= 89
id-DSCH-DeleteItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 91
id-DSCH-DeleteItem-RL-ReconfRqstFDD	ProtocolIE-ID ::= 92
id-DSCH-DeleteList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 93
id-DSCH-ID	ProtocolIE-ID ::= 95
id-DSCHs-to-Add-TDD	ProtocolIE-ID ::= 96
id-DSCH-Information-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 98
id-DSCH-Information-ModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 100
id-DSCH-InformationResponse	ProtocolIE-ID ::= 105
id-DSCH-FDD-Information	ProtocolIE-ID ::= 106

id-DSCH-TDD-Information	ProtocolIE-ID ::= 107
id-DSCH-ModifyItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 108
id-DSCH-ModifyItem-RL-ReconfRqstFDD	ProtocolIE-ID ::= 109
id-DSCH-ModifyList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 112
id-End-Of-Audit-Sequence-Indicator	ProtocolIE-ID ::= 113
id-FACH-Information	ProtocolIE-ID ::= 116
id-FACH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 117
id-FACHItem-CTCH-SetupRsp	ProtocolIE-ID ::= 118
id-FACH-ParametersList-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 120
id-FACH-ParametersListIE-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 121
id-FACH-ParametersListIE-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 122
id-IndicationType-ResourceStatusInd	ProtocolIE-ID ::= 123
id-Local-Cell-ID	ProtocolIE-ID ::= 124
id-Local-Cell-Group-InformationItem-AuditRsp	ProtocolIE-ID ::= 2
id-Local-Cell-Group-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 3
id-Local-Cell-Group-InformationItem2-ResourceStatusInd	ProtocolIE-ID ::= 4
id-Local-Cell-Group-InformationList-AuditRsp	ProtocolIE-ID ::= 5
id-Local-Cell-InformationItem-AuditRsp	ProtocolIE-ID ::= 125
id-Local-Cell-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 126
id-Local-Cell-InformationItem2-ResourceStatusInd	ProtocolIE-ID ::= 127
id-Local-Cell-InformationList-AuditRsp	ProtocolIE-ID ::= 128
id-AdjustmentPeriod	ProtocolIE-ID ::= 129
id-MaxAdjustmentStep	ProtocolIE-ID ::= 130
id-MaximumTransmissionPower	ProtocolIE-ID ::= 131
id-MeasurementFilterCoefficient	ProtocolIE-ID ::= 132
id-MeasurementID	ProtocolIE-ID ::= 133
id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst	ProtocolIE-ID ::= 134
id-NodeB-CommunicationContextID	ProtocolIE-ID ::= 143
id-P-CCPCH-Information	ProtocolIE-ID ::= 144
id-P-CCPCH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 145
id-P-CPICH-Information	ProtocolIE-ID ::= 146
id-P-CPICH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 147
id-P-SCH-Information	ProtocolIE-ID ::= 148
id-PCCPCH-Information-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 150
id-PCCPCH-Information-Cell-SetupRqstTDD	ProtocolIE-ID ::= 151
id-PCH-Parameters-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 155
id-PCH-ParametersItem-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 156
id-PCH-ParametersItem-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 157
id-PCH-Information	ProtocolIE-ID ::= 158
id-PD	ProtocolIE-ID ::= 160
id-PDSCH-Information-AddListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 161
id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 162
id-PDSCHSets-AddList-PSCH-ReconfRqst	ProtocolIE-ID ::= 163
id-PDSCHSets-DeleteList-PSCH-ReconfRqst	ProtocolIE-ID ::= 164
id-PDSCHSets-ModifyList-PSCH-ReconfRqst	ProtocolIE-ID ::= 165
id-PICH-Information	ProtocolIE-ID ::= 166
id-PICH-Parameters-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 168
id-PowerAdjustmentType	ProtocolIE-ID ::= 169
id-PRACH-Information	ProtocolIE-ID ::= 170
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 175
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 176
id-PrimaryCPICH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 177
id-PrimaryCPICH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 178

id-PrimarySCH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 179
id-PrimarySCH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 180
id-PrimaryScramblingCode	ProtocolIE-ID ::= 181
id-ProcedureScopeType-DL-PC-Rqst	ProtocolIE-ID ::= 182
id-SCH-Information-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 183
id-SCH-Information-Cell-SetupRqstTDD	ProtocolIE-ID ::= 184
id-PUSCH-Information-AddListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 185
id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 186
id-PUSCHSets-AddList-PSCH-ReconfRqst	ProtocolIE-ID ::= 187
id-PUSCHSets-DeleteList-PSCH-ReconfRqst	ProtocolIE-ID ::= 188
id-PUSCHSets-ModifyList-PSCH-ReconfRqst	ProtocolIE-ID ::= 189
id-RACH-Information	ProtocolIE-ID ::= 190
id-RACHItem-CTCH-SetupRsp	ProtocolIE-ID ::= 192
id-RACH-ParametersItem-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 196
id-RACH-ParameterItem-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 197
id-ReportCharacteristics	ProtocolIE-ID ::= 198
id-Reporting-Object-RL-FailureInd	ProtocolIE-ID ::= 199
id-Reporting-Object-RL-RestoreInd	ProtocolIE-ID ::= 200
id-RL-ID	ProtocolIE-ID ::= 201
id-RL-InformationItem-DM-Rprt	ProtocolIE-ID ::= 202
id-RL-InformationItem-DM-Rqst	ProtocolIE-ID ::= 203
id-RL-InformationItem-DM-Rsp	ProtocolIE-ID ::= 204
id-RL-InformationItem-RL-AdditionRqstFDD	ProtocolIE-ID ::= 205
id-RL-informationItem-RL-DeletionRqst	ProtocolIE-ID ::= 206
id-RL-InformationItem-RL-FailureInd	ProtocolIE-ID ::= 207
id-RL-InformationItem-RL-PreemptRequiredInd	ProtocolIE-ID ::= 286
id-RL-InformationItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 208
id-RL-InformationItem-RL-ReconfRqstFDD	ProtocolIE-ID ::= 209
id-RL-InformationItem-RL-RestoreInd	ProtocolIE-ID ::= 210
id-RL-InformationItem-RL-SetupRqstFDD	ProtocolIE-ID ::= 211
id-RL-InformationList-RL-AdditionRqstFDD	ProtocolIE-ID ::= 212
id-RL-informationList-RL-DeletionRqst	ProtocolIE-ID ::= 213
id-RL-InformationList-RL-PreemptRequiredInd	ProtocolIE-ID ::= 237
id-RL-InformationList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 214
id-RL-InformationList-RL-ReconfRqstFDD	ProtocolIE-ID ::= 215
id-RL-InformationList-RL-SetupRqstFDD	ProtocolIE-ID ::= 216
id-RL-InformationResponseItem-RL-AdditionRspFDD	ProtocolIE-ID ::= 217
id-RL-InformationResponseItem-RL-ReconfReady	ProtocolIE-ID ::= 218
id-RL-InformationResponseItem-RL-ReconfRsp	ProtocolIE-ID ::= 219
id-RL-InformationResponseItem-RL-SetupRspFDD	ProtocolIE-ID ::= 220
id-RL-InformationResponseList-RL-AdditionRspFDD	ProtocolIE-ID ::= 221
id-RL-InformationResponseList-RL-ReconfReady	ProtocolIE-ID ::= 222
id-RL-InformationResponseList-RL-ReconfRsp	ProtocolIE-ID ::= 223
id-RL-InformationResponseList-RL-SetupRspFDD	ProtocolIE-ID ::= 224
id-RL-InformationResponse-RL-AdditionRspTDD	ProtocolIE-ID ::= 225
id-RL-InformationResponse-RL-SetupRspTDD	ProtocolIE-ID ::= 226
id-RL-Information-RL-AdditionRqstTDD	ProtocolIE-ID ::= 227
id-RL-Information-RL-ReconfRqstTDD	ProtocolIE-ID ::= 228
id-RL-Information-RL-ReconfPrepTDD	ProtocolIE-ID ::= 229
id-RL-Information-RL-SetupRqstTDD	ProtocolIE-ID ::= 230
id-RL-ReconfigurationFailureItem-RL-ReconfFailure	ProtocolIE-ID ::= 236
id-RL-Set-InformationItem-DM-Rprt	ProtocolIE-ID ::= 238
id-RL-Set-InformationItem-DM-Rsp	ProtocolIE-ID ::= 240

id-RL-Set-InformationItem-RL-FailureInd	ProtocolIE-ID ::= 241
id-RL-Set-InformationItem-RL-RestoreInd	ProtocolIE-ID ::= 242
id-S-CCPCH-Information	ProtocolIE-ID ::= 247
id-S-CPICH-Information	ProtocolIE-ID ::= 249
id-SCH-Information	ProtocolIE-ID ::= 251
id-S-SCH-Information	ProtocolIE-ID ::= 253
id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 257
id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 258
id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 259
id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 260
id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD	ProtocolIE-ID ::= 261
id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 262
id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD	ProtocolIE-ID ::= 263
id-SecondarySCH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 264
id-SecondarySCH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 265
id-SegmentInformationListIE-SystemInfoUpdate	ProtocolIE-ID ::= 266
id-SFN	ProtocolIE-ID ::= 268
id-ShutdownTimer	ProtocolIE-ID ::= 269
id-Start-Of-Audit-Sequence-Indicator	ProtocolIE-ID ::= 114
id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD	ProtocolIE-ID ::= 270
id-Successful-RL-InformationRespItem-RL-SetupFailureFDD	ProtocolIE-ID ::= 271
id-Successful-RL-InformationRespList-RL-AdditionFailureFDD	ProtocolIE-ID ::= 272
id-Successful-RL-InformationRespList-RL-SetupFailureFDD	ProtocolIE-ID ::= 273
id-SyncCase	ProtocolIE-ID ::= 274
id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH	ProtocolIE-ID ::= 275
id-T-Cell	ProtocolIE-ID ::= 276
id-TimeSlotConfigurationList-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 277
id-TimeSlotConfigurationList-Cell-SetupRqstTDD	ProtocolIE-ID ::= 278
id-TransmissionDiversityApplied	ProtocolIE-ID ::= 279
id-UARFCNforNt	ProtocolIE-ID ::= 280
id-UARFCNforNd	ProtocolIE-ID ::= 281
id-UARFCNforNu	ProtocolIE-ID ::= 282
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD	ProtocolIE-ID ::= 284
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD	ProtocolIE-ID ::= 285
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 288
id-UL-DPCH-InformationItem-RL-AdditionRqstTDD	ProtocolIE-ID ::= 289
id-UL-DPCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 291
id-UL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 293
id-UL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 294
id-UL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 295
id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD	ProtocolIE-ID ::= 296
id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD	ProtocolIE-ID ::= 297
id-Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD	ProtocolIE-ID ::= 298
id-Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD	ProtocolIE-ID ::= 299
id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD	ProtocolIE-ID ::= 300
id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD	ProtocolIE-ID ::= 301
id-USCH-Information-Add	ProtocolIE-ID ::= 302
id-USCH-Information-AddList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 303
id-USCH-Information-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 304
id-USCH-Information-DeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 305
id-USCH-Information-ModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 306
id-USCH-Information-ModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 307
id-USCH-InformationResponse	ProtocolIE-ID ::= 309

id-USCH-Information	ProtocolIE-ID ::= 310
id-Active-Pattern-Sequence-Information	ProtocolIE-ID ::= 315
id-AICH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 316
id-AdjustmentRatio	ProtocolIE-ID ::= 317
id-AP-AICH-Information	ProtocolIE-ID ::= 320
id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 322
id-FACH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 323
id-CauseLevel-PSCH-ReconfFailureTDD	ProtocolIE-ID ::= 324
id-CauseLevel-RL-AdditionFailureFDD	ProtocolIE-ID ::= 325
id-CauseLevel-RL-AdditionFailureTDD	ProtocolIE-ID ::= 326
id-CauseLevel-RL-ReconfFailure	ProtocolIE-ID ::= 327
id-CauseLevel-RL-SetupFailureFDD	ProtocolIE-ID ::= 328
id-CauseLevel-RL-SetupFailureTDD	ProtocolIE-ID ::= 329
id-CDCA-ICH-Information	ProtocolIE-ID ::= 330
id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 332
id-Closed-Loop-Timing-Adjustment-Mode	ProtocolIE-ID ::= 333
id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 334
id-Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD	ProtocolIE-ID ::= 335
id-CPCH-Information	ProtocolIE-ID ::= 336
id-CPCH-Parameters-CTCH-SetupRsp	ProtocolIE-ID ::= 342
id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 343
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 346
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 347
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 348
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 349
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 350
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 351
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 352
id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 353
id-DL-DPCH-InformationDeleteListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 354
id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 355
id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 356
id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 357
id-DL-TPC-Pattern01Count	ProtocolIE-ID ::= 358
id-DPCHConstant	ProtocolIE-ID ::= 359
id-FACH-ParametersList-CTCH-SetupRsp	ProtocolIE-ID ::= 362
id-Limited-power-increase-information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 369
id-PCH-Parameters-CTCH-SetupRsp	ProtocolIE-ID ::= 374
id-PCH-ParametersItem-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 375
id-PCPCH-Information	ProtocolIE-ID ::= 376
id-PCPCH-ParametersList-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 379
id-PICH-ParametersItem-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 380
id-PRACHConstant	ProtocolIE-ID ::= 381
id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 383
id-PUSCHConstant	ProtocolIE-ID ::= 384
id-RACH-Parameters-CTCH-SetupRsp	ProtocolIE-ID ::= 385
id-Synchronisation-Configuration-Cell-ReconfRqst	ProtocolIE-ID ::= 393
id-Synchronisation-Configuration-Cell-SetupRqst	ProtocolIE-ID ::= 394
id-Transmission-Gap-Pattern-Sequence-Information	ProtocolIE-ID ::= 395
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 396
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 397
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 398
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 399

id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 400
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 401
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 402
id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 403
id-UL-DPCH-InformationDeleteListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 404
id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 405
id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 406
id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 407
id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD	ProtocolIE-ID ::= 408
id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD	ProtocolIE-ID ::= 409
id-CommunicationContextInfoItem-Reset	ProtocolIE-ID ::= 412
id-CommunicationControlPortInfoItem-Reset	ProtocolIE-ID ::= 414
id-ResetIndicator	ProtocolIE-ID ::= 416
id-TFCI2-Bearer-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 417
id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD	ProtocolIE-ID ::= 418
id-TFCI2-BearerInformationResponse	ProtocolIE-ID ::= 419
id-TimingAdvanceApplied	ProtocolIE-ID ::= 287
id-CFNReportingIndicator	ProtocolIE-ID ::= 6
id-SFNReportingIndicator	ProtocolIE-ID ::= 11
id-InnerLoopDLPCStatus	ProtocolIE-ID ::= 12
id-TimeslotISCPInfoList-DL-PC-RqstTDD	ProtocolIE-ID ::= 283
id-PICH-ParametersItem-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 167
id-PRACH-ParametersItem-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 20

END

9.3.7 Container Definitions

```
-- *****
--
-- Container definitions
--
-- *****

NBAP-Containers {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-Containers (5) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    maxProtocolExtensions,
    maxPrivateIEs,
```

```

maxProtocolIEs,
Criticality,
Presence,
PrivateIE-ID,
ProtocolExtensionID,
ProtocolIE-ID
FROM NBAP-CommonDataTypes;

-- *****
--
-- Class Definition for Protocol IEs
--
-- *****

NBAP-PROTOCOL-IES ::= CLASS {
    &id      ProtocolIE-ID      UNIQUE,
    &criticality  Criticality,
    &Value,
    &presence  Presence
}
WITH SYNTAX {
    ID      &id
    CRITICALITY &criticality
    TYPE      &Value
    PRESENCE  &presence
}

-- *****
--
-- Class Definition for Protocol IEs
--
-- *****

NBAP-PROTOCOL-IES-PAIR ::= CLASS {
    &id      ProtocolIE-ID      UNIQUE,
    &firstCriticality  Criticality,
    &FirstValue,
    &secondCriticality  Criticality,
    &SecondValue,
    &presence          Presence
}
WITH SYNTAX {
    ID      &id
    FIRST CRITICALITY  &firstCriticality
    FIRST TYPE      &FirstValue
    SECOND CRITICALITY &secondCriticality
    SECOND TYPE      &SecondValue
    PRESENCE        &presence
}

-- *****
--
-- Class Definition for Protocol Extensions

```



```

--
-- *****
NBAP-PROTOCOL-EXTENSION ::= CLASS {
    &id      ProtocolExtensionID      UNIQUE,
    &criticality  Criticality,
    &Extension,
    &presence    Presence
}
WITH SYNTAX {
    ID      &id
    CRITICALITY &criticality
    EXTENSION &Extension
    PRESENCE &presence
}
-- *****
--
-- Class Definition for Private IEs
--
-- *****

NBAP-PRIVATE-IES ::= CLASS {
    &id      PrivateIE-ID,
    &criticality  Criticality,
    &Value,
    &presence    Presence
}
WITH SYNTAX {
    ID      &id
    CRITICALITY &criticality
    TYPE    &Value
    PRESENCE &presence
}
-- *****
--
-- Container for Protocol IEs
--
-- *****

ProtocolIE-Container {NBAP-PROTOCOL-IES : IEsSetParam} ::=
    SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Single-Container {NBAP-PROTOCOL-IES : IEsSetParam} ::=
    ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Field {NBAP-PROTOCOL-IES : IEsSetParam} ::= SEQUENCE {
    id      NBAP-PROTOCOL-IES.&id      ({IEsSetParam}),
    criticality  NBAP-PROTOCOL-IES.&criticality  ({IEsSetParam}{@id}),
    value     NBAP-PROTOCOL-IES.&Value      ({IEsSetParam}{@id})
}

```

```

-- *****
--
-- Container for Protocol IE Pairs
--
-- *****

ProtocolIE-ContainerPair {NBAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
  SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-FieldPair {{IEsSetParam}}

ProtocolIE-FieldPair {NBAP-PROTOCOL-IES-PAIR : IEsSetParam} ::= SEQUENCE {
  id                NBAP-PROTOCOL-IES-PAIR.&id                ({IEsSetParam}),
  firstCriticality  NBAP-PROTOCOL-IES-PAIR.&firstCriticality  ({IEsSetParam}{@id}),
  firstValue        NBAP-PROTOCOL-IES-PAIR.&FirstValue        ({IEsSetParam}{@id}),
  secondCriticality NBAP-PROTOCOL-IES-PAIR.&secondCriticality  ({IEsSetParam}{@id}),
  secondValue       NBAP-PROTOCOL-IES-PAIR.&SecondValue       ({IEsSetParam}{@id})
}

-- *****
--
-- Container Lists for Protocol IE Containers
--
-- *****

ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, NBAP-PROTOCOL-IES : IEsSetParam} ::=
  SEQUENCE (SIZE (lowerBound..upperBound)) OF
    ProtocolIE-Container {{IEsSetParam}}

ProtocolIE-ContainerPairList {INTEGER : lowerBound, INTEGER : upperBound, NBAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
  SEQUENCE (SIZE (lowerBound..upperBound)) OF
    ProtocolIE-ContainerPair {{IEsSetParam}}

-- *****
--
-- Container for Protocol Extensions
--
-- *****

ProtocolExtensionContainer {NBAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=
  SEQUENCE (SIZE (1..maxProtocolExtensions)) OF
    ProtocolExtensionField {{ExtensionSetParam}}

ProtocolExtensionField {NBAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
  id                NBAP-PROTOCOL-EXTENSION.&id                ({ExtensionSetParam}),
  criticality       NBAP-PROTOCOL-EXTENSION.&criticality       ({ExtensionSetParam}{@id}),
  extensionValue    NBAP-PROTOCOL-EXTENSION.&Extension        ({ExtensionSetParam}{@id})
}

-- *****
--
-- Container for Private IEs
--

```

```
-- *****  
  
PrivateIE-Container {NBAP-PRIVATE-IES : IEsSetParam} ::=  
  SEQUENCE (SIZE (1..maxPrivateIEs)) OF  
  PrivateIE-Field {{IEsSetParam}}  
  
PrivateIE-Field {NBAP-PRIVATE-IES : IEsSetParam} ::= SEQUENCE {  
  id          NBAP-PRIVATE-IES.&id  
  ({{IEsSetParam}}),  
  criticality NBAP-PRIVATE-IES.&criticality  
  ({{IEsSetParam}}{@id}),  
  value      NBAP-PRIVATE-IES.&Value  
  ({{IEsSetParam}}{@id})  
}  
  
END
```

9.4 Message Transfer Syntax

NBAP shall use the ASN.1 Basic Packed Encoding Rules (BASIC-PER) Aligned Variant as transfer syntax as specified in ref. [11].

9.5 Timers

$T_{Preempt}$

- Specifies the maximum time that a Node B may wait for pre-emption of resources for establishment or reconfiguration of Radio Links.

10 Handling of unknown, unforeseen and erroneous protocol data

10.1 General

Protocol Error cases can be divided into three classes:

- Transfer Syntax Error
- Abstract Syntax Error
- Logical Error

Protocol errors can occur in the following functions within a receiving node:

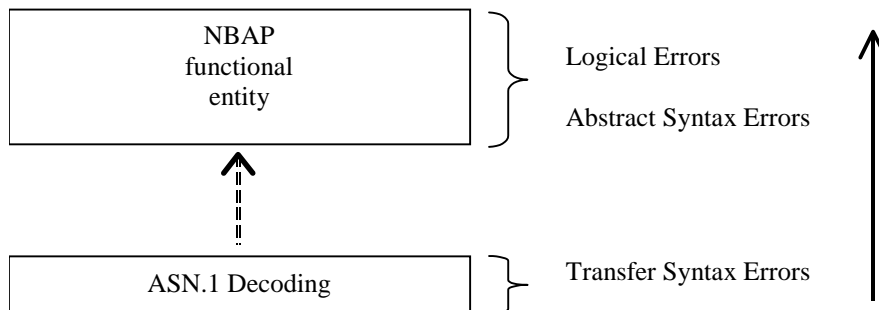


Figure 38: Protocol Errors in NBAP.

10.2 Transfer Syntax Error

A Transfer Syntax Error occurs when the receiver is not able to decode the received physical message. Transfer syntax errors are always detected in the process of ASN.1 decoding. If a Transfer Syntax Error occurs, the receiver should initiate Error Indication procedure with appropriate cause value for the Transfer Syntax protocol error.

Examples for Transfer Syntax Errors are:

- Violation of value ranges in ASN.1 definition of messages. e.g.: If an IE has a defined value range of 0 to 10 (ASN.1: INTEGER (0..10)), and 12 will be received, then this will be treated as a transfer syntax error.
- Violation in list element constraints. e.g.: If a list is defined as containing 1 to 10 elements, and 12 elements will be received, than this case will be handled as a transfer syntax error.
- Missing mandatory elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message).
- Wrong order of elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message).

10.3 Abstract Syntax Error

10.3.1 General

An Abstract Syntax Error occurs when the receiving functional NBAP entity:

1. receives IEs or IE groups that cannot be understood (unknown id);
2. receives IEs for which the logical range is violated (e.g.: ASN.1 definition: 0 to 15, the logical range is 0 to 10 (values 11 to 15 are undefined), and 12 will be received; this case will be handled as an abstract syntax error using criticality information sent by the originator of the message);
3. does not receive IEs or IE groups but according to the specified presence of the concerning object, the IEs or IE groups should have been present in the received message;
4. receives IEs or IE groups that are defined to be part of that message in wrong order or with too many occurrences of the same IE or IE group.

Cases 1 and 2 (not comprehended IE/IE group) are handled based on received Criticality information. Case 3 (missing IE/IE group) is handled based on Criticality information and Presence information for the missing IE/IE group specified in the version of the specification used by the receiver. Case 4 (IEs or IE groups in wrong order or with too many occurrences) results in rejecting the procedure.

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error that belong to cases 1-3 act according to the Criticality Information and Presence Information for the IE/IE group due to which Abstract Syntax Error occurred in accordance with subclauses 10.3.4 and 10.3.5. The handling of case 4 is specified in subclause 10.3.6.

10.3.2 Criticality Information

In the NBAP messages there is criticality information set for individual IEs and/or IE groups. This criticality information instructs the receiver how to act when receiving an IE or an IE group that is not comprehended, i.e. the entire item (IE or IE group) which is not (fully or partially) comprehended shall be treated in accordance with its own criticality information as specified in chapter 10.3.4.

In addition, the criticality information is used in case of the missing IE/IE group abstract syntax error (see subclause 10.3.5).

The receiving node shall take different actions depending on the value of the Criticality Information. The three possible values of the Criticality Information for an IE/IE group are:

- Reject IE
- Ignore IE and Notify Sender
- Ignore IE

The following rules restrict when a receiving entity may consider an IE, an IE group or an EP not comprehended (not implemented), and when action based on criticality information is applicable:

1. IE or IE group: When one new or modified IE or IE group is implemented for one EP from a standard version, then other new or modified IEs or IE groups specified for that EP in that standard version shall be considered comprehended by the receiving entity (some may still remain unsupported).

Note that this restriction is applicable to a sending entity for constructing messages.

2. EP: The comprehension of different EPs within a standard version or between different standard versions is not mandated. Any EP that is not supported may be considered not comprehended, even if another EP from that standard version is comprehended, and action based on criticality shall be applied.

10.3.3 Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, NBAP specifies separately if the presence of these IEs/IE groups is optional or mandatory with respect to RNS application by means of the presence field of the concerning object of class NBAP-PROTOCOL-IES, NBAP-PROTOCOL-IES-PAIR, NBAP-PROTOCOL-EXTENSION or NBAP-PRIVATE-IES.

The presence field of the indicated classes supports three values:

1. Optional;
2. Conditional;
3. Mandatory.

If an IE/IE group is not included in a received message and the presence of the IE/IE group is mandatory or the presence is conditional and the condition is true according to the version of the specification used by the receiver, an abstract syntax error occurs due to a missing IE/IE group.

10.3.4 Not comprehended IE/IE group

10.3.4.1 Procedure ID

The receiving node shall treat the different types of received criticality information of the *Procedure ID* according to the following:

Reject IE:

- If a message is received with a *Procedure ID* marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall reject the procedure using the Error Indication procedure.

Ignore IE and Notify Sender:

- If a message is received with a *Procedure ID* marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the procedure and initiate the Error Indication procedure.

Ignore IE:

- If a message is received with a *Procedure ID* marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the procedure.

When using the Error Indication procedure to reject a procedure or to report an ignored procedure it shall include the *Procedure ID* IE, the *Triggering Message* IE, and the *Procedure Criticality* IE in the *Criticality Diagnostics* IE.

10.3.4.2 IEs other than the Procedure ID

The receiving node shall treat the different types of received criticality information of an IE/IE group other than the *Procedure ID* according to the following:

Reject IE:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the rejection of one or more IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall initiate the Error Indication procedure.
- If a *response* message is received containing one or more IEs/IE groups marked with "*Reject IE*" that the receiving node does not comprehend, the receiving node shall initiate local error handling.

Ignore IE and Notify Sender:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups and report in the response message of the procedure that one or more IEs/IE groups have been ignored.
- if a message *initiating* a procedure that does not have a message to report the outcome of the procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and initiate the Error Indication procedure to report that one or more IEs/IE groups have been ignored.
- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and initiate the Error Indication procedure.

Ignore IE:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using the understood IEs/IE groups.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. The *Repetition Number* IE shall be included in the *Information Element Criticality Diagnostics* IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure ID* IE, the *Triggering Message* IE, *Procedure Criticality* IE, the *Transaction Id* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. The *Repetition Number* IE shall be included in the *Information Element Criticality Diagnostics* IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

10.3.5 Missing IE or IE group

The receiving node shall treat the missing IE/IE group according to the criticality information for the missing IE/IE group in the received message specified in the version of this specification used by the receiver:

Reject IE:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Reject IE*"; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the missing IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure.
- if a received message *initiating* a procedure that does not have a message to report unsuccessful outcome is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall initiate the Error Indication procedure.
- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall initiate local error handling.

Ignore IE and Notify Sender:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and report in the response message of the procedure that one or more IEs/IE groups were missing.

- if a received message *initiating* a procedure that does not have a message to report the outcome of the procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.
- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall initiate the Error Indication procedure.

Ignore IE:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure ID* IE, the *Triggering Message* IE, *Procedure Criticality* IE, the *Transaction Id* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group.

10.3.6 IEs or IE groups received in wrong order or with too many occurrences

If a message with IEs or IE groups in wrong order or with too many occurrences is received, the receiving node shall behave according to the following:

- If a message *initiating* a procedure is received containing IEs or IE groups in wrong order or with too many occurrences, none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the cause value "Abstract Syntax Error (Falsely Constructed Message)" using the message normally used to report unsuccessful outcome of the procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing IEs or IE groups in wrong order or with too many occurrences, the receiving node shall initiate the Error Indication procedure, and use cause value "Abstract Syntax Error (Falsely Constructed Message)".
- If a *response* message is received containing IEs or IE groups in wrong order or with too many occurrences, the receiving node shall initiate local error handling.

10.4 Logical Error

Logical error situations occur when a message is comprehended correctly, but the information contained within the message is not valid (i.e. semantic error), or describes a procedure which is not compatible with the state of the receiver. In these conditions, the following behaviour shall be performed (unless otherwise specified) as defined by the class of the elementary procedure, irrespective of the criticality of the IEs/IE groups containing the erroneous values.

Class 1:

Where the logical error occurs in a request message of a class 1 procedure, and the procedure has a failure message, the failure message shall be sent with an appropriate cause value.

Typical cause values are:

- Protocol Causes:
 1. Semantic Error
 2. Message not compatible with receiver state

Where the logical error is contained in a request message of a class 1 procedure, and the procedure does not have a failure message, the ERROR INDICATION procedure shall be initiated with an appropriate cause value.

Where the logical error exists in a response message of a class 1 procedure, local error handling shall be initiated.

Class 2:

Where the logical error occurs in a message of a class 2 procedure, the ERROR INDICATION procedure shall be initiated with an appropriate cause value.

Annex A (normative): Allocation and Pre-emption of Radio Links in the Node B

A.1 Deriving Allocation Information for a Radio Link

A.1.1 Establishment of a New Radio Link

The Allocation Information for a Radio Link in the case of establishment of a new Radio Link shall be derived as follows:

- The latest received *Allocation/Retention Priority* IE for each transport channel shall be used.

Note: The *Allocation/Retention Priority* IE for a transport channel may have been received in

- a) the procedure that establishes the first Radio Link for the Node B Communication Context in the Node B or
- b) a procedure adding or modifying the transport channel.

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for all transport channels that are intended to use the Radio Link is set to “not used”, the pre-emption capability of the Radio Link shall be set to “shall not trigger pre-emption”.
- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for one or more of the transport channels that are intended to use the Radio Link is not set to “not used”, the allocation priority and the pre-emption capability of the Radio Link shall be set according to the following:
 - The transport channels that have the *Priority Level* IE in the *Allocation/Retention Priority* IE set to “not used” shall be excluded when setting the allocation priority and pre-emption capability of a Radio Link.
 - The allocation priority for a Radio Link shall be set to highest priority level, given by the *Priority Level* IE in the *Allocation/Retention Priority* IE, for all non excluded transport channels that are intended to use the Radio Link.
 - If all non-excluded transport channels that are intended to use a Radio Link to be established have the pre-emption capability, given by the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE, set to “shall not trigger pre-emption”, the pre-emption capability of the Radio Link shall be set to “shall not trigger pre-emption”.
If one or more non-excluded transport channels that are intended to use the Radio Link to be established have the value of the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE set to “may trigger pre-emption”, the pre-emption capability of the Radio Link shall be set to “may trigger pre-emption”.

The derived allocation priority and pre-emption capability are only valid during this allocation/retention process.

A.1.2 Modification of an Existing Radio Link

The Allocation Information for a Radio Link in the case of modification of a Radio Link (addition or modification of transport channels using the Radio Link) shall be derived as follows:

- The latest received *Allocation/Retention Priority* IE for each transport channel shall be used.

Note: The *Allocation/Retention Priority* IE for a transport channel may have been received in

- a) the procedure that establishes the first Radio Link for the Node B Communication Context in the Node B,
- b) a previous procedure adding or modifying the transport channel, or
- c) the current procedure adding or modifying the transport channel.

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for all transport channels to be added or modified in the Radio Link is set to “not used”, the pre-emption capability of the Radio Link to be modified shall be set to “shall not trigger pre-emption”.

- If the *Priority Level IE* in the *Allocation/Retention Priority IE* for one or more of the transport channels to be added or modified in the Radio Link is not set to “not used”, the allocation priority of and the pre-emption capability of the Radio Link to be modified shall be set according to the following:
 - The transport channels to be added or modified that have the *Priority Level IE* in the *Allocation/Retention Priority IE* set to “not used” shall be excluded when setting the allocation priority and pre-emption capability of a Radio Link to be modified.
 - The allocation priority for a Radio Link to be modified shall be set to highest priority level, given by the *Priority Level IE* in the *Allocation/Retention Priority IE*, for all the non-excluded transport channels that are to be added or modified.
 - If all non-excluded transport channels that are to be added or modified in the Radio Link have the pre-emption capability, given by the *Pre-emption Capability IE* in the *Allocation/Retention Priority IE*, set to “shall not trigger pre-emption”, the pre-emption capability of the Radio Link to be modified shall be set to “shall not trigger pre-emption”.
If one or more of the non-excluded transport channels to be added or modified in the Radio Link have the value of the *Pre-emption Capability IE* in the *Allocation/Retention Priority IE* set to “may trigger pre-emption”, the pre-emption capability of the Radio Link to be modified shall be set to “may trigger pre-emption”.

The derived allocation priority and pre-emption capability are only valid during this allocation/retention process.

A.2 Deriving Retention Information for a Radio Link

The Retention Information for an existing Radio Link shall be derived as follows:

- The latest received *Allocation/Retention Priority IE* for each transport channel shall be used.
- Note: The *Allocation/Retention Priority IE* for a transport channel may have been received in
- a) the procedure that establishes the first Radio Link for the Node B Communication Context in the Node B or
 - b) a procedure adding or modifying the transport channel.
- If the *Priority Level IE* in the *Allocation/Retention Priority IE* for one or more transport channels using the Radio Link is set to “not used”, the pre-emption vulnerability of the Radio Link shall be set to “not pre-emptable”.
 - If the *Priority Level IE* in the *Allocation/Retention Priority IE* for all the transport channels using the Radio Link is not set to “not used”, the retention priority of the Radio Link and the pre-emption vulnerability of the Radio Link shall be set according to the following:
 - The retention priority for a Radio Link shall be set to highest priority level, given by the *Priority Level IE* in the *Allocation/Retention Priority IE*, for all transport channels that uses the Radio Link.
 - If all transport channels that uses the Radio Link have the pre-emption vulnerability, given by the *Pre-emption Vulnerability IE* in the *Allocation/Retention Priority IE*, set to “pre-emptable”, the pre-emption vulnerability of the Radio Link shall be set to “pre-emptable”.
If one or more transport channels that uses the Radio Link have the value of the *Pre-emption Vulnerability IE* in the *Allocation/Retention Priority IE* set to “not pre-emptable”, the pre-emption vulnerability of the Radio Link shall be set to “not pre-emptable”.

The derived retention priority and pre-emption vulnerability are valid until they are changed, or until the Radio Link is deleted. When new transport channels are added to or deleted from the Radio Link or when existing transport channels are modified with regards to the *Allocation/Retention Priority IE*, the retention information shall be derived again according to above.

A.3 The Allocation/Retention Process

The Node B shall establish or modify the resources for a Radio Link according to:

- The value of the Allocation Information (allocation priority and pre-emption capability) of the Radio Link to be established or modified. The Allocation Information is derived according to clause A.1.
- The value of the Retention Information (retention priority and pre-emption vulnerability) of existing Radio Links. The Retention Information derived according to clause A.2.
- The resource situation in the cell.

Whilst the process and the extent of the pre-emption functionality is operator dependent, the pre-emption indicators (pre-emption capability and pre-emption vulnerability) shall be treated as follows:

- If the pre-emption capability for a Radio Link to be established or modified is set to “may trigger pre-emption” and the resource situation so requires, the Node B may trigger the pre-emption process in clause A.4 to free resources for this allocation request.
- If the pre-emption capability for a Radio Link to be established or modified is set to “shall not trigger pre-emption”, then this allocation request shall not trigger the pre-emption process in clause A.4.
- If the pre-emption vulnerability for an existing Radio Link is set to “pre-emptable”, then this Radio Link shall be included in the pre-emption process in clause A.4.
- If the pre-emption vulnerability for an existing Radio Link is set to “not pre-emptable”, then this Radio Link shall not be included in the pre-emption process in clause A.4.

A.4 The Pre-emption Process

The pre-emption process shall only pre-empt Radio Links with lower retention priority than the allocation priority of the Radio Link to be established or modified. The Radio Links to be pre-empted shall be selected in ascending order of the retention priority.

When the pre-emption process detects that one or more Radio Links have to be pre-empted to free resources for a Radio Link(s) to be established or modified, the Node B shall initiate the Radio Link Pre-emption procedure for all the Node B Communication Contexts having Radio Links selected for pre-emption and start the T_{Preempt} timer.

When enough resources are freed to establish or modify the Radio Link(s) according to the request, the Node B shall stop the T_{Preempt} timer and complete the procedure that triggered the pre-emption process in accordance with the “Successful Operation” subclause of the procedure.

If the T_{Preempt} timer expires, the Node B shall regard the procedure that triggered the pre-emption process as failed and complete the procedure in accordance with the “Unsuccessful Operation” subclause of the procedure.

Annex B (informative): Change history

Change history					
TSG RAN#	Version	CR	Tdoc RAN	New Version	Subject/Comment
RAN_06	-	-	RP-99764	3.0.0	Approved at TSG RAN #6 and placed under Change Control
RAN_07	3.0.0	-	-	3.1.0	Approved at TSG RAN #7
RAN_08	3.1.0	-	RP-000250	3.2.0	Approved at TSG RAN #8
RAN_08	3.1.0	-	RP-000251	3.2.0	Approved at TSG RAN #8
RAN_08	3.1.0	-	RP-000252	3.2.0	Approved at TSG RAN #8
RAN_08	3.1.0	-	RP-000253	3.2.0	Approved at TSG RAN #8
RAN_09	3.2.0	165-168-170, 173-178, 180-189	RP-000386	3.3.0	Approved at TSG RAN #9
RAN_09	3.2.0	190-200, 203, 205, 207, 208, 211, 214, 218-219	RP-000387	3.3.0	Approved at TSG RAN #9
RAN_09	3.2.0	221-222, 224-228, 233, 244, 246	RP-000388	3.3.0	Approved at TSG RAN #9
RAN_09	3.2.0	247-248	RP-000389	3.3.0	Approved at TSG RAN #9
RAN_10	3.3.0	250-324	RP-000627 RP-000628 RP-000630 RP-000697	3.4.0	Approved at TSG RAN #10
RAN_10	3.4.0			3.4.1	Correct of headers

CR-Form-v3	
CHANGE REQUEST	
⌘ 25.433 CR 379 ⌘ rev 2 ⌘ Current version: 3.4.1 ⌘	

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Erroneous Criticality Diagnostics IE		
Source:	⌘ R-WG3		
Work item code:	⌘	Date:	⌘ 2001-03-02
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ The IE Criticality Diagnostics can't distinguish between multiple occurrences of the same ASN.1 identity within one message. See also Tdoc R3-010834.
Summary of change:	⌘ The possibility to report the message structure down to the erroneous IE is introduced in the Criticality Diagnostics IE.
Consequences if not approved:	⌘ In case the same ASN.1 identity occurs in more than one place/structure within the same message, an error reported with Criticality Diagnostics for this IE will not be unambiguous. Additional information: The proposed change is backwards compatible.

Clauses affected:	⌘ 9.2.1.17, 9.2.1.x, 9.3.4, 9.3.6
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/> <input type="checkbox"/> Test specifications ⌘ <input type="checkbox"/> <input type="checkbox"/> O&M Specifications ⌘ <input type="checkbox"/>
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/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

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

9.2.1.17 Criticality Diagnostics

The *Criticality Diagnostics* IE is sent by a Node B or the CRNC when parts of a received message have not been comprehended or are missing. It contains information about which IE was not comprehended or is missing.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Criticality Diagnostics				
>Procedure ID		0..1		Procedure ID is to be used if Criticality Diagnostics is part of Error Indication procedure, and not within the response message of the same procedure that caused the error
>>Procedure Code	M		INTEGER (0..255)	
>>Ddmode	M		ENUMERATED (FDD, TDD, Common)	Common = common to FDD and TDD.
>Triggering Message	O		ENUMERATED (initiating message, successful outcome, unsuccessful outcome)	The Triggering Message is used only if the Criticality Diagnostics is part of Error Indication.
> Procedure Criticality	O		ENUMERATED (reject, ignore, notify)	This Procedure Criticality is used for reporting the Criticality of the Triggering message (Procedure). The value 'ignore' shall never be used.
>Transaction ID	O		Transaction ID 9.2.1.62	
>Information Element Criticality Diagnostics		0 to <maxnoof errors>		
>>IE Criticality	M		ENUMERATED (reject, ignore, notify)	The IE Criticality is used for reporting the criticality of the triggering IE. The value 'ignore' shall never be used.
>>IE ID	M		INTEGER (0..65535)	The IE ID of the not understood or missing IE
>>Repetition Number	O		INTEGER (1..256)	The repetition number of the not understood IE <u>within the bottom most repetition level identified by the message structure IE</u> , if applicable
<u>>Message Structure</u>	<u>O</u>		<u>9.2.1.x</u>	

Range bound	Explanation
<i>Maxnooferrors</i>	Maximum no. of IE errors allowed to be reported with a single message.

9.2.1.x Message Structure

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>	<u>Criticality</u>	<u>Assigned Criticality</u>
<u>Message structure</u>		1 to <maxnooflevels>		Information given per level with assigned criticality in an hierachical message structure. Given from top level down to the level above the reported level for the occurred error (reported in the <i>Information Element Criticality Diagnostics</i> IE).	<u>GLOBAL</u>	<u>ignore</u>
>IE ID	<u>M</u>		<u>INTEGER (0..65535)</u>	The IE ID of this level's IE containing the not understood or missing IE.	:	
>Repetition Number	<u>O</u>		<u>INTEGER (1..256)</u>	The repetition number of this level's reported IE, if applicable	:	

<u>Range bound</u>	<u>Explanation</u>
<u>maxnooflevels</u>	<u>Maximum no. of message levels to report. The value for maxnooflevels is 256.</u>

9.3.4 Information Elements Definitions

```

--*****
--
-- Information Element Definitions
--
--*****

NBAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS
    maxNrOfTFCs,
    maxNrOfErrors,
    maxCTFC,
    maxNrOfTFs,
    maxTTI-count,
    maxRateMatching,
    maxCodeNrComp-1,
    maxNrOfCodeGroups,
    maxNrOfTFCIGroups,
    maxNrOfTFCI1Combs,
    maxNrOfTFCI2Combs,
    maxNrOfTFCI2Combs-1,
    maxNrOfSF,
    maxTGPS,
    maxNrOfUSCHs,
    maxNrOfULTSs,
    maxNrOfDPCHs,
    maxNrOfCodes,
    maxNrOfDSCHs,
    maxNrOfDLTSS,
    maxNrOfDCHs,
    maxNrOfLevels,
    id-MessageStructure

FROM NBAP-Constants

    Criticality,
    ProcedureID,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage

FROM NBAP-CommonDataTypes

    NBAP-PROTOCOL-IES,
    ProtocolExtensionContainer{},
    ProtocolIE-Single-Container{}

```

```

    NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers;

-- =====
-- A
-- =====

Acknowledged-PCPCH-access-preambles ::= INTEGER (0..15,...)

Acknowledged-PRACH-preambles-Value ::= INTEGER(0..240,...)
-- The number of L1 acknowledged random access tries per every 20 ms period.

AddorDeleteIndicator ::= ENUMERATED {
    add,
    delete
}

Active-Pattern-Sequence-Information ::= SEQUENCE {
    cmConfigurationChangeCFN                CFN,
    transmission-Gap-Pattern-Sequence-Status  Transmission-Gap-Pattern-Sequence-Status-List  OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { {Active-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}

Active-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Transmission-Gap-Pattern-Sequence-Status-List ::= SEQUENCE (SIZE (0..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGPRC           TGPRC,
        tGCFN           CFN,
        iE-Extensions   ProtocolExtensionContainer { { Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs } } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AICH-Power ::= INTEGER (-22..5)
-- Offset in dB.

AICH-TransmissionTiming ::= ENUMERATED {
    v0,
    v1
}

```

```
}
AllocationRetentionPriority ::= SEQUENCE {
    priorityLevel          PriorityLevel,
    pre-emptionCapability  Pre-emptionCapability,
    pre-emptionVulnerability Pre-emptionVulnerability,
    iE-Extensions         ProtocolExtensionContainer { {AllocationRetentionPriority-ExtIEs} } OPTIONAL,
    ...
}
AllocationRetentionPriority-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
APPreambleSignature ::= INTEGER (0..15)
APSubChannelNumber ::= INTEGER (0..11)
AvailabilityStatus ::= ENUMERATED {
    empty,
    in-test,
    failed,
    power-off,
    off-line,
    off-duty,
    dependency,
    degraded,
    not-installed,
    log-full,
    ...
}
-- =====
-- B
-- =====
BCCH-ModificationTime ::= INTEGER (0..511)
-- Time = BCCH-ModificationTime * 8
-- Range 0 to 4088, step 8
-- All SFN values in which MIB may be mapped are allowed
BindingID ::= OCTET STRING (SIZE (1..4, ...))
BetaCD ::= INTEGER (0..15)
BlockingPriorityIndicator ::= ENUMERATED {
    high,
    normal,
    low,
    ...
}
-- High priority: Block resource immediately.
-- Normal priority: Block resource when idle or upon timer expiry.
-- Low priority: Block resource when idle.
```

```
BlockSTTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

-- =====
-- C
-- =====

Cause ::= CHOICE {
    radioNetwork          CauseRadioNetwork,
    transport             CauseTransport,
    protocol              CauseProtocol,
    misc                  CauseMisc,
    ...
}

CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    oam-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    ...
}

CauseProtocol ::= ENUMERATED {
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    message-not-compatible-with-receiver-state,
    semantic-error,
    unspecified,
    abstract-syntax-error-falsely-constructed-message,
    ...
}

CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    r1-already-ActivatedOrAllocated,
    nodeB-Resources-unavailable,
    measurement-not-supported-for-the-object,
    combining-resources-not-available,
    requested-configuration-not-supported,
    synchronisation-failure,
    priority-transport-channel-established,
    sIB-Origination-in-Node-B-not-Supported,
    requested-tx-diversity-mode-not-supported,
    unspecified,
}
```

```

    bCCH-scheduling-error,
    measurement-temporarily-not-available,
    invalid-CM-settings,
    reconfiguration-CFN-not-elapsed,
    number-of-DL-codes-not-supported,
    s-cipch-not-supported,
    combining-not-supported,
    ul-sf-not-supported,
    dl-SF-not-supported,
    common-transport-channel-type-not-supported,
    dedicated-transport-channel-type-not-supported,
    downlink-shared-channel-type-not-supported,
    uplink-shared-channel-type-not-supported,
    cm-not-supported,
    tx-diversity-no-longer-supported,
    unknown-Local-Cell-ID,
    ...
}

CauseTransport ::= ENUMERATED {
    transport-resource-unavailable,
    unspecified,
    ...
}

CCTrCH-ID ::= INTEGER (0..15)

CDSubChannelNumbers ::= BIT STRING (SIZE (12))

CellParameterID ::= INTEGER (0..127,...)

CFN ::= INTEGER (0..255)

Channel-Assignment-Indication ::= ENUMERATED {
    cA-Active,
    cA-Inactive
}

ChipOffset ::= INTEGER (0..38399)
-- Unit Chip

C-ID ::= INTEGER (0..65535)

Closedlooptimingadjustmentmode ::= ENUMERATED {
    adj-1-slot,
    adj-2-slot,
    ...
}

CommonChannelsCapacityConsumptionLaw ::= SEQUENCE (SIZE(1..maxNrOfSF)) OF
SEQUENCE {
    dl-Cost      INTEGER (0..65535),
    ul-Cost      INTEGER (0..65535),
    iE-Extensions ProtocolExtensionContainer { { CommonChannelsCapacityConsumptionLaw-ExtIEs } }
}
OPTIONAL,

```

```

}
...
}
CommonChannelsCapacityConsumptionLaw-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
CommonMeasurementType ::= ENUMERATED {
received-total-wide-band-power,
transmitted-carrier-power,
acknowledged-prach-preambles,
ul-timeslot-iscp,
acknowledged-PCPCH-access-preambles,
detected-PCPCH-access-preambles,
...
}
CommonMeasurementValue ::= CHOICE {
transmitted-carrier-power          Transmitted-Carrier-Power-Value,
received-total-wide-band-power    Received-total-wide-band-power-Value,
acknowledged-prach-preambles      Acknowledged-PRACH-preambles-Value,
uL-TimeslotISCP                   UL-TimeslotISCP-Value,
acknowledged-PCPCH-access-preambles Acknowledged-PCPCH-access-preambles,
detected-PCPCH-access-preambles   Detected-PCPCH-access-preambles,
...
}
CommonMeasurementValueInformation ::= CHOICE {
measurementAvailable      CommonMeasurementAvailable,
measurementnotAvailable   CommonMeasurementnotAvailable
}
CommonMeasurementAvailable ::= SEQUENCE {
commonmeasurementValue    CommonMeasurementValue,
ie-Extensions              ProtocolExtensionContainer { { CommonMeasurementAvailableItem-ExtIEs } } OPTIONAL,
...
}
CommonMeasurementAvailableItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
CommonMeasurementnotAvailable ::= NULL
CommonPhysicalChannelID ::= INTEGER (0..255)
Common-PhysicalChannel-Status-Information ::= SEQUENCE {
commonPhysicalChannelID      CommonPhysicalChannelID,
resourceOperationalState     ResourceOperationalState,
}

```

```
availabilityStatus      AvailabilityStatus,
iE-Extensions           ProtocolExtensionContainer  { { Common-PhysicalChannel-Status-Information-ExtIEs } }      OPTIONAL,
...
}

Common-PhysicalChannel-Status-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

CommonTransportChannelID ::= INTEGER (0..255)

Common-TransportChannel-Status-Information ::= SEQUENCE {
commonTransportChannelID      CommonTransportChannelID,
resourceOperationalState     ResourceOperationalState,
availabilityStatus           AvailabilityStatus,
iE-Extensions                 ProtocolExtensionContainer  { { Common-TransportChannel-Status-Information-ExtIEs } }      OPTIONAL,
...
}

Common-TransportChannel-Status-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

CommunicationControlPortID ::= INTEGER (0..65535)

Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD ::= ENUMERATED {
on,
off
}
-- on=deactivate

ConfigurationGenerationID ::= INTEGER (0..255)
-- Value '0' means "No configuration"

ConstantValue ::= INTEGER (-10..10,...)
-- -10 dB - +10 dB
-- unit dB
-- step 1 dB

CPCH-Allowed-Total-Rate ::= ENUMERATED {
v15,
v30,
v60,
v120,
v240,
v480,
v960,
v1920,
v2880,
v3840,
v4800,
v5760,
...
}
```



```

}
CPCHScramblingCodeNumber ::= INTEGER (0..79)
CPCH-UL-DPCCH-SlotFormat ::= INTEGER (0..2,...)
CriticalityDiagnostics ::= SEQUENCE {
    procedureID          ProcedureID          OPTIONAL,
    triggeringMessage    TriggeringMessage    OPTIONAL,
    procedureCriticality Criticality          OPTIONAL,
    transactionID       TransactionID        OPTIONAL,
    iEsCriticalityDiagnostics CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}
CriticalityDiagnostics-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
    SEQUENCE {
        iECriticality      Criticality,
        iE-ID              ProtocolIE-ID,
        repetitionNumber   RepetitionNumber    OPTIONAL,
        iE-Extensions      ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,
        ...
    }
CriticalityDiagnostics-IE-List-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-MessageStructure CRITICALITY ignore EXTENSION MessageStructure PRESENCE optional },
    ...
}
MessageStructure ::= SEQUENCE (SIZE (1..maxNrOfLevels)) OF
    SEQUENCE {
        iE-ID              ProtocolIE-ID,
        repetitionNumber   RepetitionNumber    OPTIONAL,
        iE-Extensions      ProtocolExtensionContainer { {MessageStructure-ExtIEs} } OPTIONAL,
        ...
    }
MessageStructure-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

9.3.6 Constant Definitions

```

-- *****
--
-- Constant definitions
--
-- *****

NBAP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-Constants (4)}

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    ProcedureCode,
    ProtocolIE-ID
FROM NBAP-CommonDataTypes;

-- *****
--
-- Elementary Procedures
--
-- *****

id-audit                               ProcedureCode ::= 0
id-auditRequired                       ProcedureCode ::= 1
id-blockResource                       ProcedureCode ::= 2
id-cellDeletion                        ProcedureCode ::= 3
id-cellReconfiguration                 ProcedureCode ::= 4
id-cellSetup                           ProcedureCode ::= 5
id-commonMeasurementFailure            ProcedureCode ::= 6
id-commonMeasurementInitiation         ProcedureCode ::= 7
id-commonMeasurementReport             ProcedureCode ::= 8
id-commonMeasurementTermination        ProcedureCode ::= 9
id-commonTransportChannelDelete        ProcedureCode ::= 10
id-commonTransportChannelReconfigure   ProcedureCode ::= 11
id-commonTransportChannelSetup         ProcedureCode ::= 12
id-compressedModeCommand               ProcedureCode ::= 14
id-dedicatedMeasurementFailure         ProcedureCode ::= 16
id-dedicatedMeasurementInitiation      ProcedureCode ::= 17
id-dedicatedMeasurementReport         ProcedureCode ::= 18
id-dedicatedMeasurementTermination     ProcedureCode ::= 19
id-downlinkPowerControl                ProcedureCode ::= 20
id-downlinkPowerTimeslotControl        ProcedureCode ::= 38
id-errorIndicationForCommon            ProcedureCode ::= 35
id-errorIndicationForDedicated        ProcedureCode ::= 21
id-physicalSharedChannelReconfiguration ProcedureCode ::= 37
id-privateMessageForCommon             ProcedureCode ::= 36
id-privateMessageForDedicated          ProcedureCode ::= 22
id-radioLinkAddition                  ProcedureCode ::= 23

```

id-radioLinkDeletion	ProcedureCode ::= 24
id-radioLinkFailure	ProcedureCode ::= 25
id-radioLinkPreemption	ProcedureCode ::= 39
id-radioLinkRestoration	ProcedureCode ::= 26
id-radioLinkSetup	ProcedureCode ::= 27
id-reset	ProcedureCode ::= 13
id-resourceStatusIndication	ProcedureCode ::= 28
id-synchronisedRadioLinkReconfigurationCancellation	ProcedureCode ::= 29
id-synchronisedRadioLinkReconfigurationCommit	ProcedureCode ::= 30
id-synchronisedRadioLinkReconfigurationPreparation	ProcedureCode ::= 31
id-systemInformationUpdate	ProcedureCode ::= 32
id-unblockResource	ProcedureCode ::= 33
id-unSynchronisedRadioLinkReconfiguration	ProcedureCode ::= 34

```
-- *****
--
-- Lists
--
-- *****
```

maxNrOfCodes	INTEGER ::= 10
maxNrOfDLTSs	INTEGER ::= 15
maxNrOfDLCodes	INTEGER ::= 8
maxNrOfErrors	INTEGER ::= 256
maxNrOfTFs	INTEGER ::= 32
maxNrOfTFCs	INTEGER ::= 1024
maxNrOfRLs	INTEGER ::= 16
maxNrOfRLSets	INTEGER ::= maxNrOfRLs
maxNrOfDPCHs	INTEGER ::= 240
maxNrOfSCCPCHs	INTEGER ::= 8
maxNrOfCPCHs	INTEGER ::= 4
maxNrOfPCPCHs	INTEGER ::= 64
maxNrOfDCHs	INTEGER ::= 128
maxNrOfDSCHs	INTEGER ::= 32
maxNrOfFACHs	INTEGER ::= 8
maxNrOfCCTrCHs	INTEGER ::= 16
maxNrOfPDSCHs	INTEGER ::= 256
maxNrOfPUSCHs	INTEGER ::= 256
maxNrOfPDSCHSets	INTEGER ::= 256
maxNrOfPUSCHSets	INTEGER ::= 256
maxNrOfULTSs	INTEGER ::= 15
maxNrOfUSCHs	INTEGER ::= 32
maxAPSigNum	INTEGER ::= 16
maxNrOfSlotFormatsPRACH	INTEGER ::= 8
maxCellInNodeB	INTEGER ::= 256
maxCCPinNodeB	INTEGER ::= 256
maxCPCHCell	INTEGER ::= maxNrOfCPCHs
maxCTFC	INTEGER ::= 16777215
maxLocalCellInNodeB	INTEGER ::= maxCellInNodeB
maxNoofLen	INTEGER ::= 7
maxRACHCell	INTEGER ::= maxPRACHCell
maxPRACHCell	INTEGER ::= 16
maxPCPCHCell	INTEGER ::= 64
maxSCCPCHCell	INTEGER ::= 32

```

maxSCPICHCell          INTEGER ::= 32
maxTTI-count           INTEGER ::= 4
maxIBSEG               INTEGER ::= 16
maxIB                  INTEGER ::= 64
maxFACHCell            INTEGER ::= 256 -- maxNrOfFACHs * maxSCCPCHCell
maxRateMatching        INTEGER ::= 256
maxCodeNrComp-1        INTEGER ::= 256
maxNrOfCodeGroups      INTEGER ::= 256
maxNrOfTFCIGroups      INTEGER ::= 256
maxNrOfTFCI1Combs      INTEGER ::= 512
maxNrOfTFCI2Combs      INTEGER ::= 1024
maxNrOfTFCI2Combs-1    INTEGER ::= 1023
maxNrOfSF              INTEGER ::= 8
maxTGPS               INTEGER ::= 6
maxCommunicationContext INTEGER ::= 1048575
maxNrOfLevels          INTEGER ::= 256

```

-- *****

--

-- IEs

--

-- *****

```

id-AICH-Information          ProtocolIE-ID ::= 0
id-AICH-InformationItem-ResourceStatusInd ProtocolIE-ID ::= 1
id-BCH-Information          ProtocolIE-ID ::= 7
id-BCH-InformationItem-ResourceStatusInd ProtocolIE-ID ::= 8
id-BCCH-ModificationTime    ProtocolIE-ID ::= 9
id-BlockingPriorityIndicator ProtocolIE-ID ::= 10
id-Cause                    ProtocolIE-ID ::= 13
id-CCP-InformationItem-AuditRsp ProtocolIE-ID ::= 14
id-CCP-InformationList-AuditRsp ProtocolIE-ID ::= 15
id-CCP-InformationItem-ResourceStatusInd ProtocolIE-ID ::= 16
id-Cell-InformationItem-AuditRsp ProtocolIE-ID ::= 17
id-Cell-InformationItem-ResourceStatusInd ProtocolIE-ID ::= 18
id-Cell-InformationList-AuditRsp ProtocolIE-ID ::= 19
id-CellParameterID         ProtocolIE-ID ::= 23
id-CFN                      ProtocolIE-ID ::= 24
id-C-ID                     ProtocolIE-ID ::= 25
id-CommonMeasurementObjectType-CM-Rprt ProtocolIE-ID ::= 31
id-CommonMeasurementObjectType-CM-Rqst ProtocolIE-ID ::= 32
id-CommonMeasurementObjectType-CM-Rsp ProtocolIE-ID ::= 33
id-CommonMeasurementType    ProtocolIE-ID ::= 34
id-CommonPhysicalChannelID  ProtocolIE-ID ::= 35
id-CommonPhysicalChannelType-CTCH-SetupRqstFDD ProtocolIE-ID ::= 36
id-CommonPhysicalChannelType-CTCH-SetupRqstTDD ProtocolIE-ID ::= 37
id-CommonTransportChannelType-CTCH-ReconfRqstTDD ProtocolIE-ID ::= 38
id-CommunicationControlPortID ProtocolIE-ID ::= 40
id-ConfigurationGenerationID ProtocolIE-ID ::= 43
id-CRNC-CommunicationContextID ProtocolIE-ID ::= 44
id-CriticalityDiagnostics   ProtocolIE-ID ::= 45
id-DCHs-to-Add-FDD         ProtocolIE-ID ::= 48
id-DCH-AddList-RL-ReconfPrepTDD ProtocolIE-ID ::= 49
id-DCHs-to-Add-TDD         ProtocolIE-ID ::= 50

```

id-DCH-DeleteList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 52
id-DCH-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 53
id-DCH-DeleteList-RL-ReconfRqstFDD	ProtocolIE-ID ::= 54
id-DCH-DeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 55
id-DCH-FDD-Information	ProtocolIE-ID ::= 56
id-DCH-TDD-Information	ProtocolIE-ID ::= 57
id-DCH-InformationResponse	ProtocolIE-ID ::= 59
id-FDD-DCHs-to-Modify	ProtocolIE-ID ::= 62
id-TDD-DCHs-to-Modify	ProtocolIE-ID ::= 63
id-DCH-ModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 65
id-DedicatedMeasurementObjectType-DM-Rprt	ProtocolIE-ID ::= 67
id-DedicatedMeasurementObjectType-DM-Rqst	ProtocolIE-ID ::= 68
id-DedicatedMeasurementObjectType-DM-Rsp	ProtocolIE-ID ::= 69
id-DedicatedMeasurementType	ProtocolIE-ID ::= 70
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD	ProtocolIE-ID ::= 72
id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD	ProtocolIE-ID ::= 73
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 76
id-DL-DPCH-InformationItem-RL-AdditionRqstTDD	ProtocolIE-ID ::= 77
id-DL-DPCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 79
id-DL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 81
id-DL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 82
id-DL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 83
id-DL-ReferencePowerInformationItem-DL-PC-Rqst	ProtocolIE-ID ::= 84
id-DLReferencePower	ProtocolIE-ID ::= 85
id-DLReferencePowerList-DL-PC-Rqst	ProtocolIE-ID ::= 86
id-DSCH-AddItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 87
id-DSCH-AddItem-RL-ReconfRqstFDD	ProtocolIE-ID ::= 88
id-DSCHs-to-Add-FDD	ProtocolIE-ID ::= 89
id-DSCH-DeleteItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 91
id-DSCH-DeleteItem-RL-ReconfRqstFDD	ProtocolIE-ID ::= 92
id-DSCH-DeleteList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 93
id-DSCH-ID	ProtocolIE-ID ::= 95
id-DSCHs-to-Add-TDD	ProtocolIE-ID ::= 96
id-DSCH-Information-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 98
id-DSCH-Information-ModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 100
id-DSCH-InformationResponse	ProtocolIE-ID ::= 105
id-DSCH-FDD-Information	ProtocolIE-ID ::= 106
id-DSCH-TDD-Information	ProtocolIE-ID ::= 107
id-DSCH-ModifyItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 108
id-DSCH-ModifyItem-RL-ReconfRqstFDD	ProtocolIE-ID ::= 109
id-DSCH-ModifyList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 112
id-End-Of-Audit-Sequence-Indicator	ProtocolIE-ID ::= 113
id-FACH-Information	ProtocolIE-ID ::= 116
id-FACH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 117
id-FACHItem-CTCH-SetupRsp	ProtocolIE-ID ::= 118
id-FACH-ParametersList-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 120
id-FACH-ParametersListIE-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 121
id-FACH-ParametersListIE-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 122
id-IndicationType-ResourceStatusInd	ProtocolIE-ID ::= 123
id-Local-Cell-ID	ProtocolIE-ID ::= 124
id-Local-Cell-Group-InformationItem-AuditRsp	ProtocolIE-ID ::= 2
id-Local-Cell-Group-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 3
id-Local-Cell-Group-InformationItem2-ResourceStatusInd	ProtocolIE-ID ::= 4
id-Local-Cell-Group-InformationList-AuditRsp	ProtocolIE-ID ::= 5

id-Local-Cell-InformationItem-AuditRsp	ProtocolIE-ID ::= 125
id-Local-Cell-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 126
id-Local-Cell-InformationItem2-ResourceStatusInd	ProtocolIE-ID ::= 127
id-Local-Cell-InformationList-AuditRsp	ProtocolIE-ID ::= 128
id-AdjustmentPeriod	ProtocolIE-ID ::= 129
id-MaxAdjustmentStep	ProtocolIE-ID ::= 130
id-MaximumTransmissionPower	ProtocolIE-ID ::= 131
id-MeasurementFilterCoefficient	ProtocolIE-ID ::= 132
id-MeasurementID	ProtocolIE-ID ::= 133
<u>id-MessageStructure</u>	<u>ProtocolIE-ID ::= 115</u>
id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst	ProtocolIE-ID ::= 134
id-NodeB-CommunicationContextID	ProtocolIE-ID ::= 143
id-P-CCPCH-Information	ProtocolIE-ID ::= 144
id-P-CCPCH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 145
id-P-CPICH-Information	ProtocolIE-ID ::= 146
id-P-CPICH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 147
id-P-SCH-Information	ProtocolIE-ID ::= 148
id-PCCPCH-Information-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 150
id-PCCPCH-Information-Cell-SetupRqstTDD	ProtocolIE-ID ::= 151
id-PCH-Parameters-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 155
id-PCH-ParametersItem-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 156
id-PCH-ParametersItem-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 157
id-PCH-Information	ProtocolIE-ID ::= 158
id-PD	ProtocolIE-ID ::= 160
id-PDSCH-Information-AddListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 161
id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 162
id-PDSCHSets-AddList-PSCH-ReconfRqst	ProtocolIE-ID ::= 163
id-PDSCHSets-DeleteList-PSCH-ReconfRqst	ProtocolIE-ID ::= 164
id-PDSCHSets-ModifyList-PSCH-ReconfRqst	ProtocolIE-ID ::= 165
id-PICH-Information	ProtocolIE-ID ::= 166
id-PICH-Parameters-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 168
id-PowerAdjustmentType	ProtocolIE-ID ::= 169
id-PRACH-Information	ProtocolIE-ID ::= 170
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 175
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 176
id-PrimaryCPICH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 177
id-PrimaryCPICH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 178
id-PrimarySCH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 179
id-PrimarySCH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 180
id-PrimaryScramblingCode	ProtocolIE-ID ::= 181
id-ProcedureScopeType-DL-PC-Rqst	ProtocolIE-ID ::= 182
id-SCH-Information-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 183
id-SCH-Information-Cell-SetupRqstTDD	ProtocolIE-ID ::= 184
id-PUSCH-Information-AddListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 185
id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 186
id-PUSCHSets-AddList-PSCH-ReconfRqst	ProtocolIE-ID ::= 187
id-PUSCHSets-DeleteList-PSCH-ReconfRqst	ProtocolIE-ID ::= 188
id-PUSCHSets-ModifyList-PSCH-ReconfRqst	ProtocolIE-ID ::= 189
id-RACH-Information	ProtocolIE-ID ::= 190
id-RACHItem-CTCH-SetupRsp	ProtocolIE-ID ::= 192
id-RACH-ParametersItem-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 196
id-RACH-ParameterItem-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 197
id-ReportCharacteristics	ProtocolIE-ID ::= 198
id-Reporting-Object-RL-FailureInd	ProtocolIE-ID ::= 199

id-Reporting-Object-RL-RestoreInd	ProtocolIE-ID ::= 200
id-RL-ID	ProtocolIE-ID ::= 201
id-RL-InformationItem-DM-Rprt	ProtocolIE-ID ::= 202
id-RL-InformationItem-DM-Rqst	ProtocolIE-ID ::= 203
id-RL-InformationItem-DM-Rsp	ProtocolIE-ID ::= 204
id-RL-InformationItem-RL-AdditionRqstFDD	ProtocolIE-ID ::= 205
id-RL-informationItem-RL-DeletionRqst	ProtocolIE-ID ::= 206
id-RL-InformationItem-RL-FailureInd	ProtocolIE-ID ::= 207
id-RL-InformationItem-RL-PreemptRequiredInd	ProtocolIE-ID ::= 286
id-RL-InformationItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 208
id-RL-InformationItem-RL-ReconfRqstFDD	ProtocolIE-ID ::= 209
id-RL-InformationItem-RL-RestoreInd	ProtocolIE-ID ::= 210
id-RL-InformationItem-RL-SetupRqstFDD	ProtocolIE-ID ::= 211
id-RL-InformationList-RL-AdditionRqstFDD	ProtocolIE-ID ::= 212
id-RL-informationList-RL-DeletionRqst	ProtocolIE-ID ::= 213
id-RL-InformationList-RL-PreemptRequiredInd	ProtocolIE-ID ::= 237
id-RL-InformationList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 214
id-RL-InformationList-RL-ReconfRqstFDD	ProtocolIE-ID ::= 215
id-RL-InformationList-RL-SetupRqstFDD	ProtocolIE-ID ::= 216
id-RL-InformationResponseItem-RL-AdditionRspFDD	ProtocolIE-ID ::= 217
id-RL-InformationResponseItem-RL-ReconfReady	ProtocolIE-ID ::= 218
id-RL-InformationResponseItem-RL-ReconfRsp	ProtocolIE-ID ::= 219
id-RL-InformationResponseItem-RL-SetupRspFDD	ProtocolIE-ID ::= 220
id-RL-InformationResponseList-RL-AdditionRspFDD	ProtocolIE-ID ::= 221
id-RL-InformationResponseList-RL-ReconfReady	ProtocolIE-ID ::= 222
id-RL-InformationResponseList-RL-ReconfRsp	ProtocolIE-ID ::= 223
id-RL-InformationResponseList-RL-SetupRspFDD	ProtocolIE-ID ::= 224
id-RL-InformationResponse-RL-AdditionRspTDD	ProtocolIE-ID ::= 225
id-RL-InformationResponse-RL-SetupRspTDD	ProtocolIE-ID ::= 226
id-RL-Information-RL-AdditionRqstTDD	ProtocolIE-ID ::= 227
id-RL-Information-RL-ReconfRqstTDD	ProtocolIE-ID ::= 228
id-RL-Information-RL-ReconfPrepTDD	ProtocolIE-ID ::= 229
id-RL-Information-RL-SetupRqstTDD	ProtocolIE-ID ::= 230
id-RL-ReconfigurationFailureItem-RL-ReconfFailure	ProtocolIE-ID ::= 236
id-RL-Set-InformationItem-DM-Rprt	ProtocolIE-ID ::= 238
id-RL-Set-InformationItem-DM-Rsp	ProtocolIE-ID ::= 240
id-RL-Set-InformationItem-RL-FailureInd	ProtocolIE-ID ::= 241
id-RL-Set-InformationItem-RL-RestoreInd	ProtocolIE-ID ::= 242
id-S-CCPCH-Information	ProtocolIE-ID ::= 247
id-S-CPICH-Information	ProtocolIE-ID ::= 249
id-SCH-Information	ProtocolIE-ID ::= 251
id-S-SCH-Information	ProtocolIE-ID ::= 253
id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 257
id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 258
id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 259
id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 260
id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD	ProtocolIE-ID ::= 261
id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 262
id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD	ProtocolIE-ID ::= 263
id-SecondarySCH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 264
id-SecondarySCH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 265
id-SegmentInformationListIE-SystemInfoUpdate	ProtocolIE-ID ::= 266
id-SFN	ProtocolIE-ID ::= 268
id-ShutdownTimer	ProtocolIE-ID ::= 269

id-Start-Of-Audit-Sequence-Indicator	ProtocolIE-ID ::= 114
id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD	ProtocolIE-ID ::= 270
id-Successful-RL-InformationRespItem-RL-SetupFailureFDD	ProtocolIE-ID ::= 271
id-Successful-RL-InformationRespList-RL-AdditionFailureFDD	ProtocolIE-ID ::= 272
id-Successful-RL-InformationRespList-RL-SetupFailureFDD	ProtocolIE-ID ::= 273
id-SyncCase	ProtocolIE-ID ::= 274
id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH	ProtocolIE-ID ::= 275
id-T-Cell	ProtocolIE-ID ::= 276
id-TimeSlotConfigurationList-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 277
id-TimeSlotConfigurationList-Cell-SetupRqstTDD	ProtocolIE-ID ::= 278
id-TransmissionDiversityApplied	ProtocolIE-ID ::= 279
id-UARFCNforNt	ProtocolIE-ID ::= 280
id-UARFCNforNd	ProtocolIE-ID ::= 281
id-UARFCNforNu	ProtocolIE-ID ::= 282
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD	ProtocolIE-ID ::= 284
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD	ProtocolIE-ID ::= 285
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 288
id-UL-DPCH-InformationItem-RL-AdditionRqstTDD	ProtocolIE-ID ::= 289
id-UL-DPCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 291
id-UL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 293
id-UL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 294
id-UL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 295
id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD	ProtocolIE-ID ::= 296
id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD	ProtocolIE-ID ::= 297
id-Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD	ProtocolIE-ID ::= 298
id-Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD	ProtocolIE-ID ::= 299
id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD	ProtocolIE-ID ::= 300
id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD	ProtocolIE-ID ::= 301
id-USCH-Information-Add	ProtocolIE-ID ::= 302
id-USCH-Information-AddList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 303
id-USCH-Information-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 304
id-USCH-Information-DeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 305
id-USCH-Information-ModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 306
id-USCH-Information-ModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 307
id-USCH-InformationResponse	ProtocolIE-ID ::= 309
id-USCH-Information	ProtocolIE-ID ::= 310
id-Active-Pattern-Sequence-Information	ProtocolIE-ID ::= 315
id-AICH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 316
id-AdjustmentRatio	ProtocolIE-ID ::= 317
id-AP-AICH-Information	ProtocolIE-ID ::= 320
id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 322
id-FACH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 323
id-CauseLevel-PSCH-ReconfFailureTDD	ProtocolIE-ID ::= 324
id-CauseLevel-RL-AdditionFailureFDD	ProtocolIE-ID ::= 325
id-CauseLevel-RL-AdditionFailureTDD	ProtocolIE-ID ::= 326
id-CauseLevel-RL-ReconfFailure	ProtocolIE-ID ::= 327
id-CauseLevel-RL-SetupFailureFDD	ProtocolIE-ID ::= 328
id-CauseLevel-RL-SetupFailureTDD	ProtocolIE-ID ::= 329
id-CDCA-ICH-Information	ProtocolIE-ID ::= 330
id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 332
id-Closed-Loop-Timing-Adjustment-Mode	ProtocolIE-ID ::= 333
id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 334
id-Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD	ProtocolIE-ID ::= 335
id-CPCH-Information	ProtocolIE-ID ::= 336

id-CPCH-Parameters-CTCH-SetupRsp	ProtocolIE-ID ::= 342
id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 343
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 346
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 347
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 348
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 349
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 350
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 351
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 352
id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 353
id-DL-DPCH-InformationDeleteListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 354
id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 355
id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 356
id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 357
id-DL-TPC-Pattern01Count	ProtocolIE-ID ::= 358
id-DPCHConstant	ProtocolIE-ID ::= 359
id-FACH-ParametersList-CTCH-SetupRsp	ProtocolIE-ID ::= 362
id-Limited-power-increase-information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 369
id-PCH-Parameters-CTCH-SetupRsp	ProtocolIE-ID ::= 374
id-PCH-ParametersItem-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 375
id-PCPCH-Information	ProtocolIE-ID ::= 376
id-PCPCH-ParametersList-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 379
id-PICH-ParametersItem-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 380
id-PRACHConstant	ProtocolIE-ID ::= 381
id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 383
id-PUSCHConstant	ProtocolIE-ID ::= 384
id-RACH-Parameters-CTCH-SetupRsp	ProtocolIE-ID ::= 385
id-Synchronisation-Configuration-Cell-ReconfRqst	ProtocolIE-ID ::= 393
id-Synchronisation-Configuration-Cell-SetupRqst	ProtocolIE-ID ::= 394
id-Transmission-Gap-Pattern-Sequence-Information	ProtocolIE-ID ::= 395
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 396
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 397
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 398
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 399
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 400
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 401
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 402
id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 403
id-UL-DPCH-InformationDeleteListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 404
id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 405
id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 406
id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 407
id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD	ProtocolIE-ID ::= 408
id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD	ProtocolIE-ID ::= 409
id-CommunicationContextInfoItem-Reset	ProtocolIE-ID ::= 412
id-CommunicationControlPortInfoItem-Reset	ProtocolIE-ID ::= 414
id-ResetIndicator	ProtocolIE-ID ::= 416
id-TFCI2-Bearer-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 417
id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD	ProtocolIE-ID ::= 418
id-TFCI2-BearerInformationResponse	ProtocolIE-ID ::= 419
id-TimingAdvanceApplied	ProtocolIE-ID ::= 287
id-CFNReportingIndicator	ProtocolIE-ID ::= 6
id-SFNReportingIndicator	ProtocolIE-ID ::= 11
id-InnerLoopDLPCStatus	ProtocolIE-ID ::= 12

id-TimeslotISCPInfoList-DL-PC-RqstTDD
id-PICH-ParametersItem-CTCH-SetupRqstTDD
id-PRACH-ParametersItem-CTCH-SetupRqstTDD

ProtocolIE-ID ::= 283
ProtocolIE-ID ::= 167
ProtocolIE-ID ::= 20

END

CHANGE REQUEST

⌘ **25.433 CR 383** ⌘ rev **-** ⌘ Current version: **3.4.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘	Handling of Not Comprehended and Missing IEs Leading to Incapability to Compile a Response Message	
Source:	⌘	R-WG3	
Work item code:	⌘		Date: ⌘ February, 2001
Category:	⌘	F	Release: ⌘ R99
		<p>Use <u>one</u> of the following categories:</p> <p>F (essential correction)</p> <p>A (corresponds to a correction in an earlier release)</p> <p>B (Addition of feature),</p> <p>C (Functional modification of feature)</p> <p>D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>REL-4 (Release 4)</p> <p>REL-5 (Release 5)</p>

Reason for change:	⌘	In the current NBAP specification it is not 100% clear what happens to a procedure in the cases of not comprehending or missing certain IEs (marked with criticality reject or notify) if the information received is not sufficient to include all the mandatory contents of the response message. In this case it would consequently not be possible to use the procedure messages to report the non-comprehended or missing IE.
Summary of change:	⌘	The CR clarifies that if the information received is not sufficient to include all the mandatory contents of the response message in the cases of <ul style="list-style-type: none"> a) not comprehending or missing certain IEs (marked with criticality reject or notify) or b) a falsely constructed message, e.g. where duplication of IEs leads to confusion (e.g. due to duplicated IEs having different values) then the node shall terminate the procedure and initiate the Error Indication procedure.
Consequences if not approved:	⌘	If this CR is not approved the above described unclear situation will remain in the specification. <p>Backward compatibility: This CR is backward compatible with the only "reasonable" use of the previous version of NBAP. However, different interpretation may exist causing inter-working problems.</p>

Clauses affected:	⌘	10.
Other specs affected:	⌘	<input type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/> Test specifications <input type="checkbox"/> 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/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☹ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

10 Handling of unknown, unforeseen and erroneous protocol data

10.1 General

Protocol Error cases can be divided into three classes:

- Transfer Syntax Error
- Abstract Syntax Error
- Logical Error

Protocol errors can occur in the following functions within a receiving node:

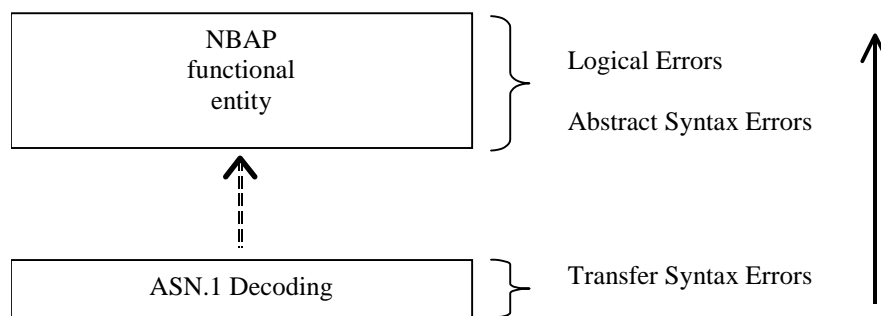


Figure 38: Protocol Errors in NBAP.

10.2 Transfer Syntax Error

A Transfer Syntax Error occurs when the receiver is not able to decode the received physical message. Transfer syntax errors are always detected in the process of ASN.1 decoding. If a Transfer Syntax Error occurs, the receiver should initiate Error Indication procedure with appropriate cause value for the Transfer Syntax protocol error.

Examples for Transfer Syntax Errors are:

- Violation of value ranges in ASN.1 definition of messages. e.g.: If an IE has a defined value range of 0 to 10 (ASN.1: INTEGER (0..10)), and 12 will be received, then this will be treated as a transfer syntax error.
- Violation in list element constraints. e.g.: If a list is defined as containing 1 to 10 elements, and 12 elements will be received, than this case will be handled as a transfer syntax error.
- Missing mandatory elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message).
- Wrong order of elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message).

10.3 Abstract Syntax Error

10.3.1 General

An Abstract Syntax Error occurs when the receiving functional NBAP entity:

1. receives IEs or IE groups that cannot be understood (unknown id);
2. receives IEs for which the logical range is violated (e.g.: ASN.1 definition: 0 to 15, the logical range is 0 to 10 (values 11 to 15 are undefined), and 12 will be received; this case will be handled as an abstract syntax error using criticality information sent by the originator of the message);

3. does not receive IEs or IE groups but according to the specified presence of the concerning object, the IEs or IE groups should have been present in the received message;
4. receives IEs or IE groups that are defined to be part of that message in wrong order or with too many occurrences of the same IE or IE group.

Cases 1 and 2 (not comprehended IE/IE group) are handled based on received Criticality information. Case 3 (missing IE/IE group) is handled based on Criticality information and Presence information for the missing IE/IE group specified in the version of the specification used by the receiver. Case 4 (IEs or IE groups in wrong order or with too many occurrences) results in rejecting the procedure.

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error that belong to cases 1-3 act according to the Criticality Information and Presence Information for the IE/IE group due to which Abstract Syntax Error occurred in accordance with subclauses 10.3.4 and 10.3.5. The handling of case 4 is specified in subclause 10.3.6.

10.3.2 Criticality Information

In the NBAP messages there is criticality information set for individual IEs and/or IE groups. This criticality information instructs the receiver how to act when receiving an IE or an IE group that is not comprehended, i.e. the entire item (IE or IE group) which is not (fully or partially) comprehended shall be treated in accordance with its own criticality information as specified in chapter 10.3.4.

In addition, the criticality information is used in case of the missing IE/IE group abstract syntax error (see subclause 10.3.5).

The receiving node shall take different actions depending on the value of the Criticality Information. The three possible values of the Criticality Information for an IE/IE group are:

- Reject IE
- Ignore IE and Notify Sender
- Ignore IE

The following rules restrict when a receiving entity may consider an IE, an IE group or an EP not comprehended (not implemented), and when action based on criticality information is applicable:

1. IE or IE group: When one new or modified IE or IE group is implemented for one EP from a standard version, then other new or modified IEs or IE groups specified for that EP in that standard version shall be considered comprehended by the receiving entity (some may still remain unsupported).

Note that this restriction is applicable to a sending entity for constructing messages.

2. EP: The comprehension of different EPs within a standard version or between different standard versions is not mandated. Any EP that is not supported may be considered not comprehended, even if another EP from that standard version is comprehended, and action based on criticality shall be applied.

10.3.3 Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, NBAP specifies separately if the presence of these IEs/IE groups is optional or mandatory with respect to RNS application by means of the presence field of the concerning object of class NBAP-PROTOCOL-IES, NBAP-PROTOCOL-IES-PAIR, NBAP-PROTOCOL-EXTENSION or NBAP-PRIVATE-IES.

The presence field of the indicated classes supports three values:

1. Optional;
2. Conditional;
3. Mandatory.

If an IE/IE group is not included in a received message and the presence of the IE/IE group is mandatory or the presence is conditional and the condition is true according to the version of the specification used by the receiver, an abstract syntax error occurs due to a missing IE/IE group.

10.3.4 Not comprehended IE/IE group

10.3.4.1 Procedure ID

The receiving node shall treat the different types of received criticality information of the *Procedure ID* according to the following:

Reject IE:

- If a message is received with a *Procedure ID* marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall reject the procedure using the Error Indication procedure.

Ignore IE and Notify Sender:

- If a message is received with a *Procedure ID* marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the procedure and initiate the Error Indication procedure.

Ignore IE:

- If a message is received with a *Procedure ID* marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the procedure.

When using the Error Indication procedure to reject a procedure or to report an ignored procedure it shall include the *Procedure ID IE*, the *Triggering Message IE*, and the *Procedure Criticality IE* in the *Criticality Diagnostics IE*.

10.3.4.2 IEs other than the Procedure ID

The receiving node shall treat the different types of received criticality information of an IE/IE group other than the *Procedure ID* according to the following:

Reject IE:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the rejection of one or more IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall initiate the Error Indication procedure.
- If a *response* message is received containing one or more IEs/IE groups marked with "*Reject IE*" that the receiving node does not comprehend, the receiving node shall initiate local error handling.

Ignore IE and Notify Sender:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups and report in the response message of the procedure that one or more IEs/IE groups have been ignored. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- if a message *initiating* a procedure that does not have a message to report the outcome of the procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and initiate the Error Indication procedure to report that one or more IEs/IE groups have been ignored.
- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and initiate the Error Indication procedure.

Ignore IE:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using the understood IEs/IE groups.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. The *Repetition Number* IE shall be included in the *Information Element Criticality Diagnostics* IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure ID* IE, the *Triggering Message* IE, *Procedure Criticality* IE, the *Transaction Id* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. The *Repetition Number* IE shall be included in the *Information Element Criticality Diagnostics* IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

10.3.5 Missing IE or IE group

The receiving node shall treat the missing IE/IE group according to the criticality information for the missing IE/IE group in the received message specified in the version of this specification used by the receiver:

Reject IE:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Reject IE*"; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the missing IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- if a received message *initiating* a procedure that does not have a message to report unsuccessful outcome is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall initiate the Error Indication procedure.
- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall initiate local error handling.

Ignore IE and Notify Sender:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and report in the response message of the procedure that one or more IEs/IE groups were missing. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- if a received message *initiating* a procedure that does not have a message to report the outcome of the procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.

- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall initiate the Error Indication procedure.

Ignore IE:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure ID* IE, the *Triggering Message* IE, *Procedure Criticality* IE, the *Transaction Id* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group.

10.3.6 IEs or IE groups received in wrong order or with too many occurrences

If a message with IEs or IE groups in wrong order or with too many occurrences is received, the receiving node shall behave according to the following:

- If a message *initiating* a procedure is received containing IEs or IE groups in wrong order or with too many occurrences, none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the cause value "Abstract Syntax Error (Falsely Constructed Message)" using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing IEs or IE groups in wrong order or with too many occurrences, the receiving node shall initiate the Error Indication procedure, and use cause value "Abstract Syntax Error (Falsely Constructed Message)".
- If a *response* message is received containing IEs or IE groups in wrong order or with too many occurrences, the receiving node shall initiate local error handling.

10.4 Logical Error

Logical error situations occur when a message is comprehended correctly, but the information contained within the message is not valid (i.e. semantic error), or describes a procedure which is not compatible with the state of the receiver. In these conditions, the following behaviour shall be performed (unless otherwise specified) as defined by the class of the elementary procedure, irrespective of the criticality of the IEs/IE groups containing the erroneous values.

Class 1:

Where the logical error occurs in a request message of a class 1 procedure, and the procedure has a failure message, the failure message shall be sent with an appropriate cause value.

Typical cause values are:

- Protocol Causes:
 1. Semantic Error
 2. Message not compatible with receiver state

Where the logical error is contained in a request message of a class 1 procedure, and the procedure does not have a failure message, the ERROR INDICATION procedure shall be initiated with an appropriate cause value.

Where the logical error exists in a response message of a class 1 procedure, local error handling shall be initiated.

Class 2:

Where the logical error occurs in a message of a class 2 procedure, the ERROR INDICATION procedure shall be initiated with an appropriate cause value.

CHANGE REQUEST

⌘ 25.433 CR 385 ⌘ rev 2 ⌘ Current version: 3.4.1 ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Node B resources model		
Source:	⌘ R-WG3		
Work item code:	⌘	Date:	⌘ 26-02-2001
Category:	⌘ F	Release:	⌘ R99

Use one of the following categories:

- F** (essential 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:

- 2 (GSM Phase 2)
- R96 (Release 1996)
- R97 (Release 1997)
- R98 (Release 1998)
- R99 (Release 1999)
- REL-4 (Release 4)
- REL-5 (Release 5)

Reason for change: ⌘ The description of the credit mechanism is incomplete:

- The DSCH cost is currently not taken into account,
- In uplink, the spreading factor can change on a frame per frame basis and therefore the allocated spreading factor is not present in the radio link or common transport channel procedures. The cost can therefore not be computed from this allocated spreading factor as currently proposed.
- The cost is not described in case of multi-codes

Summary of change: ⌘ The current description of the credit mechanism has been completed:

- The DSCH cost is now specified.
- In uplink, the cost is computed in function of the minimum spreading factor, since this spreading factor is known from the radio link or common transport channel procedures.
- When multi-codes is used, the cost is specified to be equal to the N times the cost for a single code, when N is the number of channelization codes.

Rev1:

- [Alignment with tdoc 639](#)
- [FDD paragraphs are tagged "FDD"](#)
- [Text on Common Channel Reconfiguration is removed since SF does not change](#)

Consequences if not approved: ⌘ The call admission control implemented in the CRNC and that relies on the credit mechanism will not work properly since the costs could be not interpreted the same way by the Node B and the CRNC.

[Backwards compatibility:](#)

[This CR is backward compatible with the referenced version of NBAP unless misinterpretation due to previous ambiguity.](#)

Clauses affected: ⌘ 9.2.1.9A, 9.2.1.20A

Other specs affected: ⌘ Other core specifications ⌘
 Test specifications
 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/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

9.2.1.9A Common Channels Capacity Consumption Law

The capacity consumption law indicates the CRNC how the Capacity Credit is consumed by NBAP set of procedures, depending on the allocated Spreading Factor. [FDD- For the PRACH, the reference spreading factor shall be the minimum possible spreading factor amongst the ones defined by the 'RACH slot format' IE(s) in the Common Transport Channel Setup or Reconfiguration procedures. For the PCPCH, the reference spreading factor shall be the minimum spreading factor computed from the TFCS as described in [8].]

This capacity consumption law indicates the consumption law to be used with the following procedures :

- Common Transport Channel Setup
- Common Transport Channel Deletion
- ~~Common Transport Channel Reconfiguration~~

~~In case of usage of the Common Transport Channel Deletion, the consumption cost given in the consumption law must be credited to the Capacity Credit.~~

For the Common Transport Channel Setup procedure, the cost given in the consumption law shall be debited from the Capacity Credit, whereas it shall be credited to the Capacity Credit for the Common Transport Channel Deletion one. For the Common Transport Channel Reconfiguration procedure, the difference of the consumption cost for the new spreading factor and the consumption cost for the old spreading factor shall be debited from the Capacity Credit (or credited if this difference is negative).

If the modelling of the internal resource capability of the B is modelled independently for the Uplink and Downlink, the "DL cost" shall be applied to the "DL or Global Capacity Credit" and the "UL Cost" shall be applied to the "UL Capacity Credit". If it is modelled as shared resources, both the "DL cost" and the "UL cost" shall be applied to the "DL or Global Capacity Credit".

[FDD- When the Common Transport Channel Setup or; Deletion or Reconfiguration procedures are used, the Capacity Credit shall be updated considering all physical channels related in these procedures (S-CCPCH, PICH, PRACH, AICH, PCPCH, CD/CA-ICH and AP-AICH), i.e. one cost shall be credited to or debited from the Capacity Credit per physical channel.]

[FDD- The costs given in the consumption law are the costs per channelization code. When multiple channelization codes are used by a physical channel, the cost credited to or debited from the Capacity Credit for this physical channel shall be taken as N times the cost given in the consumption law, where N is the number of channelization codes.]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Common Channels Capacity Consumption Law				
>SF allocation law		<maxNumberOfS F>		For each SF, cost of its allocation: the first instance corresponds to SF = 4, the second to SF = 8, the third to SF = 16 and so on.
>>DL cost	M		INTEGER (0..65535)	
>>UL cost	M		INTEGER (0..65535)	

9.2.1.10 Common Measurement Object Type

The Common Measurement Object type indicates the type of object that the measurement is to be performed on.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Measurement Object Type			ENUMERATED (CELL, RACH, PCPCH,...)	

9.2.1.11 Common Measurement Type

The Common Measurement Type identifies which measurement that shall be performed.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Measurement Type			ENUMERATED (Received total wide band power, Transmitted Carrier Power, Acknowledged PRACH preambles, UL Timeslot ISCP, Acknowledged PCPCH Access Preambles, Detected PCPCH Access Preambles, ...)	UL Timeslot ISCP is used by TDD only, Acknowledged PRACH preambles, Acknowledged PCPCH Access Preambles, Detected PCPCH Access Preambles are used by FDD only

9.2.1.12 Common Measurement Value

The Common Measurement Value shall be the most recent value for this measurement, for which the reporting criteria were met.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
>Transmitted Carrier Power Value	C <i>MeasValue</i>		INTEGER(0..100)	According to mapping in [22] and [23]
>Received total wide band power Value	C <i>MeasValue</i>		INTEGER(0..621)	According to mapping in [22] and [23]
>Acknowledged PRACH Preamble Value (FDD only)	C <i>MeasValue</i>		INTEGER(0..240, ...)	According to mapping in [22]
>UL Timeslot ISCP (TDD only)	C <i>MeasValue</i>		INTEGER(0..81)	According to mapping in [23]
>Acknowledged PCPCH Access Preambles (FDD only)	C <i>MeasValue</i>		INTEGER(0..15,...)	According to mapping in [22]
>Detected PCPCH Access Preambles (FDD only)	C <i>MeasValue</i>		INTEGER(0..240,...)	According to mapping in [22]

Condition	Explanation
<i>MeasValue</i>	Only one measurement value can be present at the same time.

9.2.1.12A Common Measurement Value Information

The *Common Measurement Value Information* IE provides information both on whether or not the Common Measurement Value is provided in the message or not and if provided also the Common Measurement Value itself.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Common Measurement Value Information		1			–	
>CHOICE <i>Measurement Availability Indicator</i>	M				–	
>> <i>Measurement Available</i>					–	
>>>Common Measurement value	M		9.2.1.12		–	
>> <i>Measurement not Available</i>			NULL		–	

9.2.1.13 Common Physical Channel ID

Common Physical Channel ID is the unique identifier for one common physical channel within a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Common Physical Channel ID			Integer(0..255)	

9.2.1.13A Common Physical Channel Status Information

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Common Physical Channel Status Information		1			–	
>Common Physical Channel ID	M		9.2.1.13		–	
>Resource Operational State	M		9.2.1.52		–	
>Availability Status	M		9.2.1.2		–	

9.2.1.14 Common Transport Channel ID

Common Transport Channel ID is the unique identifier for one common transport channel within a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Common Transport Channel ID			Integer(0..255)	

9.2.1.14A Common Transport Channel Information Response

The *Common Transport Channel Information Response* IE provides information for Common Transport Channels that have been established or modified.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Common Transport Channel Information Response		1			–	
>Common Transport Channel ID	M		9.2.1.14		–	
>Binding ID	O		9.2.1.4		–	
>Transport Layer Address	O		9.2.1.63		–	

9.2.1.14B Common Transport Channel Status Information

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Common Transport Channel Status Information		1			–	
>Common Transport Channel ID	M		9.2.1.14		–	
>Resource Operational State	M		9.2.1.52		–	
>Availability Status	M		9.2.1.2		–	

9.2.1.15 Communication Control Port ID

A Communication Control Port corresponds to one signalling bearer between the RNC and Node B for the control of Node B Communication Contexts. Node B may have multiple Communication Control Ports (one per Traffic Termination Point). The Communication Control Port is selected at creation of the Node B Communication Context. The Communication Control Port ID is the identifier of the Communication Control Port.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Communication Control Port ID			INTEGER (0..65535)	

9.2.1.16 Configuration Generation ID

The Configuration Generation ID describes the generation of the configuration of logical resources in a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Configuration Generation ID			Integer(0..255)	Value '0' means "No configuration". At possible wraparound of the ID counter in CRNC the value '0' shall not be used.

9.2.1.17 Criticality Diagnostics

The *Criticality Diagnostics* IE is sent by a Node B or the CRNC when parts of a received message have not been comprehended or are missing. It contains information about which IE was not comprehended or is missing.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Criticality Diagnostics				
>Procedure ID		0..1		Procedure ID is to be used if Criticality Diagnostics is part of Error Indication procedure, and not within the response message of the same procedure that caused the error
>>Procedure Code	M		INTEGER (0..255)	
>>Ddmode	M		ENUMERATED (FDD, TDD, Common)	Common = common to FDD and TDD.
>Triggering Message	O		ENUMERATED (initiating message, successful outcome, unsuccessful outcome, outcome)	The Triggering Message is used only if the Criticality Diagnostics is part of Error Indication.
> Procedure Criticality	O		ENUMERATED (reject, ignore, notify)	This Procedure Criticality is used for reporting the Criticality of the Triggering message (Procedure). The value 'ignore' shall never be used.
>Transaction ID	O		Transaction ID 9.2.1.62	
>Information Element Criticality Diagnostics				
>>IE Criticality	M	0 to <maxnoof errors>	ENUMERATED (reject, ignore, notify)	The IE Criticality is used for reporting the criticality of the triggering IE. The value 'ignore' shall never be used.
>>IE ID	M		INTEGER (0..65535)	The IE ID of the not understood or missing IE
>>Repetition Number	O		INTEGER (1..256)	The repetition number of the not understood IE if applicable

Range bound	Explanation
<i>Maxnooferrors</i>	Maximum no. of IE errors allowed to be reported with a single message.

9.2.1.18 CRNC Communication Context ID

The CRNC Communication Context ID is the identifier of the Communication Context in the CRNC.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CRNC Communication Context ID			INTEGER (0..2 ²⁰ -1)	2 ²⁰ -1 is reserved value to indicate all the CRNC communication contexts that can be reached by the communication control port (All CRNCCC).

9.2.1.19 DCH Combination Indicator

Void

9.2.1.20 DCH ID

The DCH ID is the identifier of an active dedicated transport channel. It is unique for each active DCH among the active DCHs simultaneously allocated for the same UE.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DCH ID			INTEGER (0..255)	

9.2.1.20A Dedicated Channels Capacity Consumption Law

The capacity consumption law indicates the CRNC how the Capacity Credit is consumed by NBAP set of procedures, depending on the allocated Spreading Factor and the RL/RLS situation. [\[FDD- In uplink, the reference spreading factor shall be the minimum spreading factor signalled in the Radio Link Setup Request message \(Min UL Channelisation Code length IE\).\]](#)

This capacity consumption law indicates the consumption law to be used with the following procedures :

- Radio Link Setup
- Radio Link Addition
- Radio Link Reconfiguration ~~(case of increase of the SF)~~
- [Radio Link Deletion](#)

~~In case of usage of the Radio Link Deletion or of the Radio Link Reconfiguration (case of decrease of the SF) procedure, the consumption cost given in the consumption law shall be credited to the Capacity Credit.~~

~~For the Radio Link Setup and Radio Link Addition procedures, the cost given in the consumption law shall be debited from the Capacity Credit, whereas it shall be credited to the Capacity Credit for the Radio Link Deletion procedure. For the Radio Link Reconfiguration procedure, the difference of the consumption cost for the new spreading factor and the consumption cost for the old spreading factor shall be debited from the Capacity Credit (or credited when this difference is negative).~~

If the modelling of the internal resource capability of the [Node B](#) is modelled independently for the Uplink and Downlink, the DL cost shall be applied to the DL or Global Capacity Credit and the UL Cost shall be applied to the UL Capacity Credit. If it is modelled as shared resources, both the DL costs" and the UL costs shall be applied to the DL or Global Capacity Credit.

For a Radio Link creating a Radio Link Set (first RL of a RLS), the cost for the RL and RLS shall be taken into account. When adding a Radio Link to a Radio Link Set, only the RL cost shall be taken into account.

In the case of multiple Radio Links are established in one procedure, for every created Radio Link Set the first Radio Link is always the Radio Link with the lowest repetition number.

~~[FDD- When a PDSCH is allocated in the Radio Link Setup procedure, the processing cost associated to this PDSCH, equal to the DL cost RL, shall be debited from the Capacity Credit, in addition to the processing cost of the radio links. In a similar way, this cost shall be credited to the Capacity Credit, when a PDSCH is deleted and the difference between the new cost and the old cost shall be debited from the Capacity Credit (or credited if this difference is negative) when a PDSCH is reconfigured.]~~

~~[FDD- The costs given in the consumption law are the costs per channelization code. When multiple channelization codes are used by either the radio links or the PDSCH, the cost credited to or debited from the Capacity Credit shall be taken as N times the cost for one code, where N is the number of channelization codes.]~~

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Dedicated Channels Capacity Consumption Law				
>SF allocation law		1..<maxNumberOf SF>		For each SF, cost of its allocation: the first instance corresponds to SF = 4, the second to SF = 8, the third to SF = 16 and so on.
>>DL cost RLS	M		INTEGER (0..65535)	
>>DL cost RL	M		INTEGER (0..65535)	
>>UL cost RLS	M		INTEGER (0..65535)	
>>UL cost RL	M		INTEGER (0..65535)	

9.2.1.20B DL or Global Capacity Credit

The capacity credit indicates to the CRNC the Downlink or global capacity of a Local Cell or a Local Cell Group.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL or Global Capacity Credit			INTEGER (0..65535)	

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

9.1.62 PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		-	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		-	
C-ID	M		9.2.1.9		YES	reject
SFN	O		9.2.1.53A		YES	reject
PDSCH Sets to add		<i>0..<maxnoof PDSCHSets ></i>			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		-	
>PDSCH <u>to add</u> Information		1			YES	reject
>>Repetition Period	M		9.2.3.16		-	
>>Repetition Length	M		9.2.3.15		-	
>>TDD Physical Channel Offset	M		9.2.3.20		-	
>>DL Timeslot Information		1 .. <maxnoofDLts>			-	
>>>Time Slot	M		9.2.3.23		-	
>>>Midamble Shift and Burst Type	M		9.2.3.7		-	
>>>TFCI Presence	M		9.2.1.57		-	
>>>DL Code Information		1 .. <maxnoOfPDSCH>			-	
>>>>PDSCH ID	M		9.2.3.10		-	
>>>>TDD Channelisation Code	M		9.2.3.19		-	
PDSCH Sets to Modify		<i>0..<maxnoof PDSCHSets ></i>			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		-	
>PDSCH <u>to modify</u> Information		1			YES	reject
>>Repetition Period	O		9.2.3.16		-	
>>Repetition Length	O		9.2.3.15		-	
>>TDD Physical Channel Offset	O		9.2.3.20		-	
>>Midamble Shift and Burst Type	M		9.2.3.7		-	
>>DL Timeslot Information		0 .. <maxnoofDLts>			-	
>>>Time Slot	M		9.2.3.23		-	
>>>Midamble Shift and Burst Type	O		9.2.3.7		-	
>>>TFCI Presence	O		9.2.1.57		-	
>>>DL Code Information		0 .. <maxnoOfPDSCH>			-	
>>>>PDSCH ID	M		9.2.3.10		-	

>>>>TDD Channelisation Code	M		9.2.3.19		-	
PDSCH Sets to Delete		0..<maxnoof PDSCHSets >			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		-	
PUSCH Sets to add		0..<maxnoof PUSCHSets >			GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13		-	
>PUSCH to add Information		1			YES	reject
>>Repetition Period	M		9.2.3.16		-	
>>Repetition Length	M		9.2.3.15		-	
>>TDD Physical Channel Offset	M		9.2.3.20		-	
>>UL Timeslot Information		1 .. <maxnoofUL ts>			-	
>>>Time Slot	M		9.2.3.23		-	
>>>Midamble Shift and Burst Type	M		9.2.3.7		-	
>>>TFCI Presence	M		9.2.1.57		-	
>>>UL Code Information		1 .. <maxnoOfP USCH>			-	
>>>>PUSCH ID	M		9.2.3.12		-	
>>>>TDD Channelisation Code	M		9.2.3.19		-	
PUSCH Sets to Modify		0..<maxnoof PUSCHSets >			GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13		-	
>PUSCH to modify Information		1			YES	reject
>>Repetition Period	O		9.2.3.16		-	
>>Repetition Length	O		9.2.3.15		-	
>>TDD Physical Channel Offset	O		9.2.3.20		-	
>>UL Timeslot Information		0 .. <maxnoofUL ts>			-	
>>>Time Slot	M		9.2.3.23		-	
>>>Midamble Shift and Burst Type	O		9.2.3.7		-	
>>>TFCI Presence	O		9.2.1.57		-	
>>>UL Code Information		0 .. <maxnoOfP DSCH>			-	
>>>>PUSCH ID	M		9.2.3.12		-	
>>>>TDD Channelisation Code	M		9.2.3.19		-	
PUSCH Sets to Delete		0..<maxnoof PUSCHSets >			GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13		-	

Range bound	Explanation
<i>Maxnoof PDSCH Sets</i>	Maximum number of PDSCH Sets in a cell.
<i>Maxnoof PDSCH</i>	Maximum number of PDSCH in a cell.
<i>Maxnoof PUSCH Sets</i>	Maximum number of PUSCH Sets in a cell.
<i>Maxnoof PUSCH</i>	Maximum number of PUSCH in a cell.
<i>MaxnoofDLts</i>	Maximum number of Downlink time slots in a cell
<i>MaxnoofULts</i>	Maximum number of Uplink time slots in a cell

CHANGE REQUEST

⌘ **25.433 CR 388** ⌘ rev **-** ⌘ Current version: **3.4.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Interaction between measurements and reset on lub		
Source:	⌘ R-WG3		
Work item code:	⌘	Date:	⌘ 21 Feb 01
Category:	⌘ F	Release:	⌘ R99
<p>Use <u>one</u> of the following categories:</p> <p>F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>	

Reason for change:	⌘ In the current version of the specification, the interaction between the Reset procedure and the Dedicated Measurement procedures with Node B context set to "all NBCC" is unspecified. This leads to an unimplementable requirement to continue some measurements across a reset of either a Node B or CNRC. It is unclear whether a measurement on "All NBCC" is a single measurement or multiple measurements. Finally, the restrictions on the use of the reserved values of "all NBCC" and "all CRNCCC" are incomplete, leaving open the possibility for abuse or misinterpretation.
Summary of change:	⌘ The changes are as follows: 1) Addition of clarification to measurement initiation that "all NBCC" measurements are a single measurement, and can only be terminated or failed against all contexts. 2) A specification of the interaction between initiation and reset procedures is included. 3) Minor editorial corrections to the procedure text are included. 4) The semantic descriptions of the context Ids in the termination and failure messages are clarified to make them unambiguous (and present in both cases). Backwards Compatibility – the changes are not backwards compatible with implementations that have mis-interpreted the intention of the specification, although the ASN.1 is not affected.
Consequences if not approved:	⌘ The behaviour will remain ambiguous, and the specification will be incomplete. Furthermore, it will place an unrealistic requirement on all Node B and RNC implementations.

Clauses affected:	⌘ 8.2.19.2.1, 8.3.8.2, 8.3.11, 9.1.56, 9.1.57
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Other specs Affected:	⌘ <input type="checkbox"/>	Other core specifications	⌘	
	<input type="checkbox"/>	Test specifications		
	<input type="checkbox"/>	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/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.2.19 Reset

8.2.19.1 General

The purpose of the reset procedure is to align the resources in the CRNC and Node B in the event of an abnormal failure. The CRNC or Node B may initiate the procedure.

8.2.19.2 Successful Operation

8.2.19.2.1 Reset Initiated by the CRNC

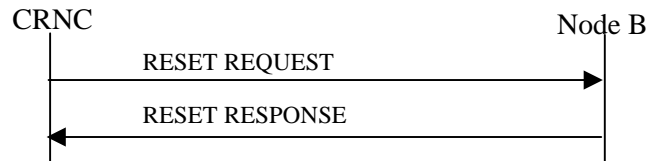


Figure 27A Reset procedure (CRNC to Node B), Successful Operation

The procedure is initiated with a RESET REQUEST message sent from the CRNC to the Node B.

If the *Reset Indicator* IE is set to 'CommunicationContext', the Node B shall remove all the indicated Node B Communication Contexts (typically identified by a *Node B Communication Context ID* IE) and all the radio resources allocated for these Node B Communication Contexts. The Node B shall also initiate release of the user plane transport bearers that were involved in these Contexts. After clearing all related resources, the Node B shall return the RESET RESPONSE message to the CRNC.

If the *Reset Indicator* IE is set to 'CommunicationControlPort', the Node B shall remove all the Node B Communication Contexts controlled via the indicated Communication Control Port(s) and all the radio resources allocated for these Node B Communication Contexts. The Node B shall also initiate release of the user plane transport bearers that were involved in these Contexts. After clearing all related resources, the Node B shall return the RESET RESPONSE message to the CRNC.

If the *Reset Indicator* IE is set to 'Node B', the Node B shall remove all the Node B Communication Contexts within the Node B and all the radio resources allocated for these Node B Communication Contexts. The Node B shall also initiate release of the user plane transport bearers that were involved in these Contexts. After clearing all related resources, the Node B shall return the RESET RESPONSE message to the CRNC.

8.2.19.2.2 Reset Initiated by the Node B

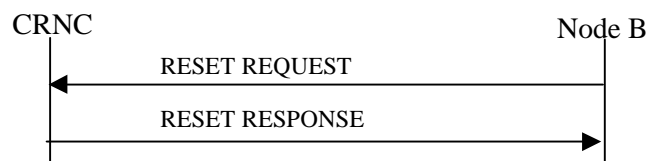


Figure 27B Reset procedure (Node B to CRNC), Successful Operation

The procedure is initiated with a RESET REQUEST message sent from the Node B to the CRNC.

If the *Reset Indicator* IE is set to 'CommunicationContext', for all indicated CRNC Communication Contexts (indicated by a *CRNC Communication Context ID* IE) the CRNC shall remove the information related to this Node B and all the radio resources allocated in the CRNC. The CRNC shall also initiate release of the user plane transport bearers towards the Node B involved in the indicated CRNC Communication Contexts. After clearing all related resources, the CRNC shall return the RESET RESPONSE message to the Node B.

If the *Reset Indicator* IE is set to 'CommunicationControlPort', for all the CRNC Communication Contexts controlled via the indicated Communication Control Port(s) the CRNC shall remove the information related to this Node B and all the radio resources allocated in the CRNC. The CRNC shall also initiate release of the user plane transport bearers

towards the Node B involved in the CRNC Communication Contexts controlled via the indicated Communication Control Port(s). After clearing all related resources, the CRNC shall return the RESET RESPONSE message to Node B.

If the *Reset Indicator* IE is set to the 'Node B', for all the CRNC Communication Contexts related to this Node B the CRNC shall remove the information related to this Node B and all the radio resources allocated in the CRNC. The CRNC shall also initiate release of the user plane transport bearers towards the Node B involved in the CRNC Communication Contexts related to this Node B. After clearing all related resources, the CRNC shall return the RESET RESPONSE message to Node B.

8.2.19.3 Unsuccessful Operation

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8.2.19.4 Abnormal Conditions

If the RESET message is received any ongoing procedure related to a CRNC Communication Context in the CRNC or Node B Communication Context in the Node B indicated (explicitly or implicitly) in the message shall be aborted.

8.3.8 Dedicated Measurement Initiation

8.3.8.1 General

This procedure is used by a CRNC to request the initiation of measurements on dedicated resources in a Node B.

The Dedicated Measurement Initiation procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in chapter 3.1.

8.3.8.2 Successful Operation

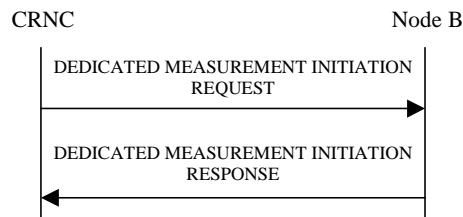


Figure 38: Dedicated Measurement Initiation procedure: Successful Operation

The procedure is initiated with a DEDICATED MEASUREMENT INITIATION REQUEST message sent from the CRNC to the Node B using the communication control port assigned to the Node B communication context.

Upon reception, the Node B shall initiate the requested measurement according to the parameters given in the request. Unless specified below the meaning of the parameters are given in other specifications.

If the *Node B Communication Context ID IE* equals the reserved value 'All NBCC', this measurement request shall apply for all current and future Node B Communication Contexts controlled via the Communication Control Port on which the DEDICATED MEASUREMENT INITIATION REQUEST message was received. Otherwise, this measurement request shall apply for the requested Node B Communication Context ID only.

If the *Node B Communication Context ID IE* equals the reserved value 'All NBCC', the measurement request shall be treated as a single measurement, despite applying to multiple contexts. This means that it may only be terminated or failed on 'All NBCC'.

If the *Dedicated Measurement Object Type IE* is set to "RL", measurement results shall be reported for all indicated Radio Links.

[FDD - If the *Dedicated Measurement Object Type IE* is set to "RLS", measurement results shall be reported for all indicated Radio Link Sets.]

If the *Dedicated Measurement Object Type IE* is set to "ALL RL", measurement results shall be reported for all current and future Radio Links within the Node B Communication Context.

[FDD - If the *Dedicated Measurement Object Type IE* is set to "ALL RLS", measurement results shall be reported for all existing and future Radio Link Sets within the Node B Communication Context.]

[TDD - If DPCH ID is provided within the RL Information the measurement request shall apply for the requested physical channel individually.]

If the *CFN Reporting Indicator IE* is set to "FN Reporting Required", the *CFN IE* shall be included in the measurement report or in the measurement response, the latter only in the case the *Report Characteristics IE* is set to 'On-Demand'. The reported CFN shall be the CFN at the time when the measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [25].

If the *CFN IE* is provided, it indicates the frame for which the first measurement shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [25].

Report characteristics

The *Report Characteristics IE* is set to how the reporting of the measurement shall be performed.

If the *Report Characteristics* IE is set to 'On-Demand', the Node B shall return the result of the measurement immediately.

If the *Report Characteristics* IE is set to 'Periodic', the Node B shall periodically initiate a Measurement Report procedure for this measurement, with the requested report frequency.

If the *Report Characteristics* IE is set to 'Event A', the Node B shall initiate a Measurement Reporting procedure when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the Node B shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event B', the Node B shall initiate a Measurement Reporting procedure when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the Node B shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event C', the Node B shall initiate a Measurement Reporting procedure when the measured entity rises more than the requested threshold within the requested time.

If the *Report Characteristics* IE is set to 'Event D', the Node B shall initiate a Measurement Reporting procedure when the measured entity falls more than the requested threshold within the requested time.

If the *Report Characteristics* IE is set to 'Event E', the Node B shall initiate a Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The Node B shall also initiate a Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Periodicity* IE is provided, the Node B shall initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. If 'Measurement Threshold 2' is not present, the Node B shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the Node B shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to 'Event F', the Node B shall initiate a Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The Node B shall also initiate a Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Periodicity* IE is provided, the Node B shall initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. If 'Measurement Threshold 2' is not present, the Node B shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the Node B shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is not set to 'On-Demand', the Node B is required to perform reporting for a dedicated measurement object, in accordance with the conditions provided in the DEDICATED MEASUREMENT INITIATION REQUEST message, as long as the object exists. If no dedicated measurement object(s) for which a measurement is defined exists any more the Node B shall terminate the measurement locally, i.e. without reporting this to the CRNC.

If at the start of the measurement, the reporting criteria are fulfilled for any of Event A, Event B, Event E or Event F, the Node B shall initiate a Measurement Reporting procedure immediately, and then continue with the measurements as specified in the DEDICATED MEASUREMENT INITIATION REQUEST message.

Higher layer filtering

The *Measurement Filter Coefficient* IE indicates how filtering of the measurement values shall be performed before measurement event evaluation and reporting.

The averaging shall be performed according to the following formula.

$$F_n = (1 - a) \cdot F_{n-1} + a \cdot M_n$$

The variables in the formula are defined as follows

F_n is the updated filtered measurement result

F_{n-1} is the old filtered measurement result

M_n is the latest received measurement result from physical layer measurements

$a = 1/2^{(k/2)}$, where k is the parameter received in the *Measurement Filter Coefficient* IE. If the *Measurement Filter Coefficient* IE is not present, a shall be set to 1 (no filtering)

In order to initialise the averaging filter, F_0 is set to M_1 when the first measurement result from the physical layer measurement is received.

Response message

If the Node B was able to initiate the measurement requested by the CRNC it shall respond with the DEDICATED MEASUREMENT INITIATION RESPONSE message using the communication control port assigned to the Node B communication context. The message shall include the same Measurement ID that was used in the measurement request.

Only in the case when *Report Characteristics* IE is set to "On-Demand", the DEDICATED MEASUREMENT INITIATION RESPONSE message shall contain the measurement result. In this case also the *Dedicated Measurement Object* IE shall be included if it was included in the request message.

In the case that the *Node B Communication Context ID* IE is set to 'All NBCC' the *CRNC Communication Context ID* IE in the DEDICATED MEASUREMENT INITIATION RESPONSE shall be set to the value 'All CRNCCC', which is reserved for this purpose.

Interaction with Reset Procedure

If a measurement has been requested with the *Node B Communication Context ID* IE set to 'All NBCC', the Node B shall terminate the measurement locally if either the CRNC or the Node B initiates the Reset procedure for the relevant Communication Control Port or the entire Node B.

8.3.11 Dedicated Measurement Failure

8.3.11.1 General

This procedure is used by the Node B to notify the CRNC that a measurement previously requested by the Measurement Initiation procedure can no longer be reported. The Node B is allowed to initiate the DEDICATED MEASUREMENT FAILURE INDICATION message at any time after having sent the RADIO LINK SETUP RESPONSE message, as long as the Node B communication context exists.

8.3.11.2 Successful Operation



Figure 42: Dedicated Measurement Failure procedure: Successful Operation

This procedure is initiated with a DEDICATED MEASUREMENT FAILURE INDICATION message, sent from the Node B to the CRNC using the communication control port assigned to the Node B communication context, to inform the CRNC that a previously requested measurement can no longer be reported. The Node B has locally terminated the indicated measurement.

If the failed measurement was initiated with the *Node B Communication Context ID* IE set to the reserved value "All NBCC" **and** the Node B has terminated the measurement reporting of the measurement corresponding to the Measurement ID indicated in the DEDICATED MEASUREMENT FAILURE INDICATION message, **and** the *CRNC Communication Context ID* IE shall be set to the value 'All CRNCCC'.

8.3.11.3 Abnormal Conditions

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9.1.56 DEDICATED MEASUREMENT TERMINATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Node B Communication Context ID	M		9.2.1.48	The reserved value <u>"All NBCC"</u> shall <u>only</u> be used if this value was used when initiating the measurement. <u>Otherwise, the reserved value 'All NBCC' shall not be used.</u>	YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore

9.1.57 DEDICATED MEASUREMENT FAILURE INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
CRNC Communication Context ID	M		9.2.1.18	<u>The reserved value 'All CRNCC C' shall be used if the Node B Communication Context ID was set to 'All NBCC' when initiating the measurement. Otherwise, the reserved value 'All CRNCCC' shall not be used.</u>	YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
Cause	M		9.2.1.6		YES	ignore