

**TSG-RAN Meeting #7
Madrid, Spain, 13 - 15 March 2000**

TSGRP#7(00)0146

Title: Agreed CRs to TS 25.423

Source: TSG-RAN WG3

Agenda item: 6.4.3

Tdoc_Num	Specification	CR_Num	Revision_Num	CR_Subject	CR_Category	WG_Status	Cur_Ver_Num	New_Ver_Num
R3-000965	25.423	016	2	Rearrangement of Neighbouring Cell Information group	F	agreed	3.0.0	3.1.0
R3-000729	25.423	007	3	Addition of measurement threshold information elements.	F	agreed	3.0.0	3.1.0
R3-000731	25.423	026	1	Clarification on criticality modelling	F	agreed	3.0.0	3.1.0
R3-000734	25.423	032	1	Introduction of 'Repetition Number' into 'Criticality Diagnostics'	F	agreed	3.0.0	3.1.0
R3-000975	25.423	056	3	CR to 25.423: Refinement of Tabular and ASN.1 in RNSAP	F	agreed	3.0.0	3.1.0
R3-000751	25.423	020	1	Introduction of RLS in RNSAP	F	agreed	3.0.0	3.1.0
R3-000754	25.423	022	1	Restriction to allowed procedure	F	agreed	3.0.0	3.1.0

				parallelism				
R3-000756	25.423	025	1	Inclusion of Beta C/D TFCS	F	agreed	3.0.0	3.1.0
R3-000867	25.423	031	1	Criticality assignment for RNSAP	C	agreed	3.0.0	3.1.0
R3-000757	25.423	036	1	UL Interference for TDD	F	agreed	3.0.0	3.1.0
R3-000942	25.423	048	2	Additional IEs to Neighbouring Cell Information regarding Tx Diversity	F	agreed	3.0.0	3.1.0
R3-000949	25.423	047	1	A new IE for "RL information" regarding Transmit Diversity (RNSAP)	F	agreed	3.0.0	3.1.0
R3-000934	25.423	002	3	Addition of IEs required by the DRAC procedure in RNSAP messages	F	agreed	3.0.0	3.1.0
R3-000777	25.423	042	1	Clarification on the definition of the parameter	F	agreed	3.0.0	3.1.0
R3-000774	25.423	041	1	Definition of the DL Power IE	F	agreed	3.0.0	3.1.0
R3-000770	25.423	054	1	Modification to "TGD" unit and range (RNSAP)	F	agreed	3.0.0	3.1.0
R3-000940	25.423	018	1	Change of definition of QE	F	agreed	3.0.0	3.1.0

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.423 CR 007r3

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**

list expected approval meeting # here ↑

for approval
for information

strategic
non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:

(at least one should be marked with an X)

(U)SIM ME UTRAN / Radio Core Network

Source:

RAN-WG3 , RAN-WG3

Date:

Feb 2000

Subject:

Addition of measurement threshold information elements.

Work item:

Category:

(only one category shall be marked with an X)

F Correction
A Corresponds to a correction in an earlier release
B Addition of feature
C Functional modification of feature
D Editorial modification

Release:

Phase 2
Release 96
Release 97
Release 98
Release 99
Release 00

Reason for change:

CR 7 R3:
Update to reflect inclusion of both CR7.R1 and CR7.R2 changes. All changes on CR7 are marked with green.

CR 7 R1:
The first revision of this CR left an error concerning the ranges of the increase/decrease thresholds: for measurements with a range not starting at 0, the absolute threshold and increase/decrease thresholds can not use the same type. This CR attempt to solve this problem. All changes made in revision 2 of the CR are indicated in green. Input for the ranges is mainly based on 25.215 v.3.1.0. In addition, extension capabilities are introduced where considered necessary.

CR 7:
TSG RAN WG1 recently took a decision on the ranges and resolution on the different L1 measurements. This allows for further progress on the measurement thresholds in 25.423. As different measurements with different units are handled with the same procedures, there is a need to introduce a special mechanism for ensuring that different thresholds in the measurement requests are transferred in a correct way. As reporting event A, B, E and F use absolute thresholds and C and D uses relative, there is also a need to handle the thresholds for them separately. Finally we have discovered some minor typos in the measurement concept, which also are proposed to be corrected.

Clauses affected:

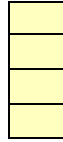
9.2.1.17; 9.2.1.38; 9.3.4

Other specs affected:

Other 3G core specifications
Other GSM core

→ List of CRs:
→ List of CRs:

specifications
MS test specifications
BSS test specifications
O&M specifications



→ List of CRs:
→ List of CRs:
→ List of CRs:



**Other
comments:**



help.doc

<----- double-click here for help and instructions on how to create a CR.

9.2.1.17 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	\ominus <u>C</u> <u>MeasValue</u>		Enumerated(-10..20), step 0.1 dBINTEGER (0..63)	According to mapping in 25.215/25.225
SIR error Value	\ominus <u>C</u> <u>MeasValue</u>		Enumerated(-10..10), step 0.1 dBINTEGER (0..125)	SIR_Error=SIR-SIR_target 0: < -31.0 dB 1: -31.0dB ≤ SIR_Error < 30.5dB 2: -30.5dB ≤ SIR_Error < 30.0dB ... 62: -0.5dB ≤ SIR_Error < 0dB 63: 0dB ≤ SIR_Error < 0.5dB ... 124: 30.5dB ≤ SIR_Error < 31dB 125: ≥ 31dB Value=(SIR_Error+31)*2 If SIRerror≤-10, SIR error Value shall be set to -10 If SIRerror≥10, SIR error Value shall be set to 10
Transmitted Code Power Value	\ominus <u>C</u> <u>MeasValue</u>		Enumerated(-35..15), step 0.1 dBINTEGER (0..127)	Relative to CPICH According to mapping in 25.215/25.225
RSCP	\ominus <u>C</u> <u>MeasValue</u>		INTEGER(0..81)TBD	According to mapping in 25.225 (TDD only)-

<Editors Note: Some adjustment of the ranges for these measurements might be needed as they await a decision on range for this measurement in TSG RAN WG1>

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

9.2.1.38 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. First working assumption!
..Event A	C – Event A			
Measurement Threshold	M		TBD	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		TBD	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		TBD	
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		TBD	
Measurement Change Time	M		ENUMERATED (10ms...1min) step 10ms,...	The time the measurement entity shall fall (in ms), in order to trigger a measurement report.
Event E	C – Event E			
Measurement Threshold 1	M		TBD Measurement Threshold	

Measurement Threshold 2	O		<u>TBD Measurement Threshold</u>	
Measurement Hysteresis Time	O		ENUMERATED (10ms...1min) step 10ms,...	The hysteresis time in ms
Report Periodicity	O		ENUMERATED (10ms...1min) 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		<u>TBD Measurement Threshold</u>	
Measurement Threshold 2	O		<u>TBD Measurement Threshold</u>	
Measurement Hysteresis Time	O		ENUMERATED (10ms...1min) step 10ms,...	The hysteresis time in ms
Report Periodicity	O		ENUMERATED (10ms...1min) step 10ms, (1min...1hr) step 1min	The frequency with which the Node B shall send measurement reports.

Editors note: Encoding of threshold TBD.

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.X Measurement Threshold (new section)

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

<u>Information Element / Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE Type and Reference</u>	<u>Semantics Description</u>
<u>SIR</u>	<u>C = Threshold</u>		INTEGER(0..63)	According to mapping in 25.215/25.225
<u>SIR Error</u>	<u>C = Threshold</u>		INTEGER(0..125)	<u>SIR_Error = SIR - SIR_target</u> 0: < -31.0 dB 1: -31.0dB ≤ SIR_Error < 30.5dB 2: -30.5dB ≤ SIR_Error < 30.0dB ... 62: -0.5dB ≤ SIR_Error < 0dB 63: 0dB ≤ SIR_Error < 0.5dB ... 124: 30.5dB ≤ SIR_Error < 31dB 125: ≥ 31dB Value = (SIR_Error + 31) * 2
<u>Transmitted Code Power</u>	<u>C = Threshold</u>		INTEGER(0..127)	According to mapping in 25.215/25.225
<u>RSCP</u>	<u>C = Threshold</u>		INTEGER(0..81)	According to mapping in 25.225 (TDD only)

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

9.2.1.X Measurement Increase/Decrease Threshold (new section)

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

<u>Information Element / Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE Type and Reference</u>	<u>Semantics Description</u>
<u>SIR</u>	<u>C = Threshold</u>		<u>INTEGER(0..62)</u>	0: 0 dB 1: 0.5 dB 2: 1 dB ... 62: 31dB
<u>SIR Error</u>	<u>C = Threshold</u>		<u>INTEGER(0..124)</u>	0: 0 dB 1: 0.5 dB 2: 1 dB ... 124: 62 dB Value=(SIR_Error+31)*2
<u>Transmitted Code Power</u>	<u>C = Threshold</u>		<u>INTEGER(0..112)</u>	0: 0 dB 1: 0.5 dB 2: 1 dB ... 112: 56 dB
<u>RSCP</u>	<u>C = Threshold</u>		<u>INTEGER(0..80)</u>	0: 0 dB 1: 0.5 dB 2: 1 dB ... 80: 40dB

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

9.3.4 Information Element Definitions

```

-- *****
--
-- Information Element Definitions
--
-- *****

RNSAP-IEs -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxNrOfErrors,
    maxRateMatching,
    maxNrOfTFCs,
    maxNrOfTFS,
    maxTTI-Count
FROM RNSAP-Constants

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM RNSAP-CommonDataTypes

    ProtocolExtensionContainer{},
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;

-- A

AllocationRetentionPriority ::= FrameHandlingPriority

AllowedQueuingTime ::= INTEGER (0..60)
-- seconds

-- B

-- ** NOTE: Size in tabular 1..4,... **
BindingID ::= OCTET STRING (SIZE (1..MAX))

BLER ::= INTEGER (-63..0)
-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER

BurstType ::= ENUMERATED {

```

```

    type1 (1),
    type2 (2)
}

-- C

Cause ::= CHOICE {
    radioNetwork          CauseRadioNetwork,
    transmissionNetwork  CauseTransmissionNetwork,
    protocol              CauseProtocol,
    misc                  CauseMisc,
    ...
}

CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    om-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    ...
}

CauseProtocol ::= ENUMERATED {
    transaction-not-allowed,
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    unspecified,
    ...
}

CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    ul-scrambling-code-already-in-use,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    measurement-not-supported-for-the-object,
    macrodiversity-combining-not-possible,
    reconfiguration-not-allowed,
    Synchronisation-failure,
    unspecified,
    ...
}

CauseTransmissionNetwork ::= ENUMERATED {
    transmission-link-failure,
    transmission-port-not-available,
    unspecified,
    ...
}

```

```

C-ID                ::= INTEGER (0..65535)

CCTrCH-ID           ::= INTEGER (0..15)

CellParameterID    ::= INTEGER (0..127)

CFN                 ::= INTEGER (0..255)

ChannelCodingType ::= ENUMERATED {
    no-coding,
    convolutional-coding,
    turbo-coding--,
-- ...
}

-- ** TODO **
ChipOffset          ::= INTEGER

CodingRate ::= ENUMERATED {
    half,
    third--,
-- ...
}

CompressedModeMethod ::= ENUMERATED {
    none,
    puncturing,
    sF2,
    gating
}

CPICH-EcIo         ::= INTEGER

CRC-Size           ::= INTEGER (0| 8| 12| 16| 24)

CriticalityDiagnostics ::= SEQUENCE {
    procedureCode          ProcedureCode          OPTIONAL,
    triggeringMessage      TriggeringMessage      OPTIONAL,
    criticalityResponse    Criticality             OPTIONAL,
    transactionID         TransactionID          OPTIONAL,
    iEsCriticalityResponses CriticalityDiagnostics-IE-List OPTIONAL,
    IE-Extensions         ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

CriticalityDiagnostics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
    SEQUENCE {
        criticalityResponse    Criticality,

```

```

        iE-ID          ProtocolIE-ID,
        iE-Extensions  ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,
        ...
    }

CriticalityDiagnostics-IE-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
CTFC ::= INTEGER
-- See formula (must be resolved)

CN-CS-DomainIdentifier ::= SEQUENCE {
    pLMN-ID          PLMN-ID,
    iE-Extensions    ProtocolExtensionContainer { {CN-CS-DomainIdentifier-ExtIEs} } OPTIONAL,
    LAC              LAC
}

CN-CS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CN-PS-DomainIdentifier ::= SEQUENCE {
    pLMN-ID          PLMN-ID,
    LAC              LAC,
    iE-Extensions    ProtocolExtensionContainer { {CN-PS-DomainIdentifier-ExtIEs} } OPTIONAL,
    rAC              RAC
}

CN-PS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **TODO**
CPICH-Power ::= INTEGER

C-RNTI ::= INTEGER (0..65535)

-- D
DCH-CombinationInd ::= INTEGER (0..255)

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

DedicatedMeasurementObjectType ::= ENUMERATED {
    r1,
    all-r1,
    ...
}

-- ** OR:
-- DedicatedMeasurementObjectType ::= INTEGER {
--    rL(0),

```

```

-- allRL(1)
-- } (0..255)
-- **

DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rSCP,
    ...
}
-- timeslotTSCP is used by TDD only


** OR:
DedicatedMeasurementType ::= INTEGER {
    sIR(0),
    sIR-Error(1),
    transmittedCodePower(2),
    rSCP(3)
} (0..255)
**


-- ** NOTE: Extensibility added **
-- **TODO**

DedicatedMeasurementValue ::= SEQUENCE-CHOICE {
    sIR-Value SealedSIR-Value OPTIONAL,
    sIR-ErrorValue SealedSIR-ErrorValue OPTIONAL,
    transmittedCodePowerValue SealedTransmittedCodePowerValue OPTIONAL, Relative to CPICH
    rSCP RSCP-ValueTDD OPTIONAL, -- TDD only
    iE-Extensions ProtocolExtensionContainer { {DedicatedMeasurementValue-ExtIEs} } OPTIONAL,
    ...
}

DedicatedMeasurementValue-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
DiversityControlField ::= INTEGER

-- ** TODO **
DiversityMode ::= INTEGER

-- ** TODO **
DL-ChannelisationCode ::= INTEGER

-- ** TODO **
DL-DPCCH-SlotFormat ::= INTEGER

-- ** TODO **
DL-DPCH-SlotNumber ::= INTEGER

```



```

DL-EbNo                ::= ScaledUL-EbNo

DL-EbNoTarget          ::= ScaledUL-EbNo

-- ** TODO **
DL-Power               ::= INTEGER

D-RNTI                 ::= INTEGER (0..1048576)
-- ** OR:
-- D-RNTI               ::= BIT STRING (SIZE (20))
-- **

D-RNTI-ReleaseIndication ::= ENUMERATED {
    not-release-D-RNTI,
    release-D-RNTI
}

-- ** TODO **
DL-ScramblingCode      ::= INTEGER

DL-FrameType ::= ENUMERATED {
    typeA,
    typeB,
    ...
}

DPCH-ID                ::= INTEGER (0..239)

-- **TODO**
DRX-Parameter          ::= TBD

-- **TODO**
DSCH-TransportFormatCombinationSet ::= INTEGER

-- **TODO**
DSCH-TFS               ::= INTEGER

-- **TODO**
D-FieldLength          ::= INTEGER

-- E

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

EventA-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

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

EventC ::= SEQUENCE {
    measurementIncreaseDecreaseThreshold MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime      ScaledMeasurementChangeTime,
    ...
}

EventB-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

EventD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

EventE-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

EventF-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

-- F
FACH-DataFrameSize      ::= INTEGER (1..5000)
-- Size of data frame in number of bits

FACH-InitialWindowSize  ::= INTEGER { unlimited(255) } (0..255)
-- Number of FACH data frames.
-- 255 = Unlimited number of FACH data frames

-- ** TODO **
FACH-InfoForOptionalS-CCPCH  ::= INTEGER

-- ** TODO **
FACH-InfoForS-CCPCH-CoupledToPRACH ::= INTEGER

-- ** TODO **
FDD-DL-ChannelisationCodeNumber ::= INTEGER

-- ** TODO **
FDD-FL-ChannelisationCodeNumber ::= INTEGER

-- ** TODO **
FDD-S-CCPCH-Offset        ::= INTEGER

FACH-PriorityIndicator     ::= INTEGER { lowest(0), highest(15) } (0..15)
FrameHandlingPriority      ::= INTEGER { lowest(0), highest(15) } (0..15)

FrameOffset               ::= INTEGER (0..255)
-- Frames

-- G
GapPositionMode ::= ENUMERATED {
    fixed,
    flexible
}

GapPeriod              ::= INTEGER (0..255)

-- H
-- I

-- **TODO**
InitialDL-TX-Power     ::= INTEGER

-- J
-- K
-- L

LAC                    ::= OCTET STRING (SIZE (2)) --(EXCEPT ('0000'H|'FFFF'H))

```

```

-- ** TODO **
L3-Information          ::= INTEGER

-- M

-- ** TODO **
MaxNrOfUL-DPCHs        ::= INTEGER

MAC-c-SDU-Length       ::= INTEGER (1..5000)

-- **TODO**
MACd-MACsh-TransportFormatSet ::= INTEGER

-- **NOTE: extensibility**
MeasurementCharacteristics ::= SEQUENCE {
    measurementFrequency      TBD,
    averagingDuration         TBD,
    IE-Extensions             ProtocolExtensionContainer { {MeasurementCharacteristics-ExtIEs} } OPTIONAL,
    ...
}

MeasurementCharacteristics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
MeanBitRate             ::= INTEGER

MeasurementID           ::= INTEGER (0..1048576)
-- **OR:
-- MeasurementID        ::= BIT STRING (SIZE (20))
-- **

MultipleURAsIndicator ::= ENUMERATED {
    single-URA-exists,
    multiple-URAs-exist
}

-- ** TODO **
MCC-Digit               ::= OCTET STRING (SIZE (3))
-- FFS
-- Reference: 24.008

-- ** TODO **
MNC-Digit               ::= OCTET STRING (SIZE (3))
-- FFS
-- Reference: 24.008

ScaledMeasurementChangeTime ::= INTEGER (1..1000)
-- MeasurementChangeTime = ScaledMeasurementChangeTime * 10
-- Units is ms

```

| ~~** TODO **~~

```

MeasurementDecreaseThreshold ::= INTEGER

ScaledMeasurementHysteresisTime ::= INTEGER (1..1000)
-- MeasurementHysteresisTime = ScaledMeasurementHysteresisTime * 10
-- Unit is ms

-- ** TODO **
MeasurementIncreaseDecreaseThreshold ::= INTEGERCHOICE {
    sir SIR-Value-IncrDecrThres,
    sir-error SIR-ErrorValue-IncrDecrThres,
    transmitted-code-power TransmittedCodePowerValue-IncrDecrThres,
    rscp RSCP-Value-IncrDecrThres,
    ...
}

-- ** TODO **
MeasurementThreshold ::= INTEGERCHOICE {
    sir SIR-Value,
    sir-error SIR-ErrorValue,
    transmitted-code-power TransmittedCodePowerValue,
    rscp RSCP-Value,
    ...
}

MidambleShift ::= INTEGER (0..15)

MinUL-ChannelisationCodeLength ::= INTEGER

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

-- N
NrOfTransportBlocks ::= INTEGER (0..4095)

-- O
Offset ::= INTEGER (0..63)

-- P
PD ::= INTEGER (0..2047, ...)

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    crc-not-included,
    crc-included--,
    ...
}

PSCH-TimeSlot ::= INTEGER (0..6)

```

```

Periodic ::= SEQUENCE {
    reportPeriodicity      ReportPeriodicity,
    iE-Extensions          ProtocolExtensionContainer { {Periodic-ExtIEs} } OPTIONAL,
    ...
}

Periodic-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
PilotBitsUsedIndicator      ::= INTEGER

-- ** TODO **
PLMN-ID ::= SEQUENCE {
    mCC-digit      MCC-Digit,
    iE-Extensions  ProtocolExtensionContainer { {PLMN-ID-ExtIEs} } OPTIONAL,
    mNC-digit      MNC-Digit
}
-- FFS

PLMN-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PowerControlMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

PowerOffset      ::= INTEGER (0..24)

PowerResumeMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

-- ** TODO **
PrimaryCPICH-Power      ::= INTEGER

PrimaryCPICH-EcNo      ::= INTEGER (-30..30)

-- ** TODO **
PrimaryCCPCH-RSCP      ::= INTEGER

PrimaryScramblingCode      ::= ScramblingCode

PropagationDelay      ::= INTEGER (0..255)

SyncCase ::= ENUMERATED {
    case1,

```

```

    case2,
    case3--,
-- ...
}

-- ** TODO **
PSCH-CCPCH-TimeSlot      ::= TimeSlot

-- ** TODO **
PSCH-PCCPCH-TimeSlot    ::= TimeSlot

-- ** TODO **
P-CPICH-Power           ::= INTEGER

PunctureLimit           ::= INTEGER (0..100)
-- Unit is %

-- Q
-- R

-- ** TODO **
RAC                     ::= INTEGER

-- ** TODO **
-- OCTET STRING?
RANAP-RelocationInformation ::= BIT STRING

RateMatchingAttribute   ::= INTEGER (1..maxRateMatching)

RepetitionLength        ::= INTEGER (1..63)

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

-- This is changed from the tabular format because it seems that
-- this is what is wanted.
ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          Periodic,
    eventA            EventA,
    eventB            EventB,
    eventC            EventC,
    eventD            EventD,
    eventE            EventE,
    eventF            EventF--,

```

```

-- ...
}

-- Changed
ReportPeriodicity ::= CHOICE {
    msec          INTEGER (1..1000),
    min           INTEGER (1..60)
}

RLC-Mode ::= ENUMERATED {
    acknowledged-mode,
    unacknowledged-mode,
    transparent-mode
}

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

RNC-ID         ::= INTEGER (0..4095)

-- According mapping in 25.225
RSCP-Value     ::= INTEGER (0..81)

RSCP-Value-IncrDecrThres ::= INTEGER (0..80)

-- S

-- Changed BIT STRING -> OCTET STRING
SAC            ::= OCTET STRING (SIZE (2))

SAI ::= SEQUENCE {
    pLMN-ID          PLMN-ID,
    LAC              LAC,
    sAC              SAC,
    iE-Extensions   ProtocolExtensionContainer { {SAI-ExtIEs} } OPTIONAL
}

SAI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
ScramblingCode          ::= INTEGER

ScramblingCodeChange ::= ENUMERATED {
    no-code-change,
    code-change
}

ScaledSIR-ErrorValue     ::= INTEGER (0..100)

SIR-ErrorValue-IncrDecrThres ::= INTEGER (0..124)

-- ScaledSIR-ErrorValue = (SIR-Error+31)*2 - SIR-ErrorValue * 10

```



```

-- If SIR-ErrorValue <= -10 ScaledSIR-ErrorValue shall be set to -100
-- If SIR-ErrorValue >= 10 ScaledSIR-ErrorValue shall be set to 100
-- SIR-ErrorValue step 0.1 dB

```

```

-- According to mapping in 25.215/25.225
ScaledSIR-Value ::= INTEGER (-1000..63200)

```

```

SIR-Value-IncrDecrThres ::= INTEGER (0..62)
-- ScaledSIR-Value = SIR-Value * 10
-- SIR-Value step 0.1 dB

```

```

ScaledTransmittedCodePowerValue ::= INTEGER (-350..150)
-- ScaledTransmittedCodePowerValue = TransmittedCodePowerValue * 10
-- TransmittedCodePowerValue step 0.1 dB

```

```

-- ** TODO **
SharedChannelType ::= INTEGER

```

```

-- ** TODO **
SecondaryCCPCH-SlotFormat ::= INTEGER

```

```

SN ::= TimeSlot

```

```

SpreadingFactorOfChannelisationCode ::= ENUMERATED {
    v256,
    v128,
    v64,
    v32,
    v16,
    v8,
    v4,
    v2,
    v1
}

```

```

-- Changed
S-FieldLength ::= INTEGER (1..2)

```

```

S-RNTI ::= INTEGER (0..1048575)
-- From 0 to 2^20-1

```

```

-- ** TODO **
SRNC-ID ::= INTEGER

```

```

SSDT-CellID ::= 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
}

SSDT-SupportIndicator ::= ENUMERATED {
    sSDT-not-supported,
    sSDT-supported
}

-- T

-- ** TODO **
TBD ::= NULL
-- Remove this type

TDD-ChannelisationCode ::= INTEGER (1..31)

TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TFCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32
}

TFCI-Presence ::= ENUMERATED {
    not-present,
    present
}

TFCI-SignallingMode ::= ENUMERATED {
    normal,
    split
}

-- ** TODO **
TimeReference ::= INTEGER
-- TimeReference ::= INTEGER (0..255)

TimeSlot ::= INTEGER (0..14)

ToAWE ::= INTEGER (0..2559)

```

```

ToAWS                ::= INTEGER (0..1279)

TPC-StepSize ::= ENUMERATED {
    half,
    one
}

TGD                ::= INTEGER (0..255)

TGL                ::= INTEGER (3| 4| 7| 10| 14)

TransmissionTimeInterval ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80--,
    -- ...
}

TransportBearerID    ::= INTEGER (0..4095)

-- Compare title and IE name in table TransportBearerRequestIndicator vs.
-- FACH-PriorityIndicator
TransportBearerRequestIndicator ::= INTEGER { lowest (0), highest (15) } (0..15)

TransportBlockSize  ::= INTEGER (1..5000)
-- Unit is bits

TransportFormatCombinationSet ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
    SEQUENCE {
        cTFC                CTFC,
        iE-Extensions        ProtocolExtensionContainer { {TransportFormatCombinationSet-ExtIEs} } OPTIONAL,
        ...
    }

TransportFormatCombinationSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet ::= SEQUENCE {
    dynamicParts            TransportFormatSet-DynamicPartList,
    semi-staticPart        TransportFormatSet-Semi-staticPart,
    iE-Extensions          ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
    SEQUENCE {
        nrOfTransportBlocks    NrOfTransportBlocks,

```

```

transportBlockSize      TransportBlockSize      OPTIONAL
-- This IE is only present if nrOfTransportBlocks is greater than 0 --,
mode                    TransportFormatSet-ModeDP,
iE-Extensions          ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-ExtIEs} } OPTIONAL,
...
}

TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

TransportFormatSet-ModeDP ::= CHOICE {
tdd                    TransmissionTimeIntervallList,
-- This IE is mandatory if not defined as semistatic parameter, otherwise it is absent --
...
}

TransmissionTimeIntervallList ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
SEQUENCE {
transmissionTimeInterval      TransmissionTimeInterval,
iE-Extensions                ProtocolExtensionContainer { {TransmissionTimeIntervallList-ExtIEs} } OPTIONAL,
...
}

TransmissionTimeIntervallList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- According to mapping in 25.215/25.225
TransmittedCodePowerValue ::= INTEGER (0..127)
TransmittedCodePowerValue-IncrDecrThres ::= INTEGER (0..112,...)

TransportFormatSet-Semi-staticPart ::= SEQUENCE {
transmissionTime          TransmissionTimeInterval,
channelCoding             ChannelCodingType,
codingRate                CodingRate              OPTIONAL
-- This IE is only present if channelCoding is 'convolutional' or 'turbo' --,
rateMatchingAttribute     RateMatchingAttribute,
cRC-Size                 CRC-Size,
mode                     TransportFormatSet-ModeSSP      OPTIONAL,
iE-Extensions            ProtocolExtensionContainer { {TransportFormatSet-Semi-staticPart-ExtIEs} } OPTIONAL,
...
}

TransportFormatSet-Semi-staticPart-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

TransportFormatSet-ModeSSP ::= CHOICE {
tdd                      SecondInterleavingMode,
...
}

```

```

}

SecondInterleavingMode ::= ENUMERATED {
    frame-related,
    timeslot-related,
    ...
}

-- TransportLayerAddress          ::= BIT STRING (1..160, ...)
TransportLayerAddress            ::= OCTET STRING (SIZE (1..20, ...))

-- U

UARFCN                          ::= INTEGER (0..698, ...)

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

UL-DeltaEbNo                    ::= INTEGER (-60..100)

UL-DeltaEbNoAfter              ::= INTEGER (-60..100)

-- ** TODO **
UL-EbNo                        ::= INTEGER

-- ** TODO **
UL-EbNoTarget                  ::= INTEGER

UC-ID ::= SEQUENCE {
    rNC-ID          RNC-ID,
    c-ID            C-ID,
    iE-Extensions  ProtocolExtensionContainer { {UC-ID-ExtIEs} } OPTIONAL,
    ...
}

UC-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.423 CR 026r1

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**

list expected approval meeting # here ↑

for approval
for information

Strategic
non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: RAN-WG3 and RAN-WG3 **Date:** 28th Feb. – 3rd March 2000

Subject: Clarification of Criticality Modelling and Protocol Error Handling

Work item:

Category: F Correction **Release:** Phase 2
A Corresponds to a correction in an earlier release Release 96
B Addition of feature Release 97
C Functional modification of feature Release 98
D Editorial modification Release 99
Release 00

(only one category shall be marked with an X)

Reason for change:

In the current RNSAP specification the description of the handling of IEs/IE groups with Criticality Information is a bit ambiguous. It is specified that if an IE with Criticality Information is received but not understood then it shall be ignored/rejected. However, it is not as clear that this is the case for an entire IE group. It is further more not clear what happens if one out of several repetitions of an IE/IE group is not understood by the receiving node.

On the other hand, it is clear that the reporting of a rejected or ignored item (IE/IE group) can only be done for the item on which criticality information is defined. This means that if parts of an IE group (where the individual IEs does not have criticality information of its own) is not understood then the whole IE group is what can be indicated in the Criticality Diagnostics, not individual IEs within the IE group.

Further more, the discrimination between Transfer Syntax Errors, Abstract Syntax Errors and Semantic/Logical Errors is not clear.

This CR aims at clarifying that if an IE group with Criticality Information is received but not understood then the whole IE group (not individual IEs within the IE group) shall be ignored/rejected. The CR further more aims at clarifying that if an IE/IE group is not understood then it shall be ignored and the receiving node shall continue with the procedure ("ignore" and "ignore and notify" cases) as if the ignored IE/IE group was not received, with the exception of the reporting of Criticality Diagnostics ("ignore and notify" case). Finally, the CR improves the discrimination between Transfer Syntax Errors, Abstract Syntax Errors and Semantic/Logical Errors.

Clauses affected: 10

Other specs Other 3G core specifications → List of CRs: 25.413 v3.0.0 CR-025r1, 25.433 v3.0.0 CR-041r1

affected:

Other GSM core specifications
MS test specifications
BSS test specifications
O&M specifications

→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:

Other comments:

--

10 Handling of Unknown, Unforeseen and Erroneous Protocol Data

10.1 General

Protocol Error cases can be divided into ~~two~~ three classes:

1. Transfer Syntax ~~error~~ Error
2. Abstract Syntax ~~error~~ Error
3. Logical Error

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

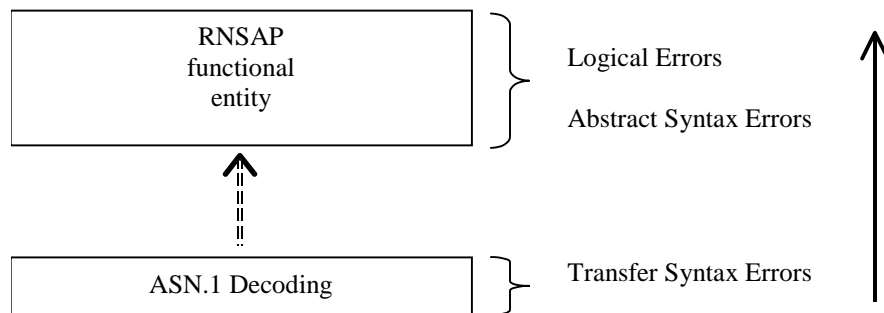


Figure X: Protocol Errors in RNSAP.

10.2 Transfer Syntax Error

A Transfer Syntax Error occurs when the receiver is not able to decode the received physical message ~~i.e. the transfer syntax can not be opened~~. 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 RNSAP entity receives IEs or IE groups that cannot be understood. The abstract syntax error also appears if the logical range of an IE 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)

10.3.2 Definition of Criticality Information

In the RANSAP messages there is criticality information set for individual IEs and/or ~~sequences of 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 10.3.3. An IE shall be regarded as not comprehended if the receiving node either cannot decode the IE or does not comprehend the function represented by the IE value. The case of the not comprehended IE is an Abstract Syntax Error.

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error act according to the Criticality Information for the IE/IE group ~~or sequences of IEs~~ due to which Abstract Syntax Error occurred in accordance with chapter 10.3.23.

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:

1. Reject IE
2. Ignore IE and Notify Sender
3. Ignore IE

10.3.23 Handling of the Criticality Information at Reception

10.3.23.1 Procedure Code

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

Reject IE:

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

10.3.23.2 IEs other than the Procedure Code

The receiving node shall treat the different types of criticality information of an IE/IE group other than the *Procedure Code* 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 group 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 only 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 the response message of the procedure~~.
- 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 only the understood IEs/IE groups.

10.3.34 Logical Error Handling

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 as defined by the class of the elementary procedure, irrespective of the criticality information 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.

TSG-RAN Working Group 3 meeting #11
Sophia Antipolis, France, 28 February – 3 March, 2000

TSGR3#(00)0734

Agenda Item: 7
Source: RAN-WG3
Title: Introduction of 'Repetition Number' into 'Criticality Diagnostics' IE
Effectuated Specifications / Releases: TS25.423 v3.0.0 / Release 99
Document for: approval
Date: 22nd February 2000

In comparison to the original CR (R3-000535) in the indentation of the *RepetitionNumber* IE has been corrected within the Message Tabular Format.

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.423 CR 032r1

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **RAN#7**
list expected approval meeting # here
↑

for approval
for information

strategic
non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: RAN-WG3 **Date:** 28 Feb 2000

Subject: Introduction of 'Repetition Number' into 'Criticality Diagnostics' IE

Work item:

Category: <small>(only one category shall be marked with an X)</small>	F Correction	<input type="checkbox"/>	Release:	Phase 2	<input type="checkbox"/>
	A Corresponds to a correction in an earlier release	<input type="checkbox"/>		Release 96	<input type="checkbox"/>
	B Addition of feature	<input type="checkbox"/>		Release 97	<input type="checkbox"/>
	C Functional modification of feature	<input checked="" type="checkbox"/>		Release 98	<input type="checkbox"/>
D Editorial modification	<input type="checkbox"/>	Release 99	Release 99	<input checked="" type="checkbox"/>	
			Release 00	<input type="checkbox"/>	

Reason for change: If a repeated IE has criticality information applied to EACH repetition, it must be possible to report the repetition number of the not comprehended information element.

Clauses affected: 9.2.1.11 Criticality Diagnostics; 9.3.4 Information Element Definitions

Other specs affected:	Other 3G core specifications	<input type="checkbox"/>	→ List of CRs:	
	Other GSM core specifications	<input type="checkbox"/>	→ List of CRs:	
	MS test specifications	<input type="checkbox"/>	→ List of CRs:	
	BSS test specifications	<input type="checkbox"/>	→ List of CRs:	
	O&M specifications	<input type="checkbox"/>	→ List of CRs:	

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

9.2.1.11 Criticality Diagnostics

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Criticality Diagnostics				
Procedure Code	O		INTEGER (0..255)	Procedure code is to be used if Criticality diagnostics is part of Error Indication procedure, and not within the response message of the same operation that caused the error
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 except when the procedure code is not understood.
Criticality Response	O		ENUMERATED (reject, ignore, notify)	This Criticality response IE is used for reporting the Criticality of the Triggering message
Transaction Id	O		INTEGER (0..255)	
Information Element Criticality Diagnostics		<i>1..<maxnoof errors></i>		
Criticality Response	M		ENUMERATED (reject, ignore, notify)	The Criticality response IE 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 IE as defined in the ASN.1 part of the specification.
<u>Repetition Number</u>	<u>O</u>		<u>INTEGER (0..255)</u>	<u>The repetition number of the not understood IE if applicable</u>

Range bound	Explanation
maxnooferrors	Maximum no. of IE errors allowed to be reported with a single message. The value for maxnooferrors is 256.

9.3.4 Information Element Definitions

```

-- *****
--
-- Information Element Definitions
--
-- *****

```

-
-
-

```

CRC-Size                ::= INTEGER (0| 8| 12| 16| 24)

CriticalityDiagnostics ::= SEQUENCE {
    procedureCode          ProcedureCode          OPTIONAL,
    triggeringMessage      TriggeringMessage      OPTIONAL,
    criticalityResponse    Criticality             OPTIONAL,
    transactionID          TransactionID          OPTIONAL,
    iEsCriticalityResponses CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

CriticalityDiagnostics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
    SEQUENCE {
        criticalityResponse    Criticality,
        iE-ID                  ProtocolIE-ID,
        repetitionNumber       RepetitionNumber    OPTIONAL,
        iE-Extensions          ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,
        ...
    }

CriticalityDiagnostics-IE-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
CTFC                ::= INTEGER
-- See formula (must be resolved)

```

```
▪  
▪  
▪  
RepetitionLength ::= INTEGER (1..63)  
RepetitionNumber ::= INTEGER (0..255)  
RepetitionPeriod ::= ENUMERATED {  
    v1,  
    v2,  
    v4,  
    v8,  
    v16,  
    v32,  
    v64--,  
    -- ...  
}
```

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply.

Elementary Procedure: The RNSAP protocol consists of Elementary Procedures (EPs). An Elementary Procedure is a unit of interaction between two RNCs. 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 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 RNSAP is FFS. To be sorted out when discussing the details of the error cases.

Class 2 EPs are considered always successful.

Radio Link Set: A set of one or more Radio Links that has a common generation of Transmit Power Control (TPC) commands in the DL.

3.2 Symbols

No special symbols are defined in this document.

3.3 Abbreviations

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

ASN.1	Abstract Syntax Notation One
ATM	Asynchronous Transfer Mode
BCCH	Broadcast Control Channel
BLER	Block Error Rate
CCPCH	Common Control Physical Channel
CCTrCH	Coded Composite Transport Channel
CFN	Connection Frame Number
CN	Core Network
CRNC	Controlling RNC
CPICH	Common Pilot Channel
DCH	Dedicated Channel
DL	Downlink
DPCCH	Dedicated Physical Control Channel
DPCH	Dedicated Physical Channel
DRNC	Drift RNC
DRNS	Drift RNS
DRX	Discontinuous Reception
DSCH	Downlink Shared Channel

FN	Frame Number
FP	Frame Protocol
MAC	Medium Access Control
PDU	Protocol Data Unit
PSCH	Physical Synchronisation Channel
RAB	Radio Access Bearer
RL	Radio Link
<u>RLS</u>	<u>Radio Link Set</u>
RLC	Radio Link Control
RNS	Radio Network Subsystem
RNSAP	Radio Network Subsystem Application Part
RNTI	Radio Network Temporary Identifier
RRC	Radio Resource Control
RSCP	Received Signal Code Power
SFN	System Frame Number
SRNC	Serving RNC
SRNS	Serving RNS
SSDT	Site Selection Diversity Transmit
TFCI	Transport Format Combination Indicator
TFCS	Transport Format Combination Set
TFS	Transport Format Set
<u>TPC</u>	<u>Transmit Power Control</u>
UARFCN	UMTS Absolute Radio Frequency Channel Number
UE	User Equipment
UL	Uplink
URA	UTRAN Registration Area
UTRAN	UMTS Terrestrial Radio Access Network

8.3.1 Radio Link Setup

8.3.1.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more radio links.

This procedure shall use the connection-oriented service of the signalling bearer.

8.3.1.2 Successful Operation

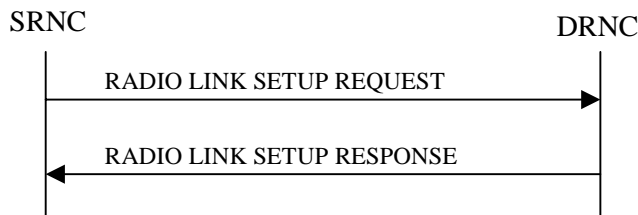


Figure 1: Radio Link Setup procedure: Successful Operation

When the SRNC makes an algorithmic decision to add the first cell or set of cells from a DRNS to the active set of a specific RRC connection, the RADIO LINK SETUP REQUEST message is sent to the corresponding DRNC to request setup of the radio link(s).

The message is also used to establish the connection-oriented service of the signalling bearer in the DRNC. The message includes the S-RNTI associated to the UE, and, if the UE context is already present in the DRNC, the corresponding D-RNTI.

[FDD - The Diversity Control Field indicates for each RL except for the first RL whether the DRNS shall combine the RL with any of the other RLs or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS shall decide for any of the alternatives. When an RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

If the RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

If the *Initial DL TX Power* IE and *UL Eb/No Target* IE [FDD] are present in the message, the DRNS shall use the indicated DL TX Power and UL Eb/No Target [FDD] as initial value.

If the *Primary CPICH Eb/No* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] is present, the DRNC should use them when deciding the Initial DL TX Power.

If the RADIO LINK SETUP REQUEST message includes the *DCH Combination Indicator* IE for a DCH, the DRNS shall treat all DCHs with the same value of this IE as a set of co-ordinated DCHs. The included *RLC Mode* IE of the DCH may be used by the DRNS to optimise the power control.

The *Allocation/Retention Priority* IE defines the priority level that should be used by the DRNS to prioritise the allocation and the retention of the resources used by the DCH. The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise the discard/delay of the data frames of the DCH.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH as the new DCH FP Mode in the Uplink of the user plane for this DCH.

The DRNS shall use the included *ToAWS* IE for a DCH as the new Time of Arrival Window Start Point in the user plane for this DCH.

The DRNS shall use the included *ToAWE* IE for a DCH as the new Time of Arrival Window End Point in the user plane for this DCH.

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

At the reception of the RADIO LINK SETUP REQUEST message, DRNS allocates requested type of channelisation codes and other physical channel resources for each RL and assigns a binding identifier and a transport layer address for each DCH or set of co-ordinated DCHs. This information shall be sent to the SRNS in the message RADIO LINK SETUP RESPONSE when all the RLs have been successfully setup.

If the *Initial DL TX Power* and the *UL Eb/No Target* IEs are not present in the RADIO LINK SETUP REQUEST message, then DRNC shall include the suggested initial UL Eb/No Target and the DL Eb/No Target in the RADIO LINK SETUP RESPONSE message.

[FDD – For each RL not having a common generation of the TPC commands in the DL with another RL, the DRNS 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 UE context.]

[FDD – For all RLs having a common generation of the TPC commands in the DL with another RL, the DRNS 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 UE context.]

In the case of combining one or more RLs the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that the RL is combined with another RL. In this case the Reference RL ID shall be included to indicate with which RL the combination is performed. The Reference RL ID shall be included for all but one of the combined RLs, for which the *Transport Layer Address* IE and the *Binding ID* IE shall be included.

In the case of not combining an RL with another RL, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH of the RL in the RADIO LINK SETUP RESPONSE message.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *Binding Identifier* IE and the *Transport Layer Address* IE shall be included only for one of the DCH in the set of co-ordinated DCHs.

[FDD - Irrespective of SSdT activation, the DRNS 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 DRNS.]

The DRNS shall also provide the SRNC with the UTRAN Cell Identifier (UC-Id) and information of the neighbouring cells to the cell(s) where the radio link(s) are added.

If a neighbouring cell is controlled by another RNC, the DRNC shall report also the node identifications (i.e. RNC, CN domain nodes) of the RNC controlling the neighbouring cell.

If there was no UE context for this UE in the DRNS before the RADIO LINK SETUP REQUEST message was received the DRNC shall include the node identifications of the CN Domain nodes that the RNC is connected to (using LAC and RAC of the current cell), and the D-RNTI in the RADIO LINK SETUP RESPONSE message.

8.3.1.3 Unsuccessful Operation

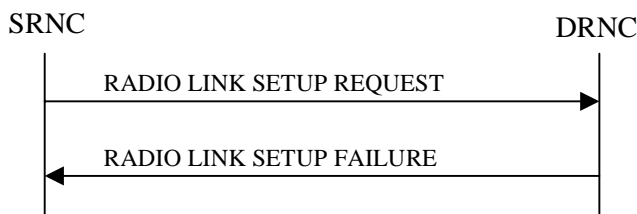


Figure 2: Radio Link Setup procedure: Unsuccessful Operation

In unsuccessful case (i.e. one or more RLs can not be setup) the RADIO LINK SETUP FAILURE message shall be sent to the SRNC, indicating the reason for failure. If some radio links were established successfully, the DRNC shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message.

Typical cause values are:

Radio Network Layer Causes:

- UL Scrambling Code Already in Use
- DL Radio Resources not Available
- UL Radio Resources not Available
- Unknown C-ID
- Macrodiversity Combining not Possible
- Requested Configuration not Supported
- Cell not Available
- Power Level not Supported

Transport Layer Causes:

- Transport Link Failure

Protocol Causes:

- Transaction not Allowed

Miscellaneous Causes:

- Control Processing Overload
- HW Failure
- Not enough User Plane Processing Resources

8.3.1.4 Abnormal Conditions

If the DRNC receives either an S-RNTI or a D-RNTI which already has RL(s) established the DRNC shall send the RADIO LINK SETUP FAILURE message to the SRNC, indicating the reason for failure.

8.3.2 Radio Link Addition

8.3.2.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more additional RLs towards a UE when there is already at least one RL established to the concerning UE via this DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

8.3.2.2 Successful Operation

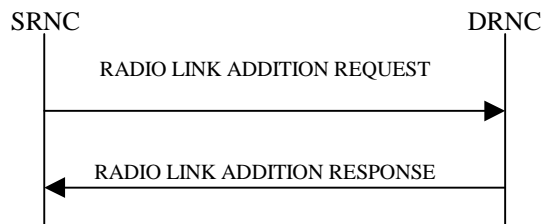


Figure 3: Radio Link Addition procedure: Successful Operation

The procedure is initiated with a RADIO LINK ADDITION REQUEST message sent from the SRNC to the DRNC.

Upon reception, the DRNS 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.

[FDD - The Diversity Control Field indicates for each RL whether the DRNS shall combine the new RL with existing RL(s) or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS shall decide for any of the alternatives. When a new RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

If the *Primary CCPCH Ec/Io* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] measured by the UE is included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power. If the *Primary CCPCH Ec/Io* IE is not present, the DRNS sets the Initial DL TX Power accordingly to the power used by the existing RLs.

[FDD - The DRNS shall use the provided UL Eb/No Target value as the current target for the inner-loop power control.]

[FDD - If the RADIO LINK ADDITION REQUEST message contains an *SSDT Cell Identity* IE, SSDT may be activated for the concerned new RL, with the indicated SSDT Cell Identity used for that RL.]

The DRNS shall activate any feedback mode diversity according to the received settings.

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

[FDD – For each RL not having a common generation of the TPC commands in the DL with another RL, the DRNS 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 UE context.]

[FDD – For all RLs having a common generation of the TPC commands in the DL with another new or existing RL, the DRNS 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 UE context.]

In the case of combining an RL with existing RL(s) the DRNC 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 DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both

the Transport Layer Address and the binding ID for the transport bearer to be established for each DCH of the RL in the RADIO LINK ADDITION RESPONSE message.

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

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

For any cell neighbouring of a cell in which a RL was added, the DRNC shall provide in the RADIO LINK ADDITION RESPONSE message the UTRAN Cell Identifier (UC-Id), the Frequency Number, the Primary Scrambling Code and the node identification of CN nodes connected to the RNC controlling the neighbouring cell if the neighbouring cell is not controlled by the DRNC. In addition, if the information is available, the DRNC shall also provide the CPICH Power level and Frame Offset of the neighbouring cell.

The DRNC shall also provide the configured uplink Maximum Eb/No and UL Minimum Eb/No for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. These values are taken into consideration by DRNS admission control and shall be used by the SRNC as limits for the UL inner-loop power control target.

The DRNC shall also provide the selected scrambling- and channelisation codes of the new RLs in order to enable the SRNC to inform the UE about the selected codes.

After sending of the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The DRNS shall start transmission on the new RL after synchronisation is achieved in the Iur user plane as specified in ref. **[Error! Reference source not found.]**.

8.3.2.3 Unsuccessful Operation

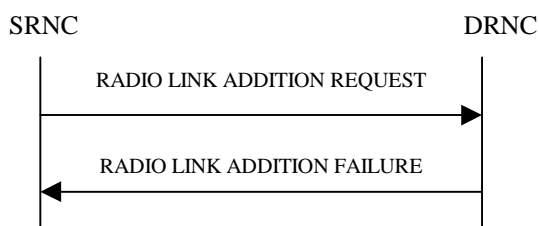


Figure 4: Radio Link Addition procedure: Unsuccessful Operation

If the establishment of at least one RL is unsuccessful, the DRNC shall send a RADIO LINK ADDITION FAILURE as response.

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

Typical cause values are:

Radio Network Layer Causes:

- DL Radio Resources not Available
- UL Radio Resources not Available
- Unknown C-ID
- Macrodiversity Combining not Possible
- Cell not Available
- Power Level not Supported

Transport Layer Causes:

- Transport Link Failure

Miscellaneous Causes:

- Control Processing Overload
- HW Failure
- Not enough User Plane Processing Resources

8.3.2.4 Abnormal Conditions

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8.3.9 Radio Link Failure

8.3.9.1 General

This procedure is started by the DRNS when one or more ~~radio-Radio links-Links~~ or Radio Link Sets are no longer available.

This procedure shall use the signalling bearer connection for the relevant UE context.

The DRNC may initiate the Radio Link Failure procedure at any time after establishing a Radio Link.

8.3.9.2 Successful Operation

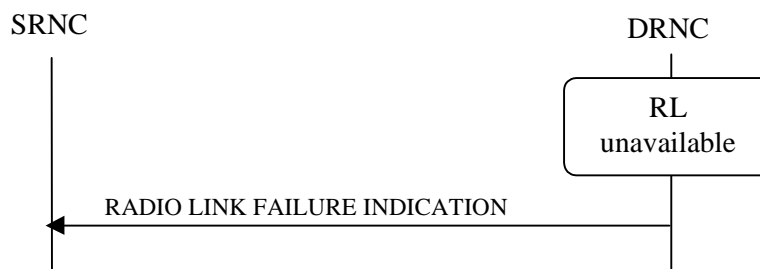


Figure 5: RL Failure procedure, Successful Operation

When DRNC detects that a one or more Radio Links or Radio Link Sets are no longer available, it shall send the RL FAILURE INDICATION message to the SRNC. The message indicates the failed ~~radio-Radio links-Links~~ or Radio Link Sets with the most appropriate cause values defined in the Cause IE. If the failure concerns one or more individual Radio Links the DRNS 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 DRNS shall indicate the affected Radio Link Set(s) using the RL Set Information IE group.]

[FDD - When the RL Failure procedure is used to notify the non achievement or loss of UL synchronisation: the message shall be sent when the UL synchronisation of ~~the newly established radio-Radio link~~ Link Set(s) is not achieved after any of the procedures RL Setup or RL Addition. The message shall also be sent if the UL synchronisation it is lost during an active connection.]

[TDD - When the RL Failure procedure is used to notify the non achievement or loss of UL synchronisation: the message shall be sent when the UL synchronisation of newly established Radio Link is not achieved after any of the procedures RL Setup or RL Addition. The message shall also be sent if the UL synchronisation it is lost during an active connection.]

Typical cause values are:

Radio Network Layer Causes:

- Synchronisation Failure

Miscellaneous Causes:

- Control Processing Overload
- HW Failure
- O&M Intervention

8.3.9.3 Abnormal Conditions

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8.3.10 Radio Link Restoration

8.3.10.1 General

This procedure is used to notify of re-establishment of UL synchronisation after that the RL Failure procedure has been used to notify the loss of the synchronisation.

This procedure shall use the signalling bearer connection for the relevant UE context.

The DRNC may initiate the Radio Link Restoration procedure after establishing a Radio Link.

8.3.10.2 Successful Operation



Figure 6: RL Restoration procedure, Successful Operation

If the UL synchronisation is re-established, the DRNC shall send the RADIO LINK RESTORE INDICATION message to the SRNC. FDD - The message shall be sent only if the RL Failure procedure has been previously used to notify the loss of UL synchronisation of the same Radio Link Set(s). TDD - The message shall be sent only if the RL Failure procedure has been previously used to notify the loss of UL synchronisation of the same Radio Link (s).; ~~and it~~ The message shall not be sent if a RL Deletion procedure have been activated in the DRNC after the RL Failure has been sent.

8.3.10.3 Abnormal Conditions

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8.3.11 Measurement Initiation

[Editor's note: According to TSGR#5 (99)564, the following measurements shall also be considered:

- * Time of Arrival
- * Frequency Offset
- * Round Trip Time
- * RX Timing Deviation

Whether these measurements shall be dedicated or common measurements have so far not been considered by TSG RAN WG3 and are thus not incorporated.]

8.3.11.1 General

This procedure is used by an SRNS to request the initiation of measurements in a DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

8.3.11.2 Successful Operation

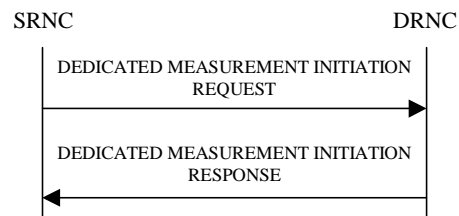


Figure 7: Measurement Initiation procedure, Successful Operation

The procedure is initiated with a DEDICATED MEASUREMENT INITIATION REQUEST message sent from the SRNC to the DRNC.

Upon reception, the DRNC 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 no RL Information is provided in the *Dedicated Measurement Object IE*, the measurement reports shall give the aggregated result for all radio links within the requested UE Context. If RL Information is provided in the request, the measurement request shall apply for the requested radio links individually.

If the *Dedicated Measurement Object IE* is set to "RL", the measurement reports shall give the measurement result for each of the indicated Radio Links.

[FDD - If the *Dedicated Measurement Object IE* is set to "RLS", the measurement reports shall give the measurement result for each of the indicated Radio Link Sets.]

If the *Dedicated Measurement Object IE* is set to "ALL RL", the measurement reports shall give the measurement result for each of the current and future Radio Links within the UE Context.

[FDD - If the *Dedicated Measurement Object IE* is set to "ALL RLS", the measurement reports shall give the measurement result for each of the existing and future Radio Link Sets within the UE Context.]

The *Report Characteristics IE* indicates how the reporting of the measurement shall be performed.

If the *Report Characteristics IE* indicates 'On-Demand', the DRNS shall report the measurement result immediately.

If the *Report Characteristics IE* indicates 'Periodic', the DRNS shall periodically initiate a Measurement Report procedure for this measurement, with the requested report frequency.

If the *Report Characteristics IE* indicates 'Event A', the DRNS 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 DRNC shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE indicates 'Event B', the DRNS 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 DRNC shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE indicates 'Event C', the DRNS 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 indicates 'Event D', the DRNS 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 indicates 'Event E', the DRNS 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 DRNS 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 Frequency* IE is provided, the DRNS shall initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. If 'Measurement Threshold 2' is not present, the DRNS shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the DRNC shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE indicates 'Event F', the DRNS 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 DRNS 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 Frequency* IE is provided, the DRNS shall initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. If 'Measurement Threshold 2' is not present, the DRNS shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the DRNC shall use the value zero as hysteresis times for both Report A and Report B.

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 DRNS shall initiate a Measurement Reporting procedure immediately, and then continue with the measurements as in normal operation.

If the DRNS was able to initiate the measurement requested by the SRNS it shall respond with the DEDICATED MEASUREMENT INITIATION RESPONSE message using the connection-oriented service of the signalling bearer. The message shall include the same Measurement Id that was used in the measurement request.

Only in the case the *Report Characteristics* IE indicated "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.

8.3.11.3 Unsuccessful Operation

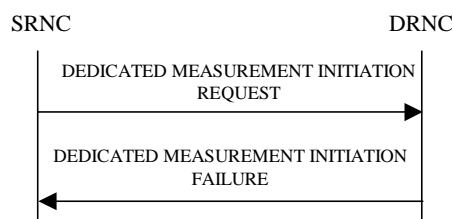


Figure 8: Measurement Initiation procedure, Unsuccessful Operation

If the requested measurement can not be initiated, the DRNC shall send a DEDICATED MEASUREMENT INITIATION FAILURE message using the connection-oriented service of the signalling bearer. The message shall include the same Measurement Id that was used in the measurement request and the *Cause* IE set to an appropriate value.

Typical cause values are:

Radio Network Layer Causes:

- Measurement not Supported For The Object

Miscellaneous Causes:

- Control Processing Overload
- HW Failure

8.3.11.4 Abnormal Conditions

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9.1.4 RADIO LINK SETUP RESPONSE

9.1.4.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
RL Information Response		1..<maxnoofRLs>		
RL ID	M			
<u>RL Set ID</u>	<u>M</u>			
SAI	M			
UL Interference Level	M			
DL Code Information		1..<maxnoofDLCode s>		
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
Diversity Indication	C-NotFirstRL			
<i>CHOICE diversity Indication Combining</i>				
RL ID	M			Reference RL ID for the combining
<i>Non Combining or IE not present</i>				"IE not present" is equivalent to "First RL".
DCH Information Response		0..<maxnoofDCHs >		Only one DCH per set of co-ordinated DCHs shall be included
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Maximum Uplink Eb/No	M		Uplink Eb/No	
Minimum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		0..<maxnoofFDDn eighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information	O	0..<maxnoofTDDn eighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Uplink Eb/No Target	O		Uplink	

			Eb/No	
Downlink Eb/No Target	O			
Criticality Diagnostics	O			

Condition	Explanation
IfComb	This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.
IfNotComb	This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B.
NotFirstRL	The IE is present only if the RL is not the first RL in the RL Information
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell.
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell.

9.1.5 RADIO LINK SETUP FAILURE

9.1.5.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
Unsuccessful RL Information Response		1...<maxnoofRLs>		
RL ID	M			
Cause	M			
Successful RL Information Response		0..<maxnoofRLs-1>		
RL ID	M			
RL Set ID	M			
SAI	M			
UL Interference Level	M			
DL Code Information		1..<maxnoofDL Codes>		
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
Diversity Indication	M			
CHOICE <i>diversity Indication Combining</i>				
RL ID	M			Reference RL ID for the combining
<i>Non Combining or IE not present</i>				"IE not present" is equivalent to "First RL".
DCH Information Response		0..<maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Neighbouring FDD Cell Information	O			
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information	O			
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case3			
PSCH Time Slot	C-Case2&3			
Uplink Eb/No Target	O		Uplink	

			Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Minimum Uplink Eb/No	M		Uplink Eb/No	
Downlink Eb/No Target	O			
Criticality Diagnostics	O			

Condition	Explanation
IfComb	This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.
IfNotComb	This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B.
NotFirstRL	The IE is present only if the RL is not the first RL in the RL Information
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.
MaxnoofDCHs	Maximum no. of DCHs for one UE.

9.1.7 RADIO LINK ADDITION RESPONSE

9.1.7.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
RL Information Response		1..<maxnoofRLs-1>		
RL ID	M			
<u>RL Set ID</u>	<u>M</u>			
SAI	M			
UL Interference Level	M			
DL Code Information		1..<maxnoofDLCodes>		
DL Scrambling Code	M			
DL Channelisation Code	M			
Diversity Indication	M			
CHOICE <i>diversity indication</i>				
<i>Combining</i>				
RL ID	M			Reference RL-Id
<i>Non combining</i>				
DCH Information Response		1..<maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Minimum Uplink Eb/No	M		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		0..<maxnoofFDD Neighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information		0..<maxnoofTDD Neighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
MaxnoofRLs	Maximum number of radio links for one UE
MaxnoofFDDNeighbours	Maximum number of neighbouring FDD cells for one cell
MaxnoofTDDNeighbours	Maximum number of neighbouring TDD cells for one cell
MaxnoofDLCodes	Maximum number of DL code information

9.1.8 RADIO LINK ADDITION FAILURE

9.1.8.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Unsuccessful RL Information Response		1..<maxnoofRLs-1>		
RL ID	M			
Cause	M			
Succesfull RL Information Response		1..<maxnoofRLs-2>		
RL ID	M			
<u>RL Set ID</u>	<u>M</u>			
SAI	M			
UL Interference Level	M			
DL Code Information		1..<maxnoofDLCodes>		
DL scrambling code	M			
DL channelisation code	M			
Diversity Indication	M			
CHOICE <i>diversity indication</i>				
<i>Combining</i>				
RL ID	M			Reference RL-Id
<i>Non combining</i>				
DCH Information Response		1..<maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Minimum Uplink Eb/No	M		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		0..<maxnoofFDD Neighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information		0..<maxnoofTDD Neighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
MaxnoofRLs	Maximum number of radio links for one UE
MaxnoofFDDNeighbours	Maximum number of neighbouring FDD cells for one cell
MaxnoofTDDNeighbours	Maximum number of neighbouring TDD cells for one cell
MaxnoofDLCodes	Maximum number of DL code information

9.1.18 RADIO LINK FAILURE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
<u>CHOICE Reporting Object</u>	<u>M</u>			<u>Object for which the Failure shall be reported.</u>
<u>"RL"</u>				
<u>RL Information</u>	M	1 .. <MaxnoofRLs>		
<u>RL ID</u>	M			
<u>Cause</u>	M			
<u>"RL Set"</u>				
<u>RL Set Information</u>		<u>1 ..</u> <u><MaxnoofRLSets</u> <u>≥</u>		
<u>RL Set ID</u>	<u>M</u>			
<u>Cause</u>	<u>M</u>			

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.
<u>MaxnoofRLSets</u>	<u>Maximum number of RL Sets for one UE.</u>

9.1.19 RADIO LINK RESTORE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
<u>CHOICE Reporting Object</u>	<u>M</u>			<u>Object for which the Restoration shall be reported.</u>
<u>"RL"</u>				
<u>RL Information</u>		1 .. <MaxnoofRLs>		
<u>RL ID</u>	M			
<u>"RL Set"</u>				
<u>RL Set Information</u>		1 .. <MaxnoofRLSets>		
<u>RL Set ID</u>	<u>M</u>			

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.
<u>MaxnoofRLSets</u>	<u>Maximum number of RL Sets for one UE.</u>

9.1.28 DEDICATED MEASUREMENT INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction Id	M			
Measurement Id	M			
Dedicated Measurement Object Type	M			
CHOICE <i>Dedicated Measurement Object Type</i>				
"RL"				
RL Information		1..<maxnoofRLs>		
RL-id	M			
DPCH Id	O			
"RLS"				
<u>RL Information</u>		<u>1..<maxnoofRLSets></u>		
<u>RL-id</u>	<u>M</u>			
Dedicated Measurement Type	M			
Measurement Characteristics	M			
Report Characteristics	M			

Range bound	Explanation
MaxnoofRLs	Maximum number of individual RLs a measurement can be started on.
<u>MaxnoofRLSets</u>	<u>Maximum number of individual RL Sets a measurement can be started on.</u>

9.1.29 DEDICATED MEASUREMENT INITIATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction Id	M			Are both transaction id and Measurement id needed ?
Measurement Id	M			
CHOICE <i>Dedicated Measurement Object Type</i>				Dedicated Measurement Object Type the measurement was initiated with
"RL" or "ALL RL"				
RL Information		1..<maxnoofRLs>		
RL-id	M			
DPCH Id	O			
Dedicated Measurement Value	M			
"RLS" or "ALL RLS"				
RL Set Information		1..<maxnoofRLSets>		
<u>RL Set ID</u>	<u>M</u>			
<u>Dedicated Measurement Value</u>	<u>M</u>			
—"ALLRL"				
— <u>Dedicated Measurement Value</u>	<u>M</u>			
CFN	O			Dedicated Measurement Time Reference
Criticality Diagnostics	O			

Range bound	Explanation
MaxnoofRLs	Maximum number of individual RLs the measurement can be started on.
<u>MaxnoofRLSets</u>	<u>Maximum number of individual RL Sets the measurement can be started on.</u>

9.1.31 DEDICATED MEASUREMENT REPORT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction Id	M			
Measurement Id	M			
CHOICE <i>Dedicated Measurement Object Type</i>				Dedicated Measurement Object Type the measurement was initiated with
<i>"RL" or "ALL RL"</i>				
RL Information		<i>1..<maxnoofRLs></i>		
RL-Id	M			
DPCH Id	O			
Dedicated Measurement Value	M			
<i>"RLS" or "ALL RLS"</i>				
RL Set Information		<i>1..<maxnoofRLSets></i>		
<u>RL Set ID</u>	<u>M</u>			
<u>Dedicated Measurement Value</u>	<u>M</u>			
<i>—"ALLRL"</i>				
<u>Dedicated Measurement Value</u>	<u>M</u>			
CFN	O			Dedicated Measurement Time Reference

Range bound	Explanation
MaxnoofRLs	Maximum number of individual RLs the measurement can be started on.
<u>MaxnoofRLSets</u>	<u>Maximum number of individual RL Sets the measurement can be started on.</u>

9.2.1.15 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, <u>RLS</u> , ALL_RL, <u>ALL_RLS</u> ,...)	

9.2.2.x RL Set ID

The RL Set ID uniquely identifies one RL Set within a UE Context.

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

9.3.3 PDU Definitions

```

-- *****
--
-- PDU definitions for RNSAP.
--
-- *****

RNSAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    AllocationRetentionPriority,
    AllowedQueuingTime,
    BLER,
    BindingID,
    BurstType,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CPICH-EcIo,
    CPICH-Power,
    Cause,
    CellParameterID,
    ChipOffset,
    CompressedModeMethod,
    CriticalityDiagnostics,
    D-FieldLength,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-CombinationInd,
    DCH-ID,
    DL-ChannelisationCode,
    DL-DPCCCH-SlotFormat,
    DL-DPCH-SlotNumber,
    DL-EbNo,
    DL-EbNoTarget,
    DL-FrameType,
    DL-Power,

```

DL-ScramblingCode,
 DPCH-ID,
 DRX-Parameter,
 DedicatedMeasurementValue,
 DiversityControlField,
 DiversityMode,
 FACH-DataFrameSize,
 FACH-InitialWindowSize,
 FACH-PriorityIndicator,
 FDD-DL-ChannelisationCodeNumber,
 FDD-S-CCPCH-Offset,
 FrameHandlingPriority,
 FrameOffset,
 GapPeriod,
 GapPositionMode,
 L3-Information,
 MAC-c-SDU-Length,
 MaxNrOfUL-DPCHs,
 MeanBitRate,
 MeasurementCharacteristics,
 MeasurementID,
 MidambleShift,
 MinUL-ChannelisationCodeLength,
 MultipleURAsIndicator,
 MultiplexingPosition,
 Offset,
 PD,
 PSCH-PCCPCH-TimeSlot,
 PSCH-TimeSlot,
 PayloadCRC-PresenceIndicator,
 PilotBitsUsedIndicator,
 PowerControlMode,
 PowerOffset,
 PowerResumeMode,
 PrimaryCCPCH-RSCP,
 PrimaryCPICH-EcNo,
 PrimaryCPICH-Power,
 PrimaryScramblingCode,
 PropagationDelay,
 PunctureLimit,
 RANAP-RelocationInformation,
 RL-ID,
 RLC-Mode,
RL-Set-ID,
 RNC-ID,
 RepetitionLength,
 RepetitionPeriod,
 ReportCharacteristics,
 S-FieldLength,
 S-RNTI,
 SAI,

```

SN,
SRNC-ID,
SSDT-CellID,
SSDT-CellID-Length,
SSDT-Indication,
SSDT-SupportIndicator,
ScaledUL-InterferenceLevel,
ScramblingCode,
ScramblingCodeChange,
SecondaryCCPCH-SlotFormat,
SyncCase,
TDD-ChannelisationCode,
TDD-PhysicalChannelOffset,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TGD,
TGL,
TPC-StepSize,
TimeSlot,
ToAWE,
ToAWS,
TransportBearerID,
TransportBearerRequestIndicator,
TransportFormatCombinationSet,
TransportFormatSet,
TransportLayerAddress,
UARFCN,
UC-ID,
UL-DL-CompressedModeSelection,
UL-DPCCH-SlotFormat,
UL-EbNo,
UL-EbNoTarget,
UL-FP-Mode,
UL-ScramblingCode,
URA-ID
FROM RNSAP-IEs

PrivateExtensionContainer{},
ProtocolExtensionContainer{},
ProtocolIE-ContainerList{},
ProtocolIE-ContainerPair{},
ProtocolIE-ContainerPairList{},
ProtocolIE-Container{},
RNSAP-PRIVATE-EXTENSION,
RNSAP-PROTOCOL-EXTENSION,
RNSAP-PROTOCOL-IES,
RNSAP-PROTOCOL-IES-PAIR
FROM RNSAP-Containers

maxNoOfDL-Codes,

```

maxNrOfCCTrCHs,
 maxNrOfDCHs,
 maxNrOfDL-Codes,
 maxNrOfDPCHs,
 maxNrOfFACH-FD-Size,
 maxNrOfFDD-Neighbours,
 maxNrOfMACcSDU-Length,
 maxNrOfTDD-Neighbours,
 maxNrOfRLs,
maxNrOfRLSets,
 maxNrOfSCCPCHs,
 maxRNCinURA,

id-AllowedQueuingTime,
 id-BindingID,
 id-C-ID,
 id-C-RNTI,
 id-CCTrCH-ID,
 id-CFN,
 id-CN-CS-DomainIdentifier,
 id-CN-PS-DomainIdentifier,
 id-Cause,
 id-CompressedModeMethod,
 id-CriticalityDiagnostics,
 id-D-RNTI,
 id-D-RNTI-ReleaseIndication,
 id-DCH-AddItem,
 id-DCH-AddItem-RL-ReconfPrepFDD,
 id-DCH-AddItem-RL-ReconfPrepTDD,
 id-DCH-AddItem-RL-ReconfReadyFDD,
 id-DCH-AddItem-RL-ReconfRqstFDD,
 id-DCH-AddItem-RL-ReconfRqstTDD,
 id-DCH-AddList-RL-ReconfPrepFDD,
 id-DCH-AddList-RL-ReconfPrepTDD,
 id-DCH-AddList-RL-ReconfRqstFDD,
 id-DCH-AddList-RL-ReconfRqstTDD,
 id-DCH-DeleteItem-RL-ReconfPrepFDD,
 id-DCH-DeleteItem-RL-ReconfPrepTDD,
 id-DCH-DeleteItem-RL-ReconfRqstFDD,
 id-DCH-DeleteItem-RL-ReconfRqstTDD,
 id-DCH-DeleteList-RL-ReconfPrepFDD,
 id-DCH-DeleteList-RL-ReconfPrepTDD,
 id-DCH-DeleteList-RL-ReconfRqstFDD,
 id-DCH-DeleteList-RL-ReconfRqstTDD,
 id-DCH-Information-RL-SetupReqFDD,
 id-DCH-InformationItem-RL-SetupReqFDD,
 id-DCH-InformationItem-RL-SetupReqTDD,
 id-DCH-InformationList-RL-SetupReqTDD,
 id-DCH-ModifyItem,
 id-DCH-ModifyItem-RL-ReconfPrepFDD,
 id-DCH-ModifyItem-RL-ReconfPrepTDD,

id-DCH-ModifyItem-RL-ReconfReadyFDD,
 id-DCH-ModifyItem-RL-ReconfRqstFDD,
 id-DCH-ModifyItem-RL-ReconfRqstTDD,
 id-DCH-ModifyList-RL-ReconfPrepFDD,
 id-DCH-ModifyList-RL-ReconfPrepTDD,
 id-DCH-ModifyList-RL-ReconfRqstFDD,
 id-DCH-ModifyList-RL-ReconfRqstTDD,
 id-DL-CCTrCH-Information-RL-ReconfPrepTDD,
 id-DL-CCTrCH-Information-RL-ReconfRqstTDD,
 id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD,
 id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD,
 id-DL-CCTrChInformationItem-RL-SetupReqTDD,
 id-DL-CCTrChInformationList-RL-SetupReqTDD,
 id-DL-CodeInformation-PhyChReconfRqstFDD,
 id-DL-DPCH-Information,
 id-DL-DPCH-Information-RL-SetupReqFDD,
 id-DL-DPCH-InformationList-PhyChReconfRqstTDD,
 id-DL-DPCH-InformationList-RL-ReconfReadyTDD,
 id-DL-EbNoTarget,
 id-DL-FrameType,
 id-DL-MeanBitRate,
 id-DL-ReferencePowerInformation-DL-PC-Rqst,
 id-DRX-Parameter,
 id-DedicatedMeasurementObjectType-DM-Rprt,
 id-DedicatedMeasurementObjectType-DM-Rqst,
 id-DedicatedMeasurementObjectType-DM-Rspns,
 id-FACH-InfoForOptionalGroupS-CCPCH,
 id-FACH-InfoForOptionals-CCPCH,
 id-FACH-InfoForS-CCPCH-CoupledToPRACH,
 id-GapPositionMode,
 id-L3-Information,
 id-MeasurementCharacteristics,
 id-MeasurementID,
 id-MultipleURAsIndicator,
 id-PD,
 id-PagingArea-PagingRqst,
 id-PowerControlMode,
 id-PowerResumeMode,
 id-ProcedureScope-DL-PC-Rqst,
 id-RANAP-RelocationInformation,
 id-RL-Information-PhyChReconfRqstFDD,
 id-RL-Information-PhyChReconfRqstTDD,
 id-RL-Information-RL-AdditionRqstFDD,
 id-RL-Information-RL-AdditionRqstTDD,
 id-RL-Information-RL-DeletionRqst,
 id-RL-Information-RL-FailureInd,
 id-RL-Information-RL-ReconfPrepFDD,
 id-RL-Information-RL-RestoreInd,
 id-RL-Information-RL-SetupReqFDD,
 id-RL-Information-RL-SetupReqTDD,
 id-RL-InformationItem-DM-Rprt,

id-RL-InformationItem-DM-Rqst,
 id-RL-InformationItem-DM-Rspns,
 id-RL-InformationItem-RL-SetupReqFDD,
 id-RL-InformationList-RL-AdditionRqstFDD,
 id-RL-InformationList-RL-DeletionRqst,
~~id-RL-InformationList-RL-FailureInd,~~
 id-RL-InformationList-RL-ReconfPrepFDD,
~~id-RL-InformationList-RL-RestoreInd,~~
 id-RL-InformationResponse-RL-AdditionRspTDD,
 id-RL-InformationResponse-RL-ReconfReadyTDD,
 id-RL-InformationResponse-RL-SetupRspTDD,
 id-RL-InformationResponseItem-RL-AdditionRspFDD,
 id-RL-InformationResponseItem-RL-ReconfReadyFDD,
 id-RL-InformationResponseItem-RL-SetupRspFDD,
 id-RL-InformationResponseList-RL-AdditionRspFDD,
 id-RL-InformationResponseList-RL-ReconfReadyFDD,
 id-RL-InformationResponseList-RL-SetupRspFDD,
~~id-RL-Set-InformationItem-DM-Rqst,~~
~~id-RL-Set-InformationItem-DM-Rprt~~
~~id-RL-Set-InformationItem-DM-Rspns,~~
~~id-RL-Set-Information-RL-FailureInd,~~
~~id-RL-Set-Information-RL-RestoreInd,~~
 id-RL-ReconfigurationFailure-RL-ReconfFail,
 id-RL-ReconfigurationFailureList-RL-ReconfFail,
 id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind,
 id-ReportCharacteristics,
~~id-Reporting-Object-RL-FailureInd,~~
~~id-Reporting-Object-RL-RestoreInd,~~
 id-S-RNTI,
 id-SAI,
 id-SN,
 id-SRNC-ID,
 id-ScramblingCodeChange,
 id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
 id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,
 id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
 id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
 id-TGD,
 id-TGL,
 id-TGP1,
 id-TGP2,
 id-TransportBearerID,
 id-TransportBearerRequestIndicator,
 id-TransportLayerAddress,
 id-UC-ID,
 id-UL-CCTrCH-Information-RL-ReconfPrepTDD,
 id-UL-CCTrCH-Information-RL-ReconfRqstTDD,
 id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD,
 id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD,
 id-UL-CCTrChInformationItem-RL-SetupReqTDD,
 id-UL-CCTrChInformationList-RL-SetupReqTDD,

```

id-UL-DL-CompressedModeSelection,
id-UL-DPCH-Information,
id-UL-DPCH-Information-RL-SetupReqFDD,
id-UL-DPCH-InformationList-PhyChReconfRqstTDD,
id-UL-DPCH-InformationList-RL-ReconfReadyTDD,
id-UL-DeltaEbNo,
id-UL-DeltaEbNoAfter,
id-UL-EbNoTarget,
id-UL-MeanBitRate,
id-URA-ID,
id-UnsuccessfulRL-InformationResponse,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
FROM RNSAP-Constants;

-- *****
--
-- Common Container List
--
-- *****

DCH-IE-ContainerList      { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfDCHs,      { IEsSetParam } }
RL-IE-ContainerList      { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfRLs,      { IEsSetParam } }
| RL-Set-IE-ContainerList { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfRLSets, { IEsSetParam } }
CCTrCH-IE-ContainerList  { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfCCTrCHs, { IEsSetParam } }
DL-Code-IE-ContainerList { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfDL-Codes, { IEsSetParam } }

.
.
.
Two Messages Skipped
.
.
.
-- *****
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- *****

RadioLinkSetupResponseFDD ::= SEQUENCE {
    protocolIES          ProtocolIE-Container      {{RadioLinkSetupResponseFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupResponseFDD-Extensions}}
    ...
}

RadioLinkSetupResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional } |

```

```

{ ID id-CN-PS-DomainIdentifier          CRITICALITY ignore TYPE CN-PS-DomainIdentifier          PRESENCE optional } |
{ ID id-CN-CS-DomainIdentifier          CRITICALITY ignore TYPE CN-CS-DomainIdentifier          PRESENCE optional } |
{ ID id-RL-InformationResponseList-RL-SetupRspFDD
      CRITICALITY ignore TYPE RL-InformationResponseList-RL-SetupRspFDD
      PRESENCE mandatory } |
{ ID id-UL-EbNoTarget                   CRITICALITY ignore TYPE UL-EbNoTarget                   PRESENCE optional } |
{ ID id-DL-EbNoTarget                   CRITICALITY ignore TYPE DL-EbNoTarget                   PRESENCE optional } |
{ ID id-CriticalityDiagnostics           CRITICALITY ignore TYPE CriticalityDiagnostics           PRESENCE optional },
...
}

RL-InformationResponseList-RL-SetupRspFDD ::= RL-IE-ContainerList { {RL-InformationResponseItemIEs-RL-SetupRspFDD} }

RL-InformationResponseItemIEs-RL-SetupRspFDD RNSAP-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,
  sAI                                  SAI,
  ul-InterferenceLevel                 ScaledUL-InterferenceLevel,
  dl-CodeInformation                   DL-CodeInformationList-RL-SetupRspFDD,
  sSDT-SupportIndicator                 SSdT-SupportIndicator,
  maxUL-EbNo                           UL-EbNo,
  minUL-EbNo                           UL-EbNo,
  neighbouringFDD-CellInformation       NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
  neighbouringTDD-CellInformation       NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
  iE-Extensions                         ProtocolExtensionContainer { {RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-SetupRspFDD

DL-CodeInformationItem-RL-SetupRspFDD ::= SEQUENCE {
  dl-ScramblingCode                    DL-ScramblingCode,
  fDD-DL-ChannelisationCodeNumber       FDD-DL-ChannelisationCodeNumber,
  -- ** NOTE: How many alternatives are there, 2 or 3? **
  diversityIndication                   CHOICE {
    combining                            SEQUENCE {
      rL-ID                               RL-ID
    },
    nonCombiningOrIENotPresent           SEQUENCE {
      dCH-InformationResponse-RL-SetupRspFDD    DCH-InformationResponseList-RL-SetupRspFDD    OPTIONAL
    }
  }
}

```

```

    }
  }
  OPTIONAL
  -- This IE is present only if the RL is not the first on in the RL Information -- ,
  iE-Extensions          ProtocolExtensionContainer { {DL-CodeInformationItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CodeInformationItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupRspFDD

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

DCH-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
  NeighbouringFDD-CellInformationItem-RL-SetupRsp

NeighbouringFDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
  uC-ID                C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN                UARFCN,
  frameOffset           FrameOffset OPTIONAL,
  primaryScramblingCode PrimaryScramblingCode,
  primaryCPICH-Power    PrimaryCPICH-Power OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
  ...
}

NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

NeighbouringTDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
  NeighbouringTDD-CellInformationItem-RL-SetupRsp

NeighbouringTDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
  c-ID                C-ID,

```

```

cN-PS-DomainIdentifier          CN-PS-DomainIdentifier  OPTIONAL,
cN-CS-DomainIdentifier          CN-CS-DomainIdentifier  OPTIONAL,
uARFCN                          UARFCN,
frameOffset                      FrameOffset          OPTIONAL,
cellParameterID                 CellParameterID,
syncCase                         SyncCase,
timeSlot                         TimeSlot          OPTIONAL
-- This IE is present only if SyncCase is Case1 -- ,
pSCH-TimeSlot                    PSCH-TimeSlot          OPTIONAL
-- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
ul-EbNo                          UL-EbNo           OPTIONAL,
dl-EbNo                          DL-EbNo           OPTIONAL,
iE-Extensions                    ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
...
}

NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkSetupResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}
.
.
.
One Message Skipped
.
.
.

-- *****
--
-- RADIO LINK SETUP FAILURE FDD
--
-- *****

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

RadioLinkSetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE mandatory } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE mandatory } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE mandatory } |
    { ID id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
      CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
      PRESENCE mandatory } |
    { ID id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD

```

```

        CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-SetupFailureFDD
        PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList { {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
      CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
      PRESENCE mandatory },
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID RL-ID,
    cause Cause,
    iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs} }

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD
      CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-SetupFailureFDD
      PRESENCE mandatory },
    ...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID RL-ID,
    rL-Set-ID RL-Set-ID,
    sAI SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation DL-CodeInformationList-RL-SetupFailureFDD,
    sSDT-SupportIndicator SSDT-SupportIndicator,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupFailureFDD OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupFailureFDD OPTIONAL,
    ul-EbNoTarget UL-EbNo,
    maxUL-EbNo UL-EbNo,
    minUL-EbNo UL-EbNo,
    dl-EbNoTarget DL-EbNo,
    iE-Extensions ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-SetupFailureFDD

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CodeInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
    -- ** NOTE: How many alternatives are there, 2 or 3? **
    diversityIndication        CHOICE {
        combining                SEQUENCE {
            rL-ID                RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dCH-InformationResponse-RL-SetupFailureFDD  DCH-InformationResponseList-RL-SetupFailureFDD OPTIONAL
        }
    } OPTIONAL
    -- This IE is present only if the RL is not the first on in the RL Information -- ,
    iE-Extensions              ProtocolExtensionContainer { {DL-CodeInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CodeInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupFailureFDD

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

DCH-InformationResponseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringFDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    uC-ID          C-ID,
    cN-PS-DomainIdentifier  CN-PS-DomainIdentifier  OPTIONAL,
    cN-CS-DomainIdentifier  CN-CS-DomainIdentifier  OPTIONAL,
    uARFCN         UARFCN,

```



```

frameOffset          FrameOffset          OPTIONAL,
primaryScramblingCode PrimaryScramblingCode,
primaryCPICH-Power   PrimaryCPICH-Power   OPTIONAL,
IE-Extensions        ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
...
}

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringTDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
uC-ID                C-ID,
cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
uARFCN               UARFCN,
frameOffset          FrameOffset          OPTIONAL,
cellParameterID      CellParameterID,
syncCase             SyncCase,
timeSlot             TimeSlot,
pSCH-TimeSlot        PSCH-TimeSlot        OPTIONAL
-- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
IE-Extensions        ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
...
}

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkSetupFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

.
.
.
Three Messages Skipped
.
.
.
-- *****
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

RadioLinkAdditionResponseFDD ::= SEQUENCE {

```

```

    protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionResponseFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkAdditionResponseFDD-Extensions}}
    ...
}

RadioLinkAdditionResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional } |
    { ID id-RL-InformationResponseList-RL-AdditionRspFDD
      CRITICALITY ignore TYPE RL-InformationResponseList-RL-AdditionRspFDD
      PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-AdditionRspFDD ::= RL-IE-ContainerList { {RL-InformationResponseItemIEs-RL-AdditionRspFDD} }

RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-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,
    sAI          SAI,
    ul-InterferenceLevel          ScaledUL-InterferenceLevel,
    dl-CodeInformation          DL-CodeInformationList-RL-AdditionRspFDD,
    sSDT-SupportIndicator          SSdT-SupportIndicator,
    maxUL-EbNo          UL-EbNo,
    minUL-EbNo          UL-EbNo,
    neighbouringFDD-CellInformation          NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation          NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-AdditionRspFDD

DL-CodeInformationItem-RL-AdditionRspFDD ::= SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber          FDD-DL-ChannelisationCodeNumber,
    -- ** NOTE: How many alternatives are there, 2 or 3? **
    diversityIndication          CHOICE {
        combining          SEQUENCE {
            rL-ID          RL-ID
        }
    }
}

```

```

    },
    nonCombiningOrIENotPresent          SEQUENCE {
        dCH-InformationResponse-RL-AdditionRspFDD          DCH-InformationResponseList-RL-AdditionRspFDD OPTIONAL
    }
}
-- This IE is present only if the RL is not the first on in the RL Information -- ,
IE-Extensions          ProtocolExtensionContainer { {DL-CodeInformationItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
...
}

DL-CodeInformationItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-AdditionRspFDD

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

DCH-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-AdditionRsp

NeighbouringFDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier          OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier          OPTIONAL,
    uARFCN               UARFCN,
    frameOffset          FrameOffset          OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power   PrimaryCPICH-Power   OPTIONAL,
    IE-Extensions         ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-AdditionRsp

```

```

NeighbouringTDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier    CN-PS-DomainIdentifier    OPTIONAL,
    cN-CS-DomainIdentifier    CN-CS-DomainIdentifier    OPTIONAL,
    uARFCN                UARFCN,
    frameOffset            FrameOffset                OPTIONAL,
    cellParameterID        CellParameterID,
    syncCase                SyncCase,
    timeSlot                TimeSlot,
    pSCH-TimeSlot            PSCH-TimeSlot                OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
    iE-Extensions            ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

.
.
.
One Message Skipped
.
.
.
-- *****
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- *****

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

RadioLinkAdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
        CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
        PRESENCE mandatory } |
    { ID id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
        CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
        PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics
        CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },

```

```

}
...
}
UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }
UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    PRESENCE mandatory },
  ...
}
UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID RL-ID,
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}
UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList { {SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }
SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    PRESENCE mandatory },
  ...
}
SuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID RL-ID,
  rL-Set-ID RL-Set-ID,
  sAI SAI,
  ul-InterferenceLevel ScaledUL-InterferenceLevel,
  dl-CodeInformation DL-CodeInformationList-RL-AdditionFailureFDD,
  sSDT-SupportIndicator SSDT-SupportIndicator,
  maxUL-EbNo UL-EbNo,
  minUL-EbNo UL-EbNo,
  neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD OPTIONAL,
  neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}
SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-AdditionFailureFDD

DL-CodeInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  dl-ScramblingCode          DL-ScramblingCode,
  dl-ChannelisationCode     DL-ChannelisationCode,
  diversityIndication       CHOICE {
    combining                SEQUENCE {
      rL-ID                  RL-ID
    },
    nonCombiningOrIENotPresent SEQUENCE {
      dCH-InformationResponse-RL-AdditionFailureFDD DCH-InformationResponseList-RL-AdditionFailureFDD OPTIONAL
    }
  } OPTIONAL
  -- This IE is present only if the RL is not the first on in the RL Information -- ,
  iE-Extensions             ProtocolExtensionContainer { {DL-CodeInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CodeInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-AdditionFailureFDD

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

DCH-InformationResponseItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
  NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  uC-ID                    C-ID,
  cN-PS-DomainIdentifier   CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier   CN-CS-DomainIdentifier OPTIONAL,
  uARFCN                   UARFCN,
  frameOffset              FrameOffset OPTIONAL,
  primaryScramblingCode    PrimaryScramblingCode,
  cPICH-Power              CPICH-Power OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

```

```

}
NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
  NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD
NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  uC-ID                C-ID,
  cN-PS-DomainIdentifier  CN-PS-DomainIdentifier  OPTIONAL,
  cN-CS-DomainIdentifier  CN-CS-DomainIdentifier  OPTIONAL,
  uARFCN                UARFCN,
  frameOffset            FrameOffset            OPTIONAL,
  cellParameterID        CellParameterID,
  syncCase                SyncCase,
  timeSlot                TimeSlot,
  pSCH-TimeSlot           PSCH-TimeSlot          OPTIONAL
  -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
  iE-Extensions           ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}
NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
RadioLinkAdditionFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
.
.
.
Several Messages Skipped
.
.
.
-- *****
--
-- RADIO LINK FAILURE INDICATION
--
-- *****

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

```

```

RadioLinkFailureIndication-IES RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationListReporting-Object-RL-FailureInd    CRITICALITY ignore  TYPE RL-InformationListReporting-Object-RL-FailureInd  PRESENCE
  mandatory  },
  ...
}

Reporting-Object-RL-FailureInd ::= CHOICE {
  rL                               RL-InformationList-RL-FailureInd,
  rL-Set                           RL-Set-InformationList-RL-FailureInd,
  ...
}

RL-InformationList-RL-FailureInd          ::= RL-IE-ContainerList { {RL-Information-RL-FailureInd-IEs} }

RL-Information-RL-FailureInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-FailureInd          CRITICALITY ignore  TYPE RL-Information-RL-FailureInd          PRESENCE mandatory  },
  ...
}

RL-Information-RL-FailureInd ::= SEQUENCE {
  rL-ID                               RL-ID,
  cause                               Cause,
  iE-Extensions                       ProtocolExtensionContainer { {RL-Information-RL-FailureInd-ExtIEs} } OPTIONAL,
  ...
}

RL-Information-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Set-InformationList-RL-FailureInd          ::= RL-IE-ContainerList { {RL-Set-Information-RL-FailureInd-IEs} }

RL-Set-Information-RL-FailureInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-Information-RL-FailureInd          CRITICALITY ignore  TYPE RL-Set-Information-RL-FailureInd          PRESENCE mandatory  },
  ...
}

RL-Set-Information-RL-FailureInd ::= SEQUENCE {
  rL-Set-ID                               RL-Set-ID,
  cause                               Cause,
  iE-Extensions                       ProtocolExtensionContainer { {RL-Set-Information-RL-FailureInd-ExtIEs} } OPTIONAL,
  ...
}

RL-Set-Information-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```



```

}
-- *****
--
-- RADIO LINK RESTORE INDICATION
--
-- *****

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

RadioLinkRestoreIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationListReporting-Object-RL-RestoreInd CRITICALITY ignore TYPE RL-InformationListReporting-Object-RL-RestoreInd PRESENCE
mandatory },
    ...
}

Reporting-Object-RL-RestoreInd ::= CHOICE {
    rL RL-InformationList-RL-RestoreInd,
    rL-Set RL-Set-InformationList-RL-RestoreInd,
    ...
}

RL-Set-InformationList-RL-RestoreInd ::= RL-IE-ContainerList { {RL-Set-Information-RL-RestoreInd-IEs} }

RL-Information-RL-RestoreInd-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-RestoreInd CRITICALITY ignore TYPE RL-Information-RL-RestoreInd PRESENCE mandatory },
    ...
}

RL-Information-RL-RestoreInd ::= SEQUENCE {
    rL-ID          RL-ID,
    iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-RestoreInd-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-RL-RestoreInd ::= RL-IE-ContainerList { {RL-Set-Information-RL-RestoreInd-IEs} }

RL-Set-Information-RL-RestoreInd-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-Information-RL-RestoreInd CRITICALITY ignore TYPE RL-Set-Information-RL-RestoreInd PRESENCE mandatory },
    ...
}

RL-Set-Information-RL-RestoreInd ::= SEQUENCE {

```

```

    rL-Set-ID                RL-Set-ID,
    iE-Extensions          ProtocolExtensionContainer { {RL-Set-Information-RL-RestoreInd-ExtIEs} } OPTIONAL,
    ...
}

RL-Set-Information-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkRestoreIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

.
.
.
Several Messages Skipped
.
.
.

-- *****
--
-- DEDICATED MEASUREMENT INITIATION REQUEST
--
-- *****

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

DedicatedMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rqst CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rqst PRESENCE mandatory } |
    { ID id-MeasurementCharacteristics CRITICALITY ignore TYPE MeasurementCharacteristics PRESENCE mandatory } |
    { ID id-ReportCharacteristics CRITICALITY ignore TYPE ReportCharacteristics PRESENCE mandatory },
    ...
}

DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {
    rLs                RL-InformationList-DM-Rqst,
    rLS                RL-Set-InformationList-DM-Rqst,
    all-RL                All-RL-InformationList-DM-Rqst,
    all-RLS               All-RL-Set-InformationList-DM-Rqst,
    ...
}

RL-InformationList-DM-Rqst ::= RL-IE-ContainerList { {RL-Information-DM-Rqst-IEs} }

```

```

RL-Information-DM-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-DM-Rqst          CRITICALITY ignore  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 RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Set-InformationList-DM-Rqst          ::= RL-Set-IE-ContainerList { {RL-Set-Information-DM-Rqst-IEs} }

RL-Set-Information-DM-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-InformationItem-DM-Rqst          CRITICALITY ignore  TYPE RL-Set-InformationItem-DM-Rqst          PRESENCE mandatory  },
  ...
}

RL-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 RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

All-RL-InformationList-DM-Rqst          ::= ProtocolExtensionContainer { {All-RL-InformationItem-DM-Rqst-ExtIEs} } OPTIONAL

All-RL-InformationItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

All-RL-Set-InformationList-DM-Rqst      ::= ProtocolExtensionContainer { {All-RL-Set-InformationItem-DM-Rqst-ExtIEs} } OPTIONAL

All-RL-Set-InformationItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DedicatedMeasurementInitiationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--

```

```

-- DEDICATED MEASUREMENT INITIATION RESPONSE
--
-- *****
DedicatedMeasurementInitiationResponse ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{DedicatedMeasurementInitiationResponse-IEs}},
    protocolExtensions         ProtocolExtensionContainer {{DedicatedMeasurementInitiationResponse-Extensions}}
    ...
}

DedicatedMeasurementInitiationResponse-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rspns CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rspns PRESENCE mandatory } |
    { ID id-CFN                    CRITICALITY ignore TYPE CFN                    PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

DedicatedMeasurementObjectType-DM-Rspns ::= CHOICE {
    rLs                RL-InformationList-DM-Rspns,
    rL-Set                RL-Set-InformationList-DM-Rspns,
    allRL                    AllRL-Information-DM-Rspns,
    allRL-Set              RL-Set-Information-DM-Rspns,
    ...
}

RL-InformationList-DM-Rspns ::= RL-IE-ContainerList { {RL-Information-DM-Rspns-IEs} }

RL-Information-DM-Rspns-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rspns CRITICALITY ignore TYPE RL-InformationItem-DM-Rspns PRESENCE mandatory },
    ...
}

RL-InformationItem-DM-Rspns ::= SEQUENCE {
    rL-ID                    RL-ID,
    dPCH-ID                  DPCH-ID OPTIONAL,
    dedicatedMeasurementValue DedicatedMeasurementValue,
    iE-Extensions            ProtocolExtensionContainer { {RL-InformationItem-DM-Rspns-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-DM-Rspns ::= RL-IE-ContainerList { {RL-Set-Information-DM-Rspns-IEs} }

RL-Set-Information-DM-Rspns-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-DM-Rspns CRITICALITY ignore TYPE RL-Set-InformationItem-DM-Rspns PRESENCE mandatory },
    ...
}

```

```

RL-InformationItem-DM-Rspns ::= SEQUENCE {
  rL-Set-ID                RL-Set-ID,
  dedicatedMeasurementValue DedicatedMeasurementValue,
  iE-Extensions            ProtocolExtensionContainer { {RL-Set-InformationItem-DM-Rspns-ExtIEs} } OPTIONAL,
  ...
}

```

```

RL-Set-InformationItem-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

AllRL-Information-DM-Rspns ::= SEQUENCE {
  dedicatedMeasurementValue DedicatedMeasurementValue,
  iE-Extensions            ProtocolExtensionContainer { {AllRL-Information-DM-Rspns-ExtIEs} } OPTIONAL,
  ...
}

```

```

AllRL-Information-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

DedicatedMeasurementInitiationResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

-
-
-
-
-
-

One Message Skipped

```

-- *****
--
-- DEDICATED MEASUREMENT REPORT
--
-- *****

```

```

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

```

```

DedicatedMeasurementReport-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
  { ID id-DedicatedMeasurementObjectType-DM-Rprt CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rprt PRESENCE mandatory } |
  { ID id-CFN                    CRITICALITY ignore TYPE CFN                    PRESENCE optional },
  ...
}

```

```

}
DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
  rLs          RL-InformationList-DM-Rprt,
  rL-Set      RL-Set-InformationList-DM-Rprt,
  all-RL      AllRL-Information-DM-Rprt,
  All-RL-Set  RL-Set-InformationList-DM-Rprt,
  ...
}
RL-InformationList-DM-Rprt          ::= RL-IE-ContainerList { {RL-Information-DM-Rprt-IEs} }
RL-Information-DM-Rprt-IEs RNSAP-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,
  dedicatedMeasurementValue      DedicatedMeasurementValue,
  iE-Extensions  ProtocolExtensionContainer { {RL-InformationItem-DM-Rprt-ExtIEs} } OPTIONAL,
  ...
}
RL-InformationItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
RL-Set-InformationList-DM-Rprt          ::= RL-IE-ContainerList { {RL-Set-Information-DM-Rprt-IEs} }
RL-Information-DM-Rprt-IEs RNSAP-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,
  dedicatedMeasurementValue      DedicatedMeasurementValue,
  iE-Extensions  ProtocolExtensionContainer { {RL-Set-InformationItem-DM-Rprt-ExtIEs} } OPTIONAL,
  ...
}
RL-Set-InformationItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
AllRL-Information-DM-Rprt ::= SEQUENCE {
  dedicatedMeasurementValue      DedicatedMeasurementValue,
  iE-Extensions  ProtocolExtensionContainer { {AllRL-Information-DM-Rprt-ExtIEs} } OPTIONAL,
  ...
}

```

```
}  
AllRL-Information-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}  
DedicatedMeasurementReport-Extensions RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}  
.  
.  
.  
Several Messages Skipped  
.  
.  
.
```

9.3.4 Information Element Definitions

```

-- *****
--
-- Information Element Definitions
--
-- *****

RNSAP-IEs -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxNrOfErrors,
    maxRateMatching,
    maxNrOfTFCs,
    maxNrOfTTFs,
    maxTTI-Count
FROM RNSAP-Constants

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM RNSAP-CommonDataTypes

    ProtocolExtensionContainer{},
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;

.
.
.
Several IEs Skipped
.
.
.

-- D

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

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

DedicatedMeasurementObjectType ::= ENUMERATED {
    rl,
    rls,

```



```

    all-rl,
    all-rls,
    ...
}
-- ** OR:
-- DedicatedMeasurementObjectType ::= INTEGER {
--   rL(0),
--   allRL(1)
-- } (0..255)
-- **

DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rSCP,
    ...
}
-- timeslotTSCP is used by TDD only

-- ** OR:
-- DedicatedMeasurementType ::= INTEGER {
--   sIR(0),
--   sIR-Error(1),
--   transmittedCodePower(2),
--   rSCP(3)
-- } (0..255)
-- **

-- ** NOTE: Extensibility added **
-- **TODO**

DedicatedMeasurementValue ::= SEQUENCE {
    sIR-Value          ScaledSIR-Value          OPTIONAL,
    sIR-ErrorValue    ScaledSIR-ErrorValue     OPTIONAL,
    transmittedCodePowerValue ScaledTransmittedCodePowerValue OPTIONAL, -- Relative to CPICH
    rSCP              TBD                      OPTIONAL, -- TDD only
    iE-Extensions     ProtocolExtensionContainer { {DedicatedMeasurementValue-ExtIEs} } OPTIONAL,
    ...
}

DedicatedMeasurementValue-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
DiversityControlField ::= INTEGER

-- ** TODO **
DiversityMode ::= INTEGER

```

```

-- ** TODO **
DL-ChannelisationCode      ::= INTEGER

-- ** TODO **
DL-DPCCH-SlotFormat        ::= INTEGER

-- ** TODO **
DL-DPCH-SlotNumber         ::= INTEGER

DL-EbNo                    ::= ScaledUL-EbNo

DL-EbNoTarget              ::= ScaledUL-EbNo

-- ** TODO **
DL-Power                   ::= INTEGER

D-RNTI                     ::= INTEGER (0..1048576)
-- ** OR:
-- D-RNTI                   ::= BIT STRING (SIZE (20))
-- **

D-RNTI-ReleaseIndication ::= ENUMERATED {
    not-release-D-RNTI,
    release-D-RNTI
}

-- ** TODO **
DL-ScramblingCode         ::= INTEGER

DL-FrameType ::= ENUMERATED {
    typeA,
    typeB,
    ...
}

DPCH-ID                    ::= INTEGER (0..239)

-- **TODO**
DRX-Parameter              ::= TBD

-- **TODO**
DSCH-TransportFormatCombinationSet ::= INTEGER

-- **TODO**
DSCH-TFS                   ::= INTEGER

-- **TODO**
D-FieldLength              ::= INTEGER

•
•

```

```

•
Several IEs Skipped
•
•
•
-- R

-- ** TODO **
RAC ::= INTEGER

-- ** TODO **
-- OCTET STRING?
RANAP-RelocationInformation ::= BIT STRING

RateMatchingAttribute ::= INTEGER (1..maxRateMatching)

RepetitionLength ::= INTEGER (1..63)

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

-- This is changed from the tabular format because it seems that
-- this is what is wanted.
ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          Periodic,
    eventA            EventA,
    eventB            EventB,
    eventC            EventC,
    eventD            EventD,
    eventE            EventE,
    eventF            EventF--,
-- ...
}

-- Changed
ReportPeriodicity ::= CHOICE {
    msec              INTEGER (1..1000),
    min               INTEGER (1..60)
}

RLC-Mode ::= ENUMERATED {
    acknowledged-mode,

```

```
    unacknowledged-mode,  
    transparent-mode  
}
```

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

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

```
RNC-ID ::= INTEGER (0..4095)
```

-
-
-

Several IEs Skipped

-
-
-

9.3.6 Constant Definitions

```

-- *****
--
-- Constant definitions
--
-- *****

RNSAP-Constants -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- Elementary Procedures
--
-- *****

id-commonTransportChannelResourcesInitiationFDD          INTEGER ::= 0
id-commonTransportChannelResourcesInitiationTDD          INTEGER ::= 1
id-commonTransportChannelResourcesRelease                INTEGER ::= 2
id-compressedModeCancellationFDD                        INTEGER ::= 3
id-compressedModeCommitFDD                              INTEGER ::= 4
id-compressedModePrepareFDD                             INTEGER ::= 5
id-downlinkPowerControl                                 INTEGER ::= 6
id-downlinkSignallingTransfer                           INTEGER ::= 7
id-errorIndication                                     INTEGER ::= 8
id-measurementFailure                                  INTEGER ::= 9
id-measurementInitiation                               INTEGER ::= 10
id-measurementReporting                                 INTEGER ::= 11
id-measurementTermination                              INTEGER ::= 12
id-pagingRequest                                       INTEGER ::= 13
id-physicalChannelReconfiguration                       INTEGER ::= 14
id-privateMessage                                       INTEGER ::= 15
id-radioLinkAddition                                   INTEGER ::= 16
id-radioLinkDeletion                                   INTEGER ::= 17
id-radioLinkFailure                                    INTEGER ::= 18
id-radioLinkRestoration                                INTEGER ::= 19
id-radioLinkSetup                                       INTEGER ::= 20
id-srnsRelocationCommit                                INTEGER ::= 21
id-synchronisedRadioLinkReconfigurationCancellation     INTEGER ::= 22
id-synchronisedRadioLinkReconfigurationCommit          INTEGER ::= 23
id-synchronisedRadioLinkReconfigurationPrepare        INTEGER ::= 24
id-unSynchronisedRadioLinkReconfiguration              INTEGER ::= 25
id-uplinkSignallingTransfer                             INTEGER ::= 26

-- *****
--
-- Extension constants

```

```

--
-- *****
maxPrivateExtensions          INTEGER ::= 65535
maxProtocolExtensions        INTEGER ::= 65535
maxProtocolIEs               INTEGER ::= 65535
-- *****
--
-- Lists
--
-- *****

maxRateMatching              INTEGER ::= 10
maxNrOfTFCs                  INTEGER ::= 10
maxNrOfTFs                   INTEGER ::= 10

maxNoOfDL-Codes              INTEGER ::= 10
maxNrOfCCTrCHs               INTEGER ::= 10
maxNrOfDCHs                  INTEGER ::= 10
maxNrOfDL-Codes              INTEGER ::= 10
maxNrOfDPCHs                 INTEGER ::= 10
maxNrOfErrors                INTEGER ::= 10
maxNrOfFACH-FD-Size          INTEGER ::= 10
maxNrOfFDD-Neighbours        INTEGER ::= 10
maxNrOfMACcSDU-Length        INTEGER ::= 10
maxNrOfTDD-Neighbours        INTEGER ::= 10
maxNrOfRRLs                  INTEGER ::= 10
maxNrOfRRLSets                ::= maxNrOfRRLs
maxNrOfSCCPCHs               INTEGER ::= 10
maxRNCinURA                 INTEGER ::= 10
maxTTI-Count                 INTEGER ::= 10

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

id-AllowedQueuingTime        INTEGER ::= 0
id-BindingID                 INTEGER ::= 1
id-C-ID                      INTEGER ::= 2
id-C-RNTI                    INTEGER ::= 3
id-CCTrCH-ID                 INTEGER ::= 4
id-CFN                       INTEGER ::= 5
id-CN-CS-DomainIdentifier    INTEGER ::= 6
id-CN-PS-DomainIdentifier    INTEGER ::= 7
id-Cause                     INTEGER ::= 8
id-CompressedModeMethod      INTEGER ::= 9
id-D-RNTI                    INTEGER ::= 10
id-D-RNTI-ReleaseIndication  INTEGER ::= 11

```

```

id-DCH-AddItem                INTEGER ::= 12
id-DCH-AddItem-RL-ReconfPrepFDD  INTEGER ::= 13
id-DCH-AddItem-RL-ReconfPrepTDD  INTEGER ::= 14
id-DCH-AddItem-RL-ReconfReadyFDD  INTEGER ::= 15
id-DCH-AddItem-RL-ReconfRqstFDD   INTEGER ::= 16
id-DCH-AddItem-RL-ReconfRqstTDD   INTEGER ::= 17
id-DCH-AddList-RL-ReconfPrepFDD   INTEGER ::= 18
id-DCH-AddList-RL-ReconfPrepTDD   INTEGER ::= 19
id-DCH-AddList-RL-ReconfRqstFDD   INTEGER ::= 20
id-DCH-AddList-RL-ReconfRqstTDD   INTEGER ::= 21
id-DCH-DeleteItem-RL-ReconfPrepFDD  INTEGER ::= 22
id-DCH-DeleteItem-RL-ReconfPrepTDD  INTEGER ::= 23
id-DCH-DeleteItem-RL-ReconfRqstFDD  INTEGER ::= 24
id-DCH-DeleteItem-RL-ReconfRqstTDD  INTEGER ::= 25
id-DCH-DeleteList-RL-ReconfPrepFDD  INTEGER ::= 26
id-DCH-DeleteList-RL-ReconfPrepTDD  INTEGER ::= 27
id-DCH-DeleteList-RL-ReconfRqstFDD  INTEGER ::= 28
id-DCH-DeleteList-RL-ReconfRqstTDD  INTEGER ::= 29
id-DCH-Information-RL-SetupReqFDD   INTEGER ::= 30
id-DCH-InformationItem-RL-SetupReqFDD  INTEGER ::= 31
id-DCH-InformationItem-RL-SetupReqTDD  INTEGER ::= 32
id-DCH-InformationList-RL-SetupReqTDD  INTEGER ::= 33
id-DCH-ModifyItem              INTEGER ::= 34
id-DCH-ModifyItem-RL-ReconfPrepFDD  INTEGER ::= 35
id-DCH-ModifyItem-RL-ReconfPrepTDD  INTEGER ::= 36
id-DCH-ModifyItem-RL-ReconfReadyFDD  INTEGER ::= 37
id-DCH-ModifyItem-RL-ReconfRqstFDD   INTEGER ::= 38
id-DCH-ModifyItem-RL-ReconfRqstTDD   INTEGER ::= 39
id-DCH-ModifyList-RL-ReconfPrepFDD  INTEGER ::= 40
id-DCH-ModifyList-RL-ReconfPrepTDD  INTEGER ::= 41
id-DCH-ModifyList-RL-ReconfRqstFDD   INTEGER ::= 42
id-DCH-ModifyList-RL-ReconfRqstTDD   INTEGER ::= 43
id-DL-CCTrCH-Information-RL-ReconfPrepTDD  INTEGER ::= 44
id-DL-CCTrCH-Information-RL-ReconfRqstTDD  INTEGER ::= 45
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD  INTEGER ::= 46
id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD  INTEGER ::= 47
id-DL-CCTrChInformationItem-RL-SetupReqTDD  INTEGER ::= 48
id-DL-CCTrChInformationList-RL-SetupReqTDD  INTEGER ::= 49
id-DL-CodeInformation-PhyChReconfRqstFDD  INTEGER ::= 50
id-DL-DPCH-Information              INTEGER ::= 51
id-DL-DPCH-Information-RL-SetupReqFDD  INTEGER ::= 52
id-DL-DPCH-InformationList-PhyChReconfRqstTDD  INTEGER ::= 53
id-DL-DPCH-InformationList-RL-ReconfReadyTDD  INTEGER ::= 54
id-DL-EbNoTarget                    INTEGER ::= 55
id-DL-FrameType                      INTEGER ::= 56
id-DL-MeanBitRate                    INTEGER ::= 57
id-DL-ReferencePowerInformation-DL-PC-Rqst  INTEGER ::= 58
id-DRX-Parameter                      INTEGER ::= 59
id-DedicatedMeasurementObjectType-DM-Rprt  INTEGER ::= 60
id-DedicatedMeasurementObjectType-DM-Rqst  INTEGER ::= 61
id-DedicatedMeasurementObjectType-DM-Rspns  INTEGER ::= 62

```

id-FACH-InfoForOptionalGroupS-CCPCH	INTEGER ::= 63
id-FACH-InfoForOptionals-CCPCH	INTEGER ::= 64
id-FACH-InfoForS-CCPCH-CoupledToPRACH	INTEGER ::= 65
id-GapPositionMode	INTEGER ::= 66
id-L3-Information	INTEGER ::= 67
id-MeasurementCharacteristics	INTEGER ::= 68
id-MeasurementID	INTEGER ::= 69
id-MultipleURAsIndicator	INTEGER ::= 70
id-PD	INTEGER ::= 71
id-PagingArea-PagingRqst	INTEGER ::= 72
id-PowerControlMode	INTEGER ::= 73
id-PowerResumeMode	INTEGER ::= 74
id-ProcedureScope-DL-PC-Rqst	INTEGER ::= 75
id-RANAP-RelocationInformation	INTEGER ::= 76
id-RL-Information-PhyChReconfRqstFDD	INTEGER ::= 77
id-RL-Information-PhyChReconfRqstTDD	INTEGER ::= 78
id-RL-Information-RL-AdditionRqstFDD	INTEGER ::= 79
id-RL-Information-RL-AdditionRqstTDD	INTEGER ::= 80
id-RL-Information-RL-DeletionRqst	INTEGER ::= 81
id-RL-Information-RL-FailureInd	INTEGER ::= 82
id-RL-Information-RL-ReconfPrepFDD	INTEGER ::= 83
id-RL-Information-RL-RestoreInd	INTEGER ::= 84
id-RL-Information-RL-SetupReqFDD	INTEGER ::= 85
id-RL-Information-RL-SetupReqTDD	INTEGER ::= 86
id-RL-InformationItem-DM-Rprt	INTEGER ::= 87
id-RL-InformationItem-DM-Rqst	INTEGER ::= 88
id-RL-InformationItem-DM-Rspns	INTEGER ::= 89
id-RL-InformationItem-RL-SetupReqFDD	INTEGER ::= 90
id-RL-InformationList-RL-AdditionRqstFDD	INTEGER ::= 91
id-RL-InformationList-RL-DeletionRqst	INTEGER ::= 92
id-RL-InformationList-RL-FailureInd	INTEGER ::= 93
id-RL-InformationList-RL-ReconfPrepFDD	INTEGER ::= 94
id-RL-InformationList-RL-RestoreInd	INTEGER ::= 95
id-RL-InformationResponse-RL-AdditionRspTDD	INTEGER ::= 96
id-RL-InformationResponse-RL-ReconfReadyTDD	INTEGER ::= 97
id-RL-InformationResponse-RL-SetupRspTDD	INTEGER ::= 98
id-RL-InformationResponseItem-RL-AdditionRspFDD	INTEGER ::= 99
id-RL-InformationResponseItem-RL-ReconfReadyFDD	INTEGER ::= 100
id-RL-InformationResponseItem-RL-SetupRspFDD	INTEGER ::= 101
id-RL-InformationResponseList-RL-AdditionRspFDD	INTEGER ::= 102
id-RL-InformationResponseList-RL-ReconfReadyFDD	INTEGER ::= 103
id-RL-InformationResponseList-RL-SetupRspFDD	INTEGER ::= 104
id-RL-Set-InformationItem-DM-Rqst	INTEGER ::= 149
id-RL-Set-InformationItem-DM-Rprt	INTEGER ::= 150
id-RL-Set-InformationItem-DM-Rspns	INTEGER ::= 151
id-RL-Set-Information-RL-FailureInd	INTEGER ::= 152
id-RL-Set-Information-RL-RestoreInd	INTEGER ::= 153
id-RL-ReconfigurationFailure-RL-ReconfFail	INTEGER ::= 105
id-RL-ReconfigurationFailureList-RL-ReconfFail	INTEGER ::= 106
id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind	INTEGER ::= 107
id-ReportCharacteristics	INTEGER ::= 108


```

id-Reporting-Object-RL-FailureInd          INTEGER ::= 93
id-Reporting-Object-RL-RestoreInd          INTEGER ::= 95
id-S-RNTI                                  INTEGER ::= 109
id-SAI                                     INTEGER ::= 110
id-SN                                      INTEGER ::= 111
id-SRNC-ID                                INTEGER ::= 112
id-ScramblingCodeChange                   INTEGER ::= 113
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD    INTEGER ::= 114
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD      INTEGER ::= 115
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD  INTEGER ::= 116
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD    INTEGER ::= 117
id-TGD                                    INTEGER ::= 118
id-TGL                                    INTEGER ::= 119
id-TGP1                                   INTEGER ::= 120
id-TGP2                                   INTEGER ::= 121
id-TransportBearerID                      INTEGER ::= 122
id-TransportBearerRequestIndicator         INTEGER ::= 123
id-TransportLayerAddress                  INTEGER ::= 124
id-UC-ID                                  INTEGER ::= 125
id-UL-CCTrCH-Information-RL-ReconfPrepTDD    INTEGER ::= 126
id-UL-CCTrCH-Information-RL-ReconfRqstTDD    INTEGER ::= 127
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD    INTEGER ::= 128
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD    INTEGER ::= 129
id-UL-CCTrChInformationItem-RL-SetupReqTDD    INTEGER ::= 130
id-UL-CCTrChInformationList-RL-SetupReqTDD    INTEGER ::= 131
id-UL-DL-CompressedModeSelection          INTEGER ::= 132
id-UL-DPCH-Information                    INTEGER ::= 133
id-UL-DPCH-Information-RL-SetupReqFDD      INTEGER ::= 134
id-UL-DPCH-InformationList-PhyChReconfRqstTDD    INTEGER ::= 135
id-UL-DPCH-InformationList-RL-ReconfReadyTDD    INTEGER ::= 136
id-UL-DeltaEbNo                           INTEGER ::= 137
id-UL-DeltaEbNoAfter                      INTEGER ::= 138
id-UL-EbNoTarget                          INTEGER ::= 139
id-UL-MeanBitRate                         INTEGER ::= 140
id-URA-ID                                INTEGER ::= 141
id-UnsuccessfulRL-InformationResponse      INTEGER ::= 142
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD    INTEGER ::= 143
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD      INTEGER ::= 144
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD      INTEGER ::= 145
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD  INTEGER ::= 146
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD    INTEGER ::= 147
id-CriticalityDiagnostics                 INTEGER ::= 148

```

END

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.423 CR 022r1

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**
 list expected approval meeting # here ↑

for approval
 for information

Strategic
 non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
 (at least one should be marked with an X)

Source: RAN-WG3 **Date:** 28th Feb. – 3rd March 2000

Subject: Restriction to allowed procedure parallelism

Work item:

Category: F Correction **Release:** Phase 2
 A Corresponds to a correction in an earlier release Release 96
 B Addition of feature Release 97
 C Functional modification of feature Release 98
 D Editorial modification Release 99
 Release 00
 (only one category shall be marked with an X)

Reason for change: When introducing the concept of Elementary Procedures (EPs) a conflict with the previous agreement on parallelism of the RNSAP DCH Procedures was introduced. The problem is that prior to introducing the concept of EPs there was no possibility for the SRNC to send any other message than either RL RECONFIGURATION COMMIT or RL RECONFIGURATION CANCEL once the SRNC had received a response to the RL RECONFIGURATION PREPARE message. However since the previous procedure (RL Reconfiguration – Synchronised) was divided into three EPs the present way of describing the parallelism did not cover this case. After introducing EPs any SRNC initiated procedure may be initiated between the Synchronised RL Reconfiguration Preparation procedure and either of the procedures Synchronised RL Reconfiguration Commit and Synchronised RL Reconfiguration Cancellation. The procedures that in this way have an increased allowed parallelism are:
 * RL Addition
 * RL Deletion
 * Synchronised RL Reconfiguration Preparation
 * Unsynchronised RL Reconfiguration
 * Measurement Initiation
 * Measurement Termination
 * Compressed Mode Preparation
 * Compressed Mode Cancellation
 * Compressed Mode Commit

Clauses affected: 3.1, 8.3.2.1, 8.3.3.1, 8.3.4.1, 8.3.4.2, 8.3.5.2, 8.3.6.2, 8.3.7.1, 8.3.11.1, 8.3.13.1, 8.3.16.1, 8.3.17.1, and 8.3.18.1.

Other specs affected: Other 3G core specifications → List of CRs: 25.433 v3.0.0 CR-034r1
 Other GSM core specifications → List of CRs:

MS test specifications
BSS test specifications
O&M specifications

→ List of CRs:
→ List of CRs:
→ List of CRs:

**Other
comments:**

--

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply.

Elementary Procedure: The RNSAP protocol consists of Elementary Procedures (EPs). An Elementary Procedure is a unit of interaction between two RNCs. 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 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 RNSAP is FFS. To be sorted out when discussing the details of the error cases.

Class 2 EPs are considered always successful.

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.

8.3.2 Radio Link Addition

8.3.2.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more additional RLs towards a UE when there is already at least one RL established to the concerning UE via this DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

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

8.3.3 Radio Link Deletion

8.3.3.1 General

The Radio Link Deletion procedure is used to release the resources in a DRNS for one or more established radio links towards a UE.

This procedure shall use the signalling bearer connection for the relevant UE context.

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

8.3.4 Synchronised Radio Link Reconfiguration Preparation

8.3.4.1 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 DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

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

8.3.4.2 Successful Operation

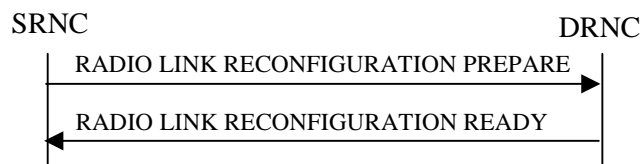


Figure 1: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

The Synchronised Radio Link Reconfiguration Preparation procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION PREPARE message to the DRNC.

Upon reception, the DRNS 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.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

DCH Modification :

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this information when reserving resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Frame Handling Priority* IE for a DCH to be modified, the DRNS 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 DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (UL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (DL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *UL DCH FP Mode* IE for a DCH to be modified, the DRNS shall apply the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes on the *ToAWS* IE for a DCH to be modified, the DRNS shall apply the new ToAWS in the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes on the *ToAWE* IE for a DCH to be modified, the DRNS shall apply the new *ToAWE* in the user plane for this DCH in the new configuration.

DCH Addition:

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be added to the Radio Link(s), the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *DCH Combination Indicator* IE for a DCH to be added, the DRNS shall

1. treat all DCHs with the same value of this IE as a set of co-ordinated DCHs and
2. include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration

The DRNS should use the *Allocation/Retention Priority* IE received for a DCH to be added when reserving resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

The DRNS 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 DRNS once the new configuration has been activated.

The DRNS may use the included *RLC Mode* IE to optimise the power control.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH to be added as the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWS* IE for a DCH to be added as the new Time of Arrival Window Start Point in the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWE* IE for a DCH to be added as the new Time of Arrival Window End Point in the user plane for this DCH in the new configuration.

DCH Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be deleted from the Radio Link(s), the DRNS shall not include this DCH in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the DRNS shall not include this set of co-ordinated DCHs in the new configuration

Physical Channel Modification:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Uplink Scrambling Code* IE, the DRNS shall apply this Uplink Scrambling Code to the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Uplink Channelisation Code* IEs, the DRNS shall apply the new Uplink Channelisation Code(s) in the new configuration.

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Spreading Factor of Channelisation Code (DL)* IE, for each *Spreading Factor of Channelisation Code (DL)* IE the DRNS shall allocate one new Downlink Channelisation Code per Radio Link and apply the new Downlink Channelisation Code(s) to the new configuration. Each Downlink Channelisation Code allocated for the new configuration shall be included as a *Channelisation Code (DL)* IE in the RADIO LINK RECONFIGURATION READY message when sent to the SRNC.]

The DRNS shall use the *TFCS (UL)* IE when reserving resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the Uplink of [TDD – the CCTrCH of] the new configuration.

The DRNS shall use the *TFCS (DL)* IE when reserving resources for the downlink of the new configuration. The DRNS shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Mean Bit Rate (UL)* IE, the DRNS should use this information when reserving resources for the Uplink of the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Mean Bit Rate (DL)* IE, the DRNS should use this information when reserving resources for the Downlink of the new configuration.

[Editor's note: There is presently no clear definition of the *Mean Bit Rate* IEs. The handling of these IEs is thus regarded as FFS.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes on the *UL DPCH Structure* IE, group the DRNS shall apply the new Uplink DPCH Structure to the new configuration.]

SSDT Activation/Deactivation:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *SSDT Indication* IE set to "SSDT Active in the UE", the DRNS may activate SSDT using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *SSDT Indication* IE set to "SSDT not Active in the UE", the DRNS shall deactivate SSDT in the new configuration.]

If the requested modifications are allowed by the DRNS, and the DRNS has successfully reserved the required resources for the new configuration of the Radio Link(s) it shall respond to the SRNC 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.

The DRNS decides the maximum and minimum Eb/No for the uplink of the Radio Link(s) and shall return this in the *Maximum Uplink Eb/No* IE and *Minimum Uplink Eb/No* IE for each Radio Link in the RADIO LINK RECONFIGURATION READY message.

[TDD – The DRNC shall include all the IEs corresponding to the new physical channel parameters for the DL DPCH and/or the UL DPCH to be reconfigured in the RADIO LINK RECONFIGURATION READY message.]

[Editor's note: Which information in the RL RECONFIGURATION PREPARE message triggers the DRNC to include any of the following *Optional TDD* information?:

- a) DL DPCH Group
- b) UL DPCH Group
- c) TDD Physical Channel Offset, *Repetition* Length, and TFCI Presence IEs as part of the DL DPCH Group
- d) TDD Physical Channel Offset, *Repetition* Length, and TFCI Presence IEs as part of the UL DPCH Group.]

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH to be Added* IE group or the *DCH to be Modified* IE group shall be included only for one of the DCHs in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH to be Added* IE group and the *DCH to be Modified* IE group shall be included only for one of the combined Radio Links.

8.3.4.3 Unsuccessful Operation

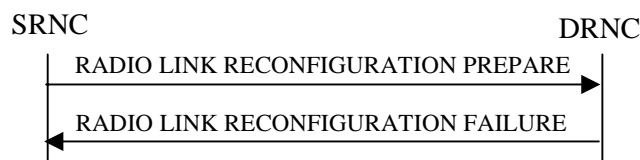


Figure 2: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation

If the DRNS cannot reserve the necessary resources for all the new DCHs of one set of co-ordinated DCHs requested to be added, it shall regard the Synchronised Radio Link Reconfiguration procedure as having failed.

- If the requested Synchronised Radio Link Reconfiguration procedure fails for one or more RLs the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC, indicating the reason for failure.

In which cases to include only the *Cause* IE on message level and in which cases the *Cause* IE also shall be included for a specific RL is FFS.

Typical cause values are:

Radio Network Layer Causes:

- UL Scrambling Code Already in Use
- DL Radio Resources not Available
- UL Radio Resources not Available
- Requested Configuration not Supported

Protocol Causes:

- Transaction not Allowed

Miscellaneous Causes:

- Control Processing Overload
- Not enough User Plane Processing Resources

8.3.4.4 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of co-ordinated DCHs is requested to be deleted, the DRNS shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as having failed and the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC.

8.3.5 Synchronised Radio Link Reconfiguration Commit

8.3.5.1 General

This procedure is used to order the DRNS to switch to the new configuration for the Radio Link(s) within the DRNS, previously prepared by the Synchronised Radio Link Preparation procedure.

This procedure shall use the signalling bearer connection for the relevant UE context.

8.3.5.2 Successful Operation



Figure 3: Synchronised Radio Link Reconfiguration Commit procedure, Successful Operation

The DRNS shall switch to the new configuration previously prepared by the Synchronised RL Reconfiguration procedure at the CFN requested by the SRNC when receiving the RADIO LINK RECONFIGURATION COMMIT message from the SRNC. When this procedure has been completed the Prepared Reconfiguration does not exist any more, see chapter 3.1.

8.3.5.3 Abnormal Conditions

8.3.6 Synchronised Radio Link Reconfiguration Cancellation

8.3.6.1 General

This procedure is used to order the DRNS to release the new configuration for the Radio Link(s) within the DRNS, previously prepared by the Synchronised Radio Link Preparation procedure.

This procedure shall use the signalling bearer connection for the relevant UE context.

8.3.6.2 Successful Operation



Figure 4: Synchronised Radio Link Reconfiguration Cancellation procedure, Successful Operation

The DRNS shall release the new configuration previously prepared by the Synchronised RL Reconfiguration Preparation procedure and continue using the old configuration when receiving the RADIO LINK RECONFIGURATION CANCEL message from the SRNC. When this procedure has been completed the Prepared Reconfiguration does not exist any more, see chapter 3.1.

8.3.6.3 Abnormal Conditions

If the DRNS receives the RADIO LINK RECONFIGURATION CANCEL message from the SRNC when there is no new configuration for the Radio Link(s) within the DRNS, previously prepared by the Synchronised Radio Link Preparation procedure, the message shall be ignored.

8.3.7 Unsynchronised Radio Link Reconfiguration

8.3.7.1 General

The Unsynchronised Radio Link Reconfiguration procedure is used to reconfigure Radio Link(s) related to one UE-UTRAN connection within a DRNS.

The procedure is used when there is no need to synchronise the time of the switching from the old to the new radio link configuration in the cells used by the UE-UTRAN connection within the DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

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

8.3.11 Measurement Initiation

[Editor's note: According to TSGR#5 (99)564, the following measurements shall also be considered:

- * Time of Arrival
- * Frequency Offset
- * Round Trip Time
- * RX Timing Deviation

Whether these measurements shall be dedicated or common measurements have so far not been considered by TSG RAN WG3 and are thus not incorporated.]

8.3.11.1 General

This procedure is used by an SRNS to request the initiation of measurements in a DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

The Measurement Initiation procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in chapter 3.1.

8.3.13 Measurement Termination

8.3.13.1 General

This procedure is used by the SRNS to terminate a measurement previously requested by the Measurement Initiation procedure.

This procedure shall use the signalling bearer connection for the relevant UE context.

The Measurement Termination procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in chapter 3.1.

8.3.16 Compressed Mode Preparation [FDD]

8.3.16.1 General

The Compressed Mode Preparation procedure is used to prepare the compressed mode in the DRNS for one UE-UTRAN connection.

This procedure shall use the signalling bearer connection for the relevant UE context.

The Compressed Mode Preparation procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in chapter 3.1.

8.3.17 Compressed Mode Commit [FDD]

8.3.17.1 General

The Compressed Mode Commit procedure is used to activate the compressed mode in the DRNS for one UE-UTRAN connection. This procedure shall use the signalling bearer connection for the relevant UE context.

The Compressed Mode Commit procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in chapter 3.1.

-

8.3.18 Compressed Mode Cancellation [FDD]

8.3.18.1 General

The Compressed Mode Cancellation procedure is used to cancel the compressed mode in the DRNS for one UE-UTRAN connection.

This procedure shall use the signalling bearer connection for the relevant UE context.

The Compressed Mode Cancellation procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in chapter 3.1.

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.423 CR 25 R1

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**

list expected approval meeting # here

↑

For approval
for information

X

Strategic
non-strategic

(for SMG
use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:

(at least one should be marked with an X)

(U)SIM ME UTRAN / Radio Core Network

Source:

RAN-WG3

Date:

Feb , 2000

Subject:

Inclusion of Beta C/D in TFCS (update of R3-000501)

Work item:

Category:

(only one category shall be marked with an X)

F Correction
A Corresponds to a correction in an earlier release
B Addition of feature
C Functional modification of feature
D Editorial modification

Release:

Phase 2
Release 96
Release 97
Release 98
Release 99
Release 00

Reason for change:

The Beta C and Beta D are the gain factors used for the DPCCH and DPDCH respectively.

These Beta's may vary per TFC and are provided by the UTRAN to the UE as part of the TFCS. In order to enable a node-B only measuring the DPCCH SIR to estimate the SIR for the DPDCH, which is used as input for certain decoders, it is proposed to extend the TFCS with the inclusion of the Beta's in line with the RRC approach as was agreed based on R2-000082 (CR 134) from Nortel.

One deviation from R2-000082 is the fact that the Beta's are not included mandatory (which seems to be an error), but only conditionally depending on the channel.

Clauses affected:

9.2.1.53, 9.3.4.

Other specs affected:

Other 3G core specifications → List of CRs:
Other GSM core specifications → List of CRs:
MS test specifications → List of CRs:
BSS test specifications → List of CRs:
O&M specifications → List of CRs:

Other comments:

Other CR's also update the TFCS: in the resulting update, the beta's should only be included in non-DSCH cases.

9.2.1.53 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.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCS		1 to <maxnoofTFCs>		The first instance of the parameter corresponds to TFC zero, the second to 1 and so on.
<u>>CTFC</u>	M		INTEGER(0..MaxCTFC-1)	Integer number calculated according to ref. [Error! Reference source not found.Error! Reference source not found.]
<u>>CHOICE Gain Factors</u>	<u>C-PhysChan</u>			
<u>>> Signalled Gain Factors</u>				
<u>>>> Gain Factor β_C</u>	M		Integer (0..15)	For UL DPCH or control part of PRACH in FDD; mapping in accordance to TS 25.213
<u>>>> Gain Factor β_D</u>	M		Integer (0..15)	For UL DPCH or data part of PRACH in FDD; mapping in accordance to TS 25.213
<u>>>> Reference TFC nr</u>	O		Integer (0..15)	If this TFC is a reference TFC, this IE indicates the reference number
<u>>>Computed Gain Factors</u>				
<u>>>> Reference TFC nr</u>	M		Integer (0..15)	Indicates the reference TFC to be used to calculate the gain factors for this TFC

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

Range bound	Explanation
<u>MaxnoofTFCs</u>	The maximum number of Transport Format Combinations (1024).
<u>MaxCTFC</u>	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 ref. [Error! Reference source not found.Error! Reference source not found.] .

9.3.4. Information Elements Definitions

-- B

BetaCD ::= INTEGER (0..15)

-- ** NOTE: Size in tabular 1..4,... **

BindingID ::= OCTET STRING (SIZE (1..MAX))

BLER ::= INTEGER (-63..0)

-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER

BurstType ::= ENUMERATED {
 type1 (1),
 type2 (2)
}

```

-- R

-- ** TODO **
RAC ::= INTEGER

-- ** TODO **
-- OCTET STRING?
RANAP-RelocationInformation ::= BIT STRING

RateMatchingAttribute ::= INTEGER (1..maxRateMatching)

RefTFNumber ::= INTEGER (0..15)

RepetitionLength ::= INTEGER (1..63)

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

-- This is changed from the tabular format because it seems that
-- this is what is wanted.
ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          Periodic,
    eventA            EventA,
    eventB            EventB,
    eventC            EventC,
    eventD            EventD,
    eventE            EventE,
    eventF            EventF--,
-- ...
}

-- Changed
ReportPeriodicity ::= CHOICE {
    msec              INTEGER (1..1000),
    min               INTEGER (1..60)
}

RLC-Mode ::= ENUMERATED {
    acknowledged-mode,
    unacknowledged-mode,
    transparent-mode
}

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

RNC-ID ::= INTEGER (0..4095)

```

```

-- T

-- ** TODO **
TBD ::= NULL
-- Remove this type

TDD-ChannelisationCode ::= INTEGER (1..31)

TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TFCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32
}

TFCI-Presence ::= ENUMERATED {
    not-present,
    present
}

TFCI-SignallingMode ::= ENUMERATED {
    normal,
    split
}

-- ** TODO **
TimeReference ::= INTEGER
-- TimeReference ::= INTEGER (0..255)

TimeSlot ::= INTEGER (0..14)

ToAWE ::= INTEGER (0..2559)

ToAWS ::= INTEGER (0..1279)

TPC-StepSize ::= ENUMERATED {
    half,
    one
}

TGD ::= INTEGER (0..255)

TGL ::= INTEGER (3| 4| 7| 10| 14)

TransmissionTimeInterval ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80--,
    -- ...
}

TransportBearerID ::= INTEGER (0..4095)

-- Compare title and IE name in table TransportBearerRequestIndicator vs.
-- FACH-PriorityIndicator
TransportBearerRequestIndicator ::= INTEGER { lowest (0), highest (15) } (0..15)

TransportBlockSize ::= INTEGER (1..5000)
-- Unit is bits

TransportFormatCombination-Beta ::= CHOICE {
    SEQUENCE {
        betaC BetaCD,
        betaD BetaCD,
        refTFCNumber RefTFCNumber OPTIONAL
    }
    refTFCNumber RefTFCNumber
}

TransportFormatCombinationSet ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
    SEQUENCE {
        cTFC CTFC,
        tFC-Beta TransportFormatCombination-Beta OPTIONAL,

```

```

        iE-Extensions          ProtocolExtensionContainer { {TransportFormatCombinationSet-ExtIEs}
    } OPTIONAL,
        ...
    }

TransportFormatCombinationSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet ::= SEQUENCE {
    dynamicParts          TransportFormatSet-DynamicPartList,
    semi-staticPart      TransportFormatSet-Semi-staticPart,
    iE-Extensions        ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
    SEQUENCE {
        nrOfTransportBlocks      NrOfTransportBlocks,
        transportBlockSize      TransportBlockSize      OPTIONAL
        -- This IE is only present if nrOfTransportBlocks is greater than 0 --,
        mode                    TransportFormatSet-ModeDP,
        iE-Extensions          ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-
ExtIEs} } OPTIONAL,
        ...
    }

TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeDP ::= CHOICE {
    tdd                    TransmissionTimeIntervallList,
    -- This IE is mandatory if not defined as semistatic parameter, otherwise it is absent --
    ...
}

TransmissionTimeIntervallList ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
    SEQUENCE {
        transmissionTimeInterval      TransmissionTimeInterval,
        iE-Extensions                ProtocolExtensionContainer { {TransmissionTimeIntervallList-ExtIEs} }
OPTIONAL,
        ...
    }

TransmissionTimeIntervallList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-Semi-staticPart ::= SEQUENCE {
    transmissionTime      TransmissionTimeInterval,
    channelCoding         ChannelCodingType,
    codingRate            CodingRate      OPTIONAL
    -- This IE is only present if channelCoding is 'convolutional' or 'turbo' --,
    rateMatchingAttribute RateMatchingAttribute,
    cRC-Size              CRC-Size,
    mode                  TransportFormatSet-ModeSSP      OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {TransportFormatSet-Semi-staticPart-ExtIEs}
} OPTIONAL,
    ...
}

TransportFormatSet-Semi-staticPart-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
    tdd                    SecondInterleavingMode,
    ...
}

SecondInterleavingMode ::= ENUMERATED {
    frame-related,
    timeslot-related,

```



```
|  
  
} ...  
  
-- TransportLayerAddress ::= BIT STRING (1..160, ...)  
TransportLayerAddress ::= OCTET STRING (SIZE (1..20, ...))
```

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.423 CR 036R1

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**

list expected approval meeting # here

↑

for approval
for information

X

strategic
non-strategic

(for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:

(at least one should be marked with an X)

(U)SIM

ME

UTRAN / Radio

Core Network

Source:

RAN WG3

Date:

February 2000

Subject:

TDD uplink interference clarification

Work item:

Category:

(only one category shall be marked with an X)

- F Correction
- A Corresponds to a correction in an earlier release
- B Addition of feature
- C Functional modification of feature
- D Editorial modification

Release:

- Phase 2
- Release 96
- Release 97
- Release 98
- Release 99
- Release 00

Reason for change:

UL interference for TDD needs to be specified per timeslot

Clauses affected:

Other specs affected:

- Other 3G core specifications → List of CRs:
- Other GSM core specifications → List of CRs:
- MS test specifications → List of CRs:
- BSS test specifications → List of CRs:
- O&M specifications → List of CRs:

Other comments:

9.1.4 RADIO LINK SETUP RESPONSE

9.1.4.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
RL Information Response		1..<maxnoofRLs>		
RL ID	M			
SAI	M			
UL Interference Level	M			
DL Code Information		1..<maxnoofDLCode s>		
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
Diversity Indication	C-NotFirstRL			
CHOICE <i>diversity Indication Combining</i>				
RL ID	M			Reference RL ID for the combining
<i>Non Combining or IE not present</i>				"IE not present" is equivalent to "First RL".
DCH Information Response		0..<maxnoofDCHs >		Only one DCH per set of co-ordinated DCHs shall be included
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Maximum Uplink Eb/No	M		Uplink Eb/No	
Minimum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		0..<maxnoofFDDn eighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information	O	0..<maxnoofTDDn eighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Uplink Eb/No Target	O		Uplink Eb/No	

Downlink Eb/No Target	O			
Criticality Diagnostics	O			

Condition	Explanation
IfComb	This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.
IfNotComb	This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B.
NotFirstRL	The IE is present only if the RL is not the first RL in the RL Information
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell.
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell.

9.1.4.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
RL Information Response		1		
RL ID	M			
SAI	M			
UL Interference per Time Slot		1.. <maxnoofULts>		<u>Interference Level for each UL time slot within the Radio Link</u>
Time Slot	M			
UL Interference Level	M			
Maximum Uplink Eb/No	M		Uplink Eb/No	
Minimum Uplink Eb/No	M		Uplink Eb/No	
Uplink Eb/No Target	O		Uplink Eb/No	
Downlink Eb/No Target	O			
UL CCTrCH Information		1.. <maxnoofCCTrCHs>		
CCTrCH ID	M			
UL DPCH Information		1.. <MaxnoofDPC Hs>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DL CCTrCH Information		1.. <maxnoofCCTrCHs>		
CCTrCH ID	M			
DL DPCH Information		1.. <MaxnoofDPC Hs>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DCH Information Response		1.. <maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Neighbouring FDD Cell Information	O	0.. <maxnoofFDDn eighbours>		
UC-Id	M			
CN PS Domain Identifier	O			

CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information	O	<i>0..<maxnoofTDDn eighbours></i>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofDPCHs	Maximum no. of DPCHs for one CCTrCH.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell
MaxnoofCCTrCHs	Maximum no. of CCTrCH for one UE.
MaxnoofULts	Maximum number of Uplink time slots per Radio Link

9.1.7 RADIO LINK ADDITION RESPONSE

9.1.7.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
RL Information Response		1..<maxnoofRLs-1>		
RL ID	M			
SAI	M			
UL Interference Level	M			
DL Code Information		1..<maxnoofDLCodes>		
DL Scrambling Code	M			
DL Channelisation Code	M			
Diversity Indication	M			
CHOICE <i>diversity indication</i>				
<i>Combining</i>				
RL ID	M			Reference RL-Id
<i>Non combining</i>				
DCH Information Response		1..<maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Minimum Uplink Eb/No	M		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		0..<maxnoofFDD Neighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information		0..<maxnoofTDD Neighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
MaxnoofRLs	Maximum number of radio links for one UE
MaxnoofFDDNeighbours	Maximum number of neighbouring FDD cells for one cell
MaxnoofTDDNeighbours	Maximum number of neighbouring TDD cells for one cell
MaxnoofDLCodes	Maximum number of DL code information

9.1.7.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
RL Information Response		1		
RL ID	M			
SAI	M			
UL Interference per Time Slot		1.. <maxnoofULTs>		Interference Level for each UL time slot within the Radio Link
Time Slot	M			
UL Interference Level	M			
UL CCTrCH Information		1..<maxnoof CCTrCHs>		
CCTrCH ID	M			
UL DPCH Information		1..<maxnoOfDPC Hs>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DL CCTrCH Information		1..<maxnoof CCTrCHs>		
CCTrCH ID	M			
DL DPCH information		1..<maxnoOfDPC Hs>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
Diversity Indication	M			
CHOICE <i>diversity indication</i>				
<i>Combining</i>				
RL ID	M			Reference RL
<i>Non combining</i>				
DCH Information Response		1..<maxnoofDCHs >		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Minimum Uplink Eb/No	M		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		0..<maxnoofFDD Neighbours>		

UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information		<i>0..<maxnoofTDD Neighbours></i>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range Bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
MaxnoofFDDNeighbours	Maximum number of neighbouring FDD cells for one cell
MaxnoofTDDNeighbours	Maximum number of neighbouring TDD cells for one cell
MaxnoofDLCodes	Maximum number of DL code information
MaxnoOfDPCHs	Maximum number of DPCH in one CCTrCH
MaxnoofCCTrCHs	no. of CCTrCH for one UE.
<u>MaxnoofULts</u>	<u>Maximum number of Uplink time slots per Radio Link</u>

9.2.1.58 UL Interference Level

The parameter indicates the UL Interference Level in a cell[FDD]/time slot[TDD]. The UL Interference Level is used by the UE to calculate its initial UL power for the cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL Interference Level			ENUMERATED ED (-128..-60)	Unit: dBm, Step size=0.1 dB

9.3.3 PDU Definitions

```
-- *****
--
-- PDU definitions for RNSAP.
--
-- *****

RNSAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    AllocationRetentionPriority,
    AllowedQueuingTime,
    BLER,
    BindingID,
    BurstType,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CPICH-EcIo,
    CPICH-Power,
    Cause,
    CellParameterID,
    ChipOffset,
    CompressedModeMethod,
    CriticalityDiagnostics,
    D-FieldLength,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-CombinationInd,
    DCH-ID,
    DL-ChannelisationCode,
    DL-DPCCCH-SlotFormat,
    DL-DPCH-SlotNumber,
    DL-EbNo,
    DL-EbNoTarget,
    DL-FrameType,
    DL-Power,
```

DL-ScramblingCode,
DPCH-ID,
DRX-Parameter,
DedicatedMeasurementValue,
DiversityControlField,
DiversityMode,
FACH-DataFrameSize,
FACH-InitialWindowSize,
FACH-PriorityIndicator,
FDD-DL-ChannelisationCodeNumber,
FDD-S-CCPCH-Offset,
FrameHandlingPriority,
FrameOffset,
GapPeriod,
GapPositionMode,
L3-Information,
MAC-c-SDU-Length,
MaxNrOfUL-DPCHs,
MeanBitRate,
MeasurementCharacteristics,
MeasurementID,
MidambleShift,
MinUL-ChannelisationCodeLength,
MultipleURAsIndicator,
MultiplexingPosition,
Offset,
PD,
PSCH-PCCPCH-TimeSlot,
PSCH-TimeSlot,
PayloadCRC-PresenceIndicator,
PilotBitsUsedIndicator,
PowerControlMode,
PowerOffset,
PowerResumeMode,
PrimaryCCPCH-RSCP,
PrimaryCPICH-EcNo,
PrimaryCPICH-Power,
PrimaryScramblingCode,
PropagationDelay,
PunctureLimit,
RANAP-RelocationInformation,
RL-ID,
RLC-Mode,
RNC-ID,
RepetitionLength,
RepetitionPeriod,
ReportCharacteristics,
S-FieldLength,
S-RNTI,
SAI,
SN,

```
SRNC-ID,  
SSDT-CellID,  
SSDT-CellID-Length,  
SSDT-Indication,  
SSDT-SupportIndicator,  
ScaledUL-InterferenceLevel,  
ScramblingCode,  
ScramblingCodeChange,  
SecondaryCCPCH-SlotFormat,  
SyncCase,  
TDD-ChannelisationCode,  
TDD-PhysicalChannelOffset,  
TFCI-Coding,  
TFCI-Presence,  
TFCI-SignallingMode,  
TGD,  
TGL,  
TPC-StepSize,  
TimeSlot,  
ToAWE,  
ToAWS,  
TransportBearerID,  
TransportBearerRequestIndicator,  
TransportFormatCombinationSet,  
TransportFormatSet,  
TransportLayerAddress,  
UARFCN,  
UC-ID,  
UL-DL-CompressedModeSelection,  
UL-DPCCH-SlotFormat,  
UL-EbNo,  
UL-EbNoTarget,  
UL-FP-Mode,  
UL-ScramblingCode,  
URA-ID  
FROM RNSAP-IEs  
  
PrivateExtensionContainer{},  
ProtocolExtensionContainer{},  
ProtocolIE-ContainerList{},  
ProtocolIE-ContainerPair{},  
ProtocolIE-ContainerPairList{},  
ProtocolIE-Container{},  
RNSAP-PRIVATE-EXTENSION,  
RNSAP-PROTOCOL-EXTENSION,  
RNSAP-PROTOCOL-IES,  
RNSAP-PROTOCOL-IES-PAIR  
FROM RNSAP-Containers  
  
maxNoOfDL-Codes,  
maxNrOfCCTrCHs,
```

maxNrOfDCHs ,
maxNrOfDL-Codes ,
maxNrOfDPCHs ,
maxNrOfFACH-FD-Size ,
maxNrOfFDD-Neighbours ,
maxNrOfMACcSDU-Length ,
maxNrOfTDD-Neighbours ,
maxNrOfRLs ,
maxNrOfSCCPCHs ,
maxNrOfULTs ,
maxRNCinURA ,

```

-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****

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

RadioLinkSetupResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional } |
    { ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore TYPE RL-InformationResponse-RL-SetupRspTDD PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
    rL-ID          RL-ID,
    sAI            SAI,
    ul-InterferenceLevel          ScaledUL-InterferenceLevel,
    ul-InterferencePerTimeslot UL-InterferenceList-RL-SetupRspTDD
    maxUL-EbNo    UL-EbNo,
    minUL-EbNo    UL-EbNo,
    ul-EbNoTarget UL-EbNo          OPTIONAL,
    dl-EbNoTarget DL-EbNo          OPTIONAL,
    ul-CCTrCHInformation          UL-CCTrCHInformationList-RL-SetupRspTDD,
    dl-CCTrCHInformation          DL-CCTrCHInformationList-RL-SetupRspTDD,
    dCH-InformationResponse       DCH-InformationResponseList-RL-SetupRspTDD,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { {RL-InformationResponse-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponse-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-InterferenceList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfULTs)) OF UL-InterferenceItem-RL-SetupRspTDD

UL-InterferenceItem-RL-SetupRspTDD ::= SEQUENCE {
    timeSlot          TimeSlot,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
}
}

```



```

-- *****
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****

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

RadioLinkAdditionResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional } |
    { ID id-RL-InformationResponse-RL-AdditionRspTDD
      CRITICALITY ignore TYPE RL-InformationResponse-RL-AdditionRspTDD PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics
      CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID          RL-ID,
    sAI            SAI,
    ul-InterferenceLevel          ScaledUL-InterferenceLevel,
    ul-InteferencePerTimeslot      UL-InterferenceList-RL-AdditionRspTDD
    ul-CCTrCHInformation          UL-CCTrCHInformationList-RL-AdditionRspTDD,
    dl-CCTrCHInformation          DL-CCTrCHInformationList-RL-AdditionRspTDD,
    diversityIndication           CHOICE {
        combining                 SEQUENCE {
            rL-ID                 RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dCH-InformationResponse-RL-AdditionRspFDD
            DCH-InformationResponseList-RL-AdditionRspFDD OPTIONAL
        }
    }
    ...
    OPTIONAL,
    maxUL-EbNo          UL-EbNo,
    minUL-EbNo          UL-EbNo,
    neighbouringFDD-CellInformation          NeighbouringFDD-CellInformationList-RL-AdditionRspTDD OPTIONAL,
    neighbouringTDD-CellInformation         NeighbouringTDD-CellInformationList-RL-AdditionRspTDD OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {RL-InformationResponse-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-InterferenceList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfULTs)) OF UL-InterferenceItem-RL-AdditionRspTDD
UL-InterferenceItem-RL-AdditionRspTDD ::= SEQUENCE {
    timeSlot          TimeSlot,

```

```
| ul-InterferenceLevel ScaledUL-InterferenceLevel,  
| }
```

9.3.6 Constant Definitions

```

-- *****
--
-- Constant definitions
--
-- *****

RNSAP-Constants -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- Elementary Procedures
--
-- *****

id-commonTransportChannelResourcesInitiationFDD          INTEGER ::= 0
id-commonTransportChannelResourcesInitiationTDD          INTEGER ::= 1
id-commonTransportChannelResourcesRelease                INTEGER ::= 2
id-compressedModeCancellationFDD                        INTEGER ::= 3
id-compressedModeCommitFDD                              INTEGER ::= 4
id-compressedModePrepareFDD                             INTEGER ::= 5
id-downlinkPowerControl                                 INTEGER ::= 6
id-downlinkSignallingTransfer                            INTEGER ::= 7
id-errorIndication                                      INTEGER ::= 8
id-measurementFailure                                   INTEGER ::= 9
id-measurementInitiation                                 INTEGER ::= 10
id-measurementReporting                                  INTEGER ::= 11
id-measurementTermination                                INTEGER ::= 12
id-pagingRequest                                        INTEGER ::= 13
id-physicalChannelReconfiguration                       INTEGER ::= 14
id-privateMessage                                       INTEGER ::= 15
id-radioLinkAddition                                    INTEGER ::= 16
id-radioLinkDeletion                                    INTEGER ::= 17
id-radioLinkFailure                                     INTEGER ::= 18
id-radioLinkRestoration                                 INTEGER ::= 19
id-radioLinkSetup                                       INTEGER ::= 20
id-srnsRelocationCommit                                 INTEGER ::= 21
id-synchronisedRadioLinkReconfigurationCancellation     INTEGER ::= 22
id-synchronisedRadioLinkReconfigurationCommit           INTEGER ::= 23
id-synchronisedRadioLinkReconfigurationPrepare          INTEGER ::= 24
id-unSynchronisedRadioLinkReconfiguration               INTEGER ::= 25
id-uplinkSignallingTransfer                              INTEGER ::= 26

-- *****
--

```

```
-- Extension constants
--
-- *****

maxPrivateExtensions          INTEGER ::= 65535
maxProtocolExtensions        INTEGER ::= 65535
maxProtocolIEs               INTEGER ::= 65535

-- *****
--
-- Lists
--
-- *****

maxRateMatching              INTEGER ::= 10
maxNrOfTFCs                  INTEGER ::= 10
maxNrOfTFS                    INTEGER ::= 10

maxNoOfDL-Codes              INTEGER ::= 10
maxNrOfCCTrCHs               INTEGER ::= 10
maxNrOfDCHs                   INTEGER ::= 10
maxNrOfDL-Codes              INTEGER ::= 10
maxNrOfDPCHs                  INTEGER ::= 10
maxNrOfErrors                 INTEGER ::= 10
maxNrOfFACH-FD-Size          INTEGER ::= 10
maxNrOfFDD-Neighbours        INTEGER ::= 10
maxNrOfMACcSDU-Length        INTEGER ::= 10
maxNrOfTDD-Neighbours        INTEGER ::= 10
maxNrOfRLs                    INTEGER ::= 10
maxNrOfSCCPCHs               INTEGER ::= 10
maxNrOfULTs                   INTEGER ::= 15
maxRNCinURA                  INTEGER ::= 10
maxTTI-Count                  INTEGER ::= 10
```

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.423 CR 054r1

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**
 list expected approval meeting # here ↑

for approval
 for information

strategic
 non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
 (at least one should be marked with an X)

Source: RAN-WG3 **Date:** 28 February 2000

Subject: Modification to "TGD" unit and range (RNSAP)

Work item:

Category: F Correction
 A Corresponds to a correction in an earlier release
 B Addition of feature
 C Functional modification of feature
 D Editorial modification
 (only one category shall be marked with an X)

Release: Phase 2
 Release 96
 Release 97
 Release 98
 Release 99
 Release 00

Reason for change: In TR25.922, it is assumed that the number of frames for Transmission Gap Distance (TGD) may be provided in a fractional expression, as quoted below.

5.1.6.2.1.1 Setting of the compressed mode parameters for selection mode

During the transmission gaps, the UE shall perform measurements so as to be able to report to the UTRAN the frame timing, the scrambling code and the Ec/Io of Primary CCPCH of up FDD cells in the handover monitoring set.

When compressed mode is used for cell acquisition at each target FDD frequency, the parameters of compressed mode pattern are fixed to be:

	TGL	TGD	TGP1	TGP2	PD
Pattern1	7	24/15	4	20	M
Pattern2	7	24/15	4	140	M
Pattern3	7	2	4	Not Used	M
Pattern4	7	2	4	20	M
Pattern5	7	2	4	140	M
Pattern6	14	3	6	18	M
Pattern7	14	3	6	138	M

On the other hand, R3 has so far considered that the number of frames for TGD is an integer which has defined it as "INTEGER(0..255)".

In order to support Compressed Mode Pattern1 and 2 in the quotation above, it is proposed to express the TGD in unit of "Slots" rather than in "Frames". It is also proposed to expand the range of TGD in accordance with change of unit.

Clauses affected: 9.2.2.32 TGP
 9.3.4 Information Element Definitions

Other specs Other 3G core specifications → List of CRs:

affected:

Other GSM core specifications	<input type="checkbox"/>	→ List of CRs:
MS test specifications	<input type="checkbox"/>	→ List of CRs:
BSS test specifications	<input type="checkbox"/>	→ List of CRs:
O&M specifications	<input type="checkbox"/>	→ List of CRs:

**Other
comments:**



help.doc

<----- [double-click here for help and instructions on how to create a CR.](#)

9.2.2.32 Transmission Gap Distance (TGD)

Transmission Gap Distance is the duration of transmission between two consecutive transmission gaps within a transmission gap period, expressed in number of slotsframes. In case there is only one transmission gap in the transmission gap period, this parameter shall be set to zero.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TGD			INTEGER(0.. 3839255)	<u>SlotsFrames</u>

9.3.4 Information Element Definitions

----- omitted -----

```

-- ** TODO **
TimeReference ::= INTEGER
-- TimeReference ::= INTEGER (0..255)

TimeSlot ::= INTEGER (0..14)

ToAWE ::= INTEGER (0..2559)

ToAWS ::= INTEGER (0..1279)

TPC-StepSize ::= ENUMERATED {
    half,
    one
}

TGD ::= INTEGER (0..3839255)

TGL ::= INTEGER (3| 4| 7| 10| 14)

TransmissionTimeInterval ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80--
-- ...
}

TransportBearerID ::= INTEGER (0..4095)

```

----- omitted -----

CHANGE REQUEST		<i>Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.</i>	
25.423	CR	41r1	Current Version: 3.0.0
<small>GSM (AA.BB) or 3G (AA.BBB) specification number ↑</small>		<small>↑ CR number as allocated by MCC support team</small>	
For submission to: RAN#7 <small>list expected approval meeting # here ↑</small>	for approval <input checked="" type="checkbox"/> for information <input type="checkbox"/>	strategic <input type="checkbox"/> non-strategic <input type="checkbox"/>	<small>(for SMG use only)</small>

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: R-WG3 **Date:** _____

Subject: Definition of the DL Power IE

Work item: _____

Category:	F Correction <input checked="" type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input type="checkbox"/> C Functional modification of feature <input type="checkbox"/> D Editorial modification <input type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input checked="" type="checkbox"/> Release 00 <input type="checkbox"/>
------------------	--	-----------------	--

(only one category shall be marked with an X)

Reason for change: The Definition of the DL power IE is currently missing from the RNSAP specification. It is also clarified that the DL Power is intended as power of the transmitted DPDCH symbols. Range and ASN.1 definition is taken from NBAP specification v 3.0.0

Clauses affected: 9.2.2, 9.3.4

Other specs affected:

Other 3G core specifications	<input type="checkbox"/> →	List of CRs: _____
Other GSM core specifications	<input type="checkbox"/> →	List of CRs: _____
MS test specifications	<input type="checkbox"/> →	List of CRs: _____
BSS test specifications	<input type="checkbox"/> →	List of CRs: _____
O&M specifications	<input type="checkbox"/> →	List of CRs: _____

Other comments: _____

9.2.2.x DL Power

The DL Power IE indicates the power level of the DPDCH symbols, expressed as a relative value with respect to the CPICH power.

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

9.3.4 Information Element Definitions

```
--- ** TODO **  
DL-Power ::= INTEGER(-350..150)  
-- Value = DL-Power / 10  
-- Unit dB, Range -35dB .. +15dB, Step +0.1dB
```

3GPP TSG-RA WG3 Meeting #11
Sophia Antipolis, 28 Feb – 3 Mar 2000

Document R3-000777

e.g. for 3GPP use the format TP-99xxx
 or for SMG, use the format P-99-xxx

<h2 style="margin: 0;">CHANGE REQUEST</h2>		Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.	
25.423	CR	042r1	Current Version: 3.0.0
GSM (AA.BB) or 3G (AA.BBB) specification number ↑		↑ CR number as allocated by MCC support team	
For submission to: RAN#7 list expected approval meeting # here ↑	for approval for information	<input checked="" type="checkbox"/> <input type="checkbox"/>	strategic <input type="checkbox"/> non-strategic <input type="checkbox"/> (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
 (at least one should be marked with an X)

Source: R-WG3 **Date:**

Subject: Clarification on the definition of the parameter "Allocation/Retention Priority"

Work item:

Category:	F Correction <input checked="" type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/>
	A Corresponds to a correction in an earlier release <input type="checkbox"/>		Release 96 <input type="checkbox"/>
(only one category shall be marked with an X)	B Addition of feature <input type="checkbox"/>		Release 97 <input type="checkbox"/>
	C Functional modification of feature <input type="checkbox"/>		Release 98 <input type="checkbox"/>
	D Editorial modification <input type="checkbox"/>		Release 99 <input checked="" type="checkbox"/>
			Release 00 <input type="checkbox"/>

Reason for change: The 'Allocation/Retention Priority' parameter was agreed in WG3 meeting #6. It is linked to the RAB Parameter 'Allocation/Retention priority', defined in 23.107 as 'specifies the relative importance compared to other Radio access bearers for allocation and retention of the Radio access bearer'. In RNSAP the Allocation/Retention Priority specifies the priority to be used for the allocation and retention of the resources in the DRNC. This CR clarifies the use of such parameter.

Clauses affected: 8.3.4.2, 8.3.7.2, 9.2.1.1

Other specs affected:	Other 3G core specifications <input type="checkbox"/>	→ List of CRs:	
	Other GSM core specifications <input type="checkbox"/>	→ List of CRs:	
	MS test specifications <input type="checkbox"/>	→ List of CRs:	
	BSS test specifications <input type="checkbox"/>	→ List of CRs:	
	O&M specifications <input type="checkbox"/>	→ List of CRs:	

Other comments:

8.3.4.2 Successful Operation

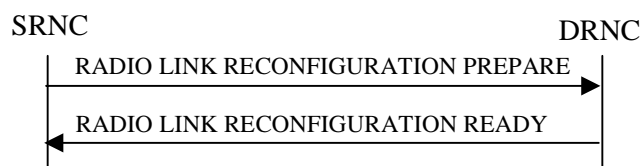


Figure 14: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

The Synchronised Radio Link Reconfiguration Preparation procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION PREPARE message to the DRNC.

Upon reception, the DRNS 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.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

DCH Modification :

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this information when reserving resources for this DCH in the new configuration.

~~[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]~~

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Frame Handling Priority* IE for a DCH to be modified, the DRNS 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 DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (UL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (DL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *UL DCH FP Mode* IE for a DCH to be modified, the DRNS shall apply the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes on the *ToAWS* IE for a DCH to be modified, the DRNS shall apply the new ToAWS in the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes on the *ToAWE* IE for a DCH to be modified, the DRNS shall apply the new ToAWE in the user plane for this DCH in the new configuration.

DCH Addition:

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be added to the Radio Link(s), the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *DCH Combination Indicator* IE for a DCH to be added, the DRNS shall

1. treat all DCHs with the same value of this IE as a set of co-ordinated DCHs and

2. include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration

~~The DRNS should use the *Allocation/Retention Priority* IE received for a DCH to be added when reserving resources for this DCH in the new configuration.~~

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

The DRNS 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 DRNS once the new configuration has been activated.

The DRNS may use the included *RLC Mode* IE to optimise the power control.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH to be added as the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWS* IE for a DCH to be added as the new Time of Arrival Window Start Point in the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWE* IE for a DCH to be added as the new Time of Arrival Window End Point in the user plane for this DCH in the new configuration.

DCH Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be deleted from the Radio Link(s), the DRNS shall not include this DCH in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the DRNS shall not include this set of co-ordinated DCHs in the new configuration

Physical Channel Modification:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Uplink Scrambling Code* IE, the DRNS shall apply this Uplink Scrambling Code to the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Uplink Channelisation Code* IEs, the DRNS shall apply the new Uplink Channelisation Code(s) in the new configuration.

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Spreading Factor of Channelisation Code (DL)* IE, for each *Spreading Factor of Channelisation Code (DL)* IE the DRNS shall allocate one new Downlink Channelisation Code per Radio Link and apply the new Downlink Channelisation Code(s) to the new configuration. Each Downlink Channelisation Code allocated for the new configuration shall be included as a *Channelisation Code (DL)* IE in the RADIO LINK RECONFIGURATION READY message when sent to the SRNC.]

The DRNS shall use the *TFCS (UL)* IE when reserving resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the Uplink of [TDD – the CCTrCH of] the new configuration.

The DRNS shall use the *TFCS (DL)* IE when reserving resources for the downlink of the new configuration. The DRNS shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Mean Bit Rate (UL)* IE, the DRNS should use this information when reserving resources for the Uplink of the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Mean Bit Rate (DL)* IE, the DRNS should use this information when reserving resources for the Downlink of the new configuration.

[Editor's note: There is presently no clear definition of the *Mean Bit Rate* IEs. The handling of these IEs is thus regarded as FFS.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes on the *UL DPCCH Structure* IE, group the DRNS shall apply the new Uplink DPCCH Structure to the new configuration.]

SSDT Activation/Deactivation:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *SSDT Indication* IE set to "SSDT Active in the UE", the DRNS may activate SSDT using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the SSDT Indication IE set to "SSDT not Active in the UE", the DRNS shall deactivate SSDT in the new configuration.]

If the requested modifications are allowed by the DRNS, and the DRNS has successfully reserved the required resources for the new configuration of the Radio Link(s) it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message.

The DRNS decides the maximum and minimum Eb/No for the uplink of the Radio Link(s) and shall return this in the *Maximum Uplink Eb/No* IE and *Minimum Uplink Eb/No* IE for each Radio Link in the RADIO LINK RECONFIGURATION READY message.

[TDD – The DRNC shall include all the IEs corresponding to the new physical channel parameters for the DL DPCH and/or the UL DPCH to be reconfigured in the RADIO LINK RECONFIGURATION READY message.]

[Editor's note: Which information in the RL RECONFIGURATION PREPARE message triggers the DRNC to include any of the following *Optional* TDD information?:

- a) DL DPCH Group
- b) UL DPCH Group
- c) TDD Physical Channel Offset, *Repetition* Length, and TFCI Presence IEs as part of the DL DPCH Group
- d) TDD Physical Channel Offset, *Repetition* Length, and TFCI Presence IEs as part of the UL DPCH Group.]

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH to be Added* IE group or the *DCH to be Modified* IE group shall be included only for one of the DCHs in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH to be Added* IE group and the *DCH to be Modified* IE group shall be included only for one of the combined Radio Links.

8.3.7.2 Successful Operation

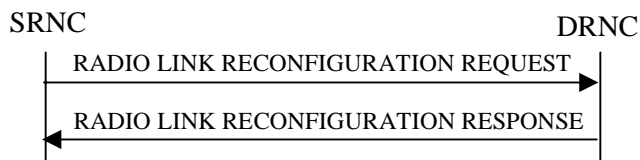


Figure 22: Unsynchronised Radio Link Reconfiguration procedure, Successful Operation

The Unsynchronised Radio Link Reconfiguration procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION REQUEST message to the DRNC.

Upon reception, the DRNS 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.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

DCH Modification:

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this ~~information~~ new value when reserving resources for this DCH in the new configuration.

~~[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]~~

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Frame Handling Priority* IE for a DCH to be modified, the DRNS 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 DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Transport Format Set (UL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Transport Format Set (DL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *UL DCH FP Mode* IE for a DCH to be modified, the DRNS shall apply the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *ToAWS* IE for a DCH to be modified, the DRNS shall apply the new ToAWS in the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *ToAWE* IE for a DCH to be modified, the DRNS shall apply the new ToAWE in the user plane for this DCH in the new configuration.

DCH Addition:

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be added to the Radio Link(s), the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *DCH Combination Indicator* IE for a DCH to be added, the DRNS shall.

1. treat all DCHs with the same value of this IE as a set of co-ordinated DCHs and
2. include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration

~~The DRNS should use the *Allocation/Retention Priority* IE received for a DCH to be added when allocating resources for this DCH in the new configuration.~~

~~[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]~~

The DRNS 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 DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *RLC Mode* IE, the DRNS may use this information to optimise the power control.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH to be added as the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWS* IE for a DCH to be added as the new Time of Arrival Window Start Point in the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWE* IE for a DCH to be added as the new Time of Arrival Window End Point in the user plane for 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 DRNS shall not include this DCH in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the DRNS shall not include this set of co-ordinated DCHs in the new configuration

Physical Channel Modification:

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS (UL)* IE, the DRNS shall apply the new TFCS in the Uplink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS (DL)* IE, the DRNS shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Mean Bit Rate (UL)* IE, the DRNS should use this information when reserving resources for the Uplink of the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Mean Bit Rate (DL)* IE, the DRNS should use this information when reserving resources for the Downlink of the new configuration.

[Editor's note: There is presently no clear definition of the *Mean Bit Rate* IEs. The handling of these IEs is thus regarded as FFS.]

If the requested modifications are allowed by the DRNS, the DRNS has successfully allocated the required resources, and changed to the new configuration it shall respond to the SRNC with the RADIO LINK RECONFIGURATION RESPONSE message.

The DRNS decides the maximum and minimum Eb/No for the uplink of the Radio Link(s) and shall return this in the IEs *Maximum Uplink Eb/No* and *Minimum Uplink Eb/No* for each Radio Link in the RADIO LINK RECONFIGURATION RESPONSE message.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH to be Added* IE group or the *DCH to be Modified* IE group shall be included only for one of the DCH in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH to be Added* IE group and the *DCH to be Modified* IE group shall be included only for one of the combined Radio Links.

9.2.1.1 Allocation/Retention Priority

This parameter indicates the priority level in the allocation and retention of DCH-transport channel resources in DRNS. DRNS **may** use the Allocation/Retention priority information of the transport channels composing the RL to prioritise requests for RL Setup/addition and reconfiguration. In similar way, DRNS **may** use the allocation/Retention priority information of the transport channels composing the RL to prioritise which RL shall be set to failure, **in case** **prioritisation is possible**.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
9.2.1.1-Allocation/Retention Priority			Frame Handling Priority	

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 correspondent note below the message description.

In case of an information element group, the group is preceded by a name for the info group (in bold). It is also indicated whether the group is mandatory, optional or conditional. Each group may be also repeated within one message. 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.

9.1.3 RADIO LINK SETUP REQUEST

9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
S-RNTI	M				YES	reject
D-RNTI	O				YES	reject
Allowed Queuing time	O				YES	reject
UL DPCH Information		1			YES	reject
UL Scrambling Code	M				–	
Min UL Channelisation Code Length	M				–	
Max Number of UL DPDCHs	C – CodeLen				–	
Puncture Limit	M			For the UL.	–	
UL Transport Format Combination Set	M				–	
UL DPCH Slot Format	M				–	
UL Eb/No Target	O				–	
Diversity mode	M				–	
D Field Length	C-FB				–	
SSDT Cell ID Length	O				–	
S Field Length	O				–	
Mean Bit Rate	O			For the UL.	–	
DL DPCH Information		1			YES	reject
Transport Format Combination Set	M				–	
DL DPCH Slot Format	M				–	
TFCI Signalling Mode	M				–	
TFCI Presence	C-SlotFormat				–	
Multiplexing Position	M				–	
Power Offset Information		1			–	
PO1	M		Power Offset	Power offset for the TFCI bits.	–	
PO2	M		Power Offset	Power offset for the TPC bits.	–	
PO3	M		Power Offset	Power offset for the pilot bits.	–	
TPC Downlink Step Size	M				–	
Mean Bit Rate	O			For the DL.	–	
DCH Information		1..<maxnumberOfDCHs>			GLOBAL	reject
DCH ID	M				–	
DCH Combination Ind	O				–	
RLC Mode	M				–	
Transport Format Set	M			For the UL.	–	
Transport Format Set	M			For the DL.	–	
BLER	M			For the UL.	–	
BLER	M			For the DL.	–	
Allocation/Retention Priority	M				–	
Frame Handling Priority	M				–	
Payload CRC Presence Indicator	M				–	
UL FP Mode	M				–	
ToAWS	M				–	

ToAWE	M				–	
RL Information		<i>1...<maxno ofRLs></i>			EACH	notify
RL ID	M				–	
C-ID	M				–	
Frame Offset	M				–	
Chip Offset	M				–	
Propagation Delay	O				–	
Diversity Control Field	C – NotFirstR L				–	
Initial DL TX Power	O		DL Power		–	
Primary CPICH Ec/Io	O				–	
SSDT Cell ID	O				–	

Condition	Explanation
CodeLen	This IE is present only if "Min UL Channelisation Code len"th equals to 4
FB	This IE is present only if Feed Back mode diversity is activated.
SlotFormat	This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16.
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information .

Range bound	Explanation
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofRLs	Maximum no. of RLs for one UE.

9.1.3.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
S-RNTI	M				YES	reject
D-RNTI	O				YES	reject
Allowed Queuing time	O				YES	reject
Mean Bit Rate	O			For the UL.	YES	reject
Mean Bit Rate	O			For the DL.	YES	reject
UL CCTrCH Information		<i>1..<maxnoof CCTrCHs></i>			EACH	notify
CCTrCH ID	M				–	
TFCS	M			For the UL.	–	
TFCI Coding	M				–	
Puncture Limit	M				–	
DL CCTrCH Information		<i>1..<maxnoof CCTrCHs></i>			EACH	notify
CCTrCH ID	M				–	
TFCS	M			For the DL.	–	
TFCI Coding	M				–	
Puncture Limit	M				–	
DCH Information		<i>1..<maxnoof DCHs></i>			GLOBAL	reject
DCH ID	M				–	
CCTrCH ID	M			UL CCTrCH in which the DCH is mapped	–	
CCTrCH ID	M			DL CCTrCH in which the DCH is mapped	–	
DCH Combination Ind	O				–	
RLC Mode	M				–	
Transport Format Set	M			For the UL.	–	
Transport Format Set	M			For the DL.	–	
BLER	M			For the UL.	–	
BLER	M			For the DL.	–	
Allocation/Retention Priority	M				–	
Frame Handling Priority	M				–	
Payload CRC Presence Indicator	M				–	
UL FP Mode	M				–	
ToAWS	M				–	
ToAWE	M				–	
RL Information		<i>1</i>			YES	reject
RL ID	M				–	
C-ID	M				–	
Frame Offset	M				–	
Primary CCPCH RSCP	O				–	

Range bound	Explanation
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofCCTrCHs	Maximum no. of CCTrCH for one UE.

9.1.4 RADIO LINK SETUP RESPONSE

9.1.4.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
D-RNTI	O				YES	
CN PS Domain Identifier	O				YES	ignore
CN CS Domain Identifier	O				YES	ignore
RL Information Response		1..<maxnoof RLs>			EACH	ignore
RL ID	M				–	
SAI	M				–	
UL Interference Level	M				–	
DL Code Information		1..<maxnoofDL Codes>			–	
DL Scrambling Code	M				–	
FDD DL Channelisation Code Number	M				–	
Diversity Indication	C-NotFirstRL				–	
CHOICE <i>diversity Indication</i>						
<i>Combining</i>					YES	ignore
RL ID	M			Reference RL ID for the combining	–	
<i>Non Combining or IE not present</i>				"IE not present" is equivalent to "First RL".	YES	ignore
DCH Information Response		0..<maxnoof DCHs>		Only one DCH per set of co-ordinated DCHs shall be included	–	
DCH ID	M				–	
Binding ID	M				–	
Transport Layer Address	M				–	
SSDT Support Indicator	M				–	
Maximum Uplink Eb/No	M		Uplink Eb/No		–	
Minimum Uplink Eb/No	M		Uplink Eb/No		–	
Neighbouring FDD Cell Information		0..<maxnoof FDDneighbours>			EACH	ignore
UC-Id	M				–	
CN PS Domain Identifier	O				–	
CN CS Domain Identifier	O				–	
UARFCN	M				–	
Frame Offset	O				–	
Primary Scrambling Code	M				–	
Primary CPICH Power	O				–	
Neighbouring TDD Cell Information	O	0..<maxnoof TDDneighbours>			EACH	ignore
UC-Id	M				–	

CN PS Domain Identifier	O				–	
CN CS Domain Identifier	O				–	
UARFCN	M				–	
Frame Offset	O				–	
Cell Parameter ID	M				–	
Sync Case	M				–	
Time Slot	C-Case1				–	
PSCH Time Slot	C-Case2&3				–	
Uplink Eb/No Target	O		Uplink Eb/No		YES	ignore
Downlink Eb/No Target	O				YES	ignore
Criticality Diagnostics	O				YES	ignore

Condition	Explanation
IfComb	This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.
IfNotComb	This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B.
NotFirstRL	The IE is present only if the RL is not the first RL in the RL Information
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell.
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell.

9.1.4.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
D-RNTI	O				YES	ignore
CN PS Domain Identifier	O				YES	ignore
CN CS Domain Identifier	O				YES	ignore
RL Information Response		1			YES	ignore
RL ID	M				–	
SAI	M				–	
UL Interference Level	M				–	
Maximum Uplink Eb/No	M		Uplink Eb/No		–	
Minimum Uplink Eb/No	M		Uplink Eb/No		–	
Uplink Eb/No Target	O		Uplink Eb/No		–	
Downlink Eb/No Target	O				–	
UL CCTrCH Information		1..<maxnoof CCTrCHs>			GLOBAL	ignore
CCTrCH ID	M				–	
UL DPCH Information		1..<Maxnoof DPCHs>			EACH	ignore
DPCH ID	M				–	
TDD Channelisation Code	M				–	
Burst Type	M				–	
Midamble Shift	M				–	
Time Slot	M				–	
TDD Physical Channel Offset	M				–	
Repetition Period	M				–	
Repetition Length	M				–	
TFCI Presence	M				–	
DL CCTrCH Information		1..<maxnoof CCTrCHs>			GLOBAL	ignore
CCTrCH ID	M				–	
DL DPCH Information		1..<Maxnoof DPCHs>			EACH	ignore
DPCH ID	M				–	
TDD Channelisation Code	M				–	
Burst Type	M				–	
Midamble Shift	M				–	
Time Slot	M				–	
TDD Physical Channel Offset	M				–	
Repetition Period	M				–	
Repetition Length	M				–	
TFCI Presence	M				–	
DCH Information Response		1..<maxnoof DCHs>		Only one DCH per set of co-ordinated DCHs shall be included.	GLOBAL	ignore
DCH ID	M				–	
Binding ID	M				–	
Transport Layer Address	M				–	
Neighbouring FDD Cell Information	O	0..<maxnoof FDDneighbours>			EACH	ignore
UC-Id	M				–	

CN PS Domain Identifier	O				–	
CN CS Domain Identifier	O				–	
UARFCN	M				–	
Frame Offset	O				–	
Primary Scrambling Code	M				–	
Primary CPICH Power	O				–	
Neighbouring TDD Cell Information	O	<i>0..<maxnoof TDDneighbours></i>			EACH	ignore
UC-Id	M				–	
CN PS Domain Identifier	O				–	
CN CS Domain Identifier	O				–	
UARFCN	M				–	
Frame Offset	O				–	
Cell Parameter ID	M				–	
Sync Case	M				–	
Time Slot	C-Case1				–	
PSCH Time Slot	C-Case2&3				–	
Criticality Diagnostics	O				YES	ignore

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofDPCHs	Maximum no. of DPCHs for one CCTrCH.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell
MaxnoofCCTrCHs	Maximum no. of CCTrCH for one UE.

9.1.5 RADIO LINK SETUP FAILURE

9.1.5.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
D-RNTI	O				YES	ignore
CN PS Domain Identifier	O				YES	ignore
CN CS Domain Identifier	O				YES	ignore
Unsuccessful RL Information Response		1...<maxnoof RLS>			EACH	ignore
RL ID	M				–	
Cause	M				–	
Successful RL Information Response		0..<maxnoof RLS-1>			EACH	ignore
RL ID	M				–	
SAI	M				–	
UL Interference Level	M				–	
DL Code Information		1..<maxnoofDL Codes>			GLOBAL	ignore
DL Scrambling Code	M				–	
FDD DL Channelisation Code Number	M				–	
Diversity Indication	M				–	
CHOICE <i>diversity Indication</i>						
<i>Combining</i>					YES	ignore
RL ID	M			Reference RL ID for the combining	–	
<i>Non Combining or IE not present</i>				"IE not present" is equivalent to "First RL".	YES	ignore
DCH Information Response		0..<maxnoof DCHs>		Only one DCH per set of co-ordinated DCHs shall be included.	–	
DCH ID	M				–	
Binding ID	M				–	
Transport Layer Address	M				–	
SSDT Support Indicator	M				–	
Neighbouring FDD Cell Information	O				EACH	ignore
UC-Id	M				–	
CN PS Domain Identifier	O				–	
CN CS Domain Identifier	O				–	
UARFCN	M				–	
Frame Offset	O				–	
Primary Scrambling Code	M				–	
Primary CPICH Power	O				–	
Neighbouring TDD Cell Information	O				EACH	ignore
UC-Id	M				–	
CN PS Domain Identifier	O				–	
CN CS Domain Identifier	O				–	

Identifier						
UARFCN	M				–	
Frame Offset	O				–	
Cell Parameter ID	M				–	
Sync Case	M				–	
Time Slot	C-Case3				–	
PSCH Time Slot	C-Case2&3				–	
Uplink Eb/No Target	O		Uplink Eb/No		–	
Maximum Uplink Eb/No	M		Uplink Eb/No		–	
Minimum Uplink Eb/No	M		Uplink Eb/No		–	
Downlink Eb/No Target	O				–	
Criticality Diagnostics	O				YES	ignore

Condition	Explanation
IfComb	This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.
IfNotComb	This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B.
NotFirstRL	The IE is present only if the RL is not the first RL in the RL Information
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.
MaxnoofDCHs	Maximum no. of DCHs for one UE.

9.1.5.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
Unsuccessful RL Information Response		1			YES	ignore
RL ID	M				–	
Cause	M				–	
Criticality Diagnostics	O				YES	ignore

9.1.6 RADIO LINK ADDITION REQUEST

9.1.6.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
Uplink Eb/No Target	M		Uplink Eb/No		YES	reject
RL Information		<i>1..<maxnoof RLS-1></i>			EACH	notify
RL ID	M				–	
C-Id	M				–	
Frame Offset	M				–	
Chip Offset	M				–	
Diversity Control Field	M				–	
Primary CPICH Ec/lo	O				–	
SSDT Cell Identity	O				–	

Range bound	Explanation
MaxnoofRLs	Maximum number of radio links for one UE

9.1.6.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
RL Information		<i>1</i>			YES	reject
RL ID	M				–	
C-Id	M				–	
Frame Offset	M				–	
Diversity Control Field	M				–	
Primary CCPCH RSCP	O				–	

9.1.7 RADIO LINK ADDITION RESPONSE

9.1.7.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				-	
RL Information Response		1..<maxnoof RLS-1>			EACH	ignore
RL ID	M				-	
SAI	M				-	
UL Interference Level	M				-	
DL Code Information		1..<maxnoof DL Codes>			GLOBAL	ignore
DL Scrambling Code	M				-	
DL Channelisation Code	M				-	
Diversity Indication	M				YES	ignore
CHOICE <i>diversity indication</i>						
<i>Combining</i>					YES	ignore
RL ID	M			Reference RL-Id	-	
<i>Non combining</i>					YES	ignore
DCH Information Response		1..<maxnoof DCHs>		Only one DCH per set of co-ordinated DCHs shall be included.	-	
DCH ID	M				-	
Binding ID	M				-	
Transport Layer Address	M				-	
SSDT Support Indicator	M				-	
Minimum Uplink Eb/No	M		Uplink Eb/No		-	
Maximum Uplink Eb/No	M		Uplink Eb/No		-	
Neighbouring FDD Cell Information		0..<maxnoof FDD Neighbours>			EACH	ignore
UC-Id	M				-	
CN PS Domain Identifier	O				-	
CN CS Domain Identifier	O				-	
UARFCN	M				-	
Frame Offset	O				-	
Primary Scrambling Code	M				-	
Primary CPICH Power	O				-	
Neighbouring TDD Cell Information		0..<maxnoof TDD Neighbours>			EACH	ignore
UC-Id	M				-	
CN PS Domain Identifier	O				-	
CN CS Domain Identifier	O				-	
UARFCN	M				-	
Frame Offset	O				-	
Cell Parameter ID	M				-	
Sync Case	M				-	
Time Slot	C-Case1				-	
PSCH Time Slot	C-				-	

	Case2&3					
Criticality Diagnostics	O				YES	ignore

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
MaxnoofRLs	Maximum number of radio links for one UE
MaxnoofFDDNeighbours	Maximum number of neighbouring FDD cells for one cell
MaxnoofTDDNeighbours	Maximum number of neighbouring TDD cells for one cell
MaxnoofDLCodes	Maximum number of DL code information

9.1.7.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
RL Information Response		1			YES	ignore
RL ID	M				–	
SAI	M				–	
UL Interference Level	M				–	
UL CCTrCH Information		1..<maxnoof CCTrCHs>			GLOBAL	ignore
CCTrCH ID	M				–	
UL DPCH Information		1..<maxnoOf fDPCHs>			EACH	ignore
DPCH ID	M				–	
TDD Channelisation Code	M				–	
Burst Type	M				–	
Midamble Shift	M				–	
Time Slot	M				–	
TDD Physical Channel Offset	M				–	
Repetition Period	M				–	
Repetition Length	M				–	
TFCI Presence	M				–	
DL CCTrCH Information		1..<maxnoof CCTrCHs>			GLOBAL	ignore
CCTrCH ID	M				–	
DL DPCH information		1..<maxnoOf fDPCHs>			EACH	ignore
DPCH ID	M				–	
TDD Channelisation Code	M				–	
Burst Type	M				–	
Midamble Shift	M				–	
Time Slot	M				–	
TDD Physical Channel Offset	M				–	
Repetition Period	M				–	
Repetition Length	M				–	
TFCI Presence	M				–	
Diversity Indication	M				YES	ignore
CHOICE <i>diversity indication</i>						
<i>Combining</i>					YES	ignore
RL ID	M			Reference RL	–	
<i>Non combining</i>					YES	ignore
DCH Information Response		1..<maxnoof DCHs>		Only one DCH per set of co-ordinated DCHs shall be included.	–	
DCH ID	M				–	
Binding ID	M				–	
Transport Layer Address	M				–	
Minimum Uplink Eb/No	M		Uplink Eb/No		–	
Maximum Uplink Eb/No	M		Uplink Eb/No		–	
Neighbouring FDD Cell Information		0..<maxnoof FDDNeighbours>			EACH	ignore
UC-Id	M				–	

CN PS Domain Identifier	O				–	
CN CS Domain Identifier	O				–	
UARFCN	M				–	
Frame Offset	O				–	
Primary Scrambling Code	M				–	
Primary CPICH Power	O				–	
Neighbouring TDD Cell Information		<i>0..<maxnoof TDDNeighbours></i>			EACH	ignore
UC-Id	M				–	
CN PS Domain Identifier	O				–	
CN CS Domain Identifier	O				–	
UARFCN	M				–	
Frame Offset	O				–	
Cell Parameter ID	M				–	
Sync Case	M				–	
Time Slot	C-Case1				–	
PSCH Time Slot	C-Case2&3				–	
Criticality Diagnostics	O				YES	ignore

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range Bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
MaxnoofFDDNeighbours	Maximum number of neighbouring FDD cells for one cell
MaxnoofTDDNeighbours	Maximum number of neighbouring TDD cells for one cell
MaxnoofDLCodes	Maximum number of DL code information
MaxnoOfDPCHs	Maximum number of DPCH in one CCTrCH
MaxnoofCCTrCHs	no. of CCTrCH for one UE.

9.1.8 RADIO LINK ADDITION FAILURE

9.1.8.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
Unsuccessful RL Information Response		1..<maxnoof RLS-1>			EACH	ignore
RL ID	M				–	
Cause	M				–	
Successful RL Information Response		1..<maxnoof RLS-2>			EACH	ignore
RL ID	M				–	
SAI	M				–	
UL Interference Level	M				–	
DL Code Information		1..<maxnoof DL Codes>			GLOBAL	ignore
DL scrambling code	M				–	
DL channelisation code	M				–	
Diversity Indication	M				YES	ignore
CHOICE <i>diversity indication</i>						
<i>Combining</i>					YES	ignore
RL ID	M			Reference RL-Id	–	
<i>Non combining</i>					YES	ignore
DCH Information Response		1..<maxnoof DCHs>		Only one DCH per set of co-ordinated DCHs shall be included.	–	
DCH ID	M				–	
Binding ID	M				–	
Transport Layer Address	M				–	
SSDT Support Indicator	M				–	
Minimum Uplink Eb/No	M		Uplink Eb/No		–	
Maximum Uplink Eb/No	M		Uplink Eb/No		–	
Neighbouring FDD Cell Information		0..<maxnoof FDD Neighbours>			EACH	ignore
UC-Id	M				–	
CN PS Domain Identifier	O				–	
CN CS Domain Identifier	O				–	
UARFCN	M				–	
Frame Offset	O				–	
Primary Scrambling Code	M				–	
Primary CPICH Power	O				–	
Neighbouring TDD Cell Information		0..<maxnoof TDD Neighbours>			EACH	ignore
UC-Id	M				–	
CN PS Domain Identifier	O				–	
CN CS Domain Identifier	O				–	
UARFCN	M				–	
Frame Offset	O				–	
Cell Parameter ID	M				–	

Sync Case	M				–	
Time Slot	C-Case1				–	
PSCH Time Slot	C-Case2&3				–	
Criticality Diagnostics	O				YES	ignore

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
MaxnoofRLs	Maximum number of radio links for one UE
MaxnoofFDDNeighbours	Maximum number of neighbouring FDD cells for one cell
MaxnoofTDDNeighbours	Maximum number of neighbouring TDD cells for one cell
MaxnoofDLCodes	Maximum number of DL code information

9.1.8.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
Unsuccessful RL Information Response		1			YES	ignore
RL ID	M				–	
Cause	M				–	
Criticality Diagnostics	O				YES	ignore

9.1.9 RADIO LINK DELETION REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
RL Information		1..<maxnoof RLs>			EACH	notify
RL ID	M				–	

Range bound	Explanation
MaxnoofRLs	Maximum number of radio links for one UE

9.1.10 RADIO LINK DELETION RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
Criticality Diagnostics	O				YES	ignore

9.1.11 RADIO LINK RECONFIGURATION PREPARE

9.1.11.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
Allowed Queuing Time	O				YES	reject
UL DPCH Information		0..1			YES	reject
UL Scrambling code	O				–	
Min UL Channelisation Code Length	O				–	
Max Number of UL DPDCHs	C – CodeLen				–	
Puncture Limit	O			For the UL.	–	
TFCS	O			TFCS for the UL.	–	
UL DPCCCH Slot Format	O				–	
SSDT Cell Identity Length	O				–	
S-Field Length	O				–	
Mean Bit Rate	O			For the UL.	–	
DL DPCH Information		0..1			YES	reject
TFCS	O			TFCS for the DL.	–	
DL DPCH Slot Format	O				–	
TFCI Signalling Mode	O				–	
TFCI Presence	C- SlotFormat				–	
MultiplexingPosition	O				–	
Mean Bit Rate	O			For the DL.	–	
DCHs to Modify		0..<maxnoof DCHs>			GLOBAL	reject
DCH ID	M				–	
Transport Format Set	O			For the UL.	–	
Transport Format Set	O			For the DL.	–	
Allocation/Retention Priority	O				–	
Frame Handling Priority	O				–	
UL FP Mode	O				–	
ToAWS	O				–	
ToAWE	O				–	
DCHs to Add		0..<maxnoof DCHs>			GLOBAL	reject
DCH ID	M				–	
DCH Combination Indicator	O				–	
RLC Mode	M				–	
Transport Format Set	M			For the UL.	–	
Transport Format Set	M			For the DL.	–	
BLER	M			For the UL.	–	
BLER	M			For the DL.	–	
Allocation/Retention Priority	M				–	
Frame Handling Priority	M				–	
Payload CRC Presence Indicator	M				–	
UL FP Mode	M				–	
ToAWS	M				–	
ToAWE	M				–	
DCHs to Delete		0..<maxnoof DCHs>			GLOBAL	reject
DCH ID	M				–	
RL Information		0..<maxnoof			EACH	reject

		<i>RLs></i>				
RL ID	M				–	
SSDT Indication	O				–	
SSDT Cell Identity	C - SSDTIndO N				–	

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 values 12 to 16.

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofRLs	Maximum number of RLs for a UE.

9.1.11.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
Allowed Queuing Time	O				YES	reject
Mean Bit Rate	O			For the UL	YES	reject
Mean Bit Rate	O			For the DL	YES	reject
UL CCH Information		<i>0..<maxnoof CCHs></i>			EACH	notify
CCH ID	M				–	
TFCS	O			For the UL.	–	
TFCI Coding	O				–	
Puncture Limit	O				–	
DL CCH Information		<i>0..<maxnoof CCHs></i>			EACH	notify
CCH ID	M				–	
TFCS	O			For the DL.	–	
TFCI Coding	O				–	
Puncture Limit	O				–	
DCHs to Modify		<i>0..<maxnoof DCHs></i>			GLOBAL	reject
DCH ID	M				–	
CCH Id	O			UL CCH in which the DCH is mapped.	–	
CCH Id	O			DL CCH in which the DCH is mapped	–	
Transport Format Set	O			For the UL.	–	
Transport Format Set	O			For the DL.	–	
Allocation/Retention Priority	O				–	
Frame Handling Priority	O				–	
UL FP Mode	O				–	
ToAWS	O				–	
ToAWE	O				–	
DCHs to Add		<i>0..<maxnoof DCHs></i>			GLOBAL	reject
DCH ID	M				–	
CCH Id	M			UL CCH in which the DCH is mapped.	–	
CCH Id	M			DL CCH in which the DCH is mapped	–	
DCH Combination Indicator	O				–	
RLC Mode	M				–	
Transport Format Set	M			For the UL.	–	
Transport Format Set	M			For the DL.	–	
BLER	M			For the UL.	–	
BLER	M			For the DL.	–	
Allocation/Retention Priority	M				–	
Frame Handling Priority	M				–	
Payload CRC Presence Indicator	M				–	
UL FP Mode	M				–	
ToAWS	M				–	
ToAWE	M				–	
DCHs to Delete		<i>0..<maxnoof DCHs></i>			GLOBAL	reject

DCH ID	M				–	
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Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.

9.1.12 RADIO LINK RECONFIGURATION READY

9.1.12.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
RL Information Response		<i>0..<maxnoof RLS></i>			EACH	ignore
RL ID	M				–	
Maximum Uplink Eb/No	O		Uplink Eb/No		–	
Minimum Uplink Eb/No	O		Uplink Eb/No		–	
Downlink Code Information		<i>0..<maxnoof DL Codes></i>			GLOBAL	ignore
DL Scrambling Code	M				–	
DL Channelisation Code	M				–	
DCH to be Added		<i>0..<maxnoof DCHs></i>		Only one DCH per set of co-ordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLS.	GLOBAL	ignore
DCH ID	M				–	
Binding ID	M				–	
Transport Layer Address	M				–	
DCH to be Modified		<i>0..<maxnoof DCHs></i>		Only one DCH per set of co-ordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLS.	GLOBAL	ignore
DCH ID	M				–	
Binding ID	M				–	
Transport Layer Address	M				–	
Criticality Diagnostics	O				YES	ignore

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs.
MaxnoofRLs	Maximum number of RLS for a UE.
MaxnoofDL Codes	Maximum number of Downlink Channelisation Codes.

9.1.12.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
RL Information Response		0..1			YES	ignore
RL ID	M				–	
Maximum Uplink Eb/No	O		Uplink Eb/No		–	
Minimum Uplink Eb/No	O		Uplink Eb/No		–	
UL CCTrCH Information		0..<maxnoof CCTrCHs>			GLOBAL	ignore
CCTrCH ID	M				–	
UL DPCH Information		1..<maxnoof DPCHs>			GLOBAL	ignore
DPCH ID	M				–	
TDD Channelisation Code	O				–	
Burst Type	O				–	
Midamble Shift	O				–	
Time Slot	O				–	
TDD Physical Channel Offset	O				–	
Repetition Period	O				–	
Repetition Length	O				–	
TFCI Presence	O				–	
DL CCTrCH Information		0..<maxnoof CCTrCHs>			GLOBAL	ignore
CCTrCH ID	M				–	
DL DPCH Information		1..<maxnoof DPCHs>			GLOBAL	ignore
DPCH ID	M				–	
TDD Channelisation Code	O				–	
Burst Type	O				–	
Midamble Shift	O				–	
Time Slot	O				–	
TDD Physical Channel Offset	O				–	
Repetition Period	O				–	
Repetition Length	O				–	
TFCI Presence	O				–	
DCH to be Added		0..<maxnoof DCHs>		Only one DCH per set of co-ordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLs.	GLOBAL	ignore
DCH ID	M				–	
Binding ID	M				–	
Transport Layer Address	M				–	
DCH to be Modified		0..<maxnoof DCHs>		Only one DCH per set of co-ordinated DCHs shall be included. The IE group shall be included only	GLOBAL	ignore

				once per DCH per set of combined RLS.		
DCH ID	M				–	
Binding ID	M				–	
Transport Layer Address	M				–	
Criticality Diagnostics	O				YES	ignore

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.
Maxnoof DPCHs	Maximum number of DPCHs in one CCTrCH.

9.1.13 RADIO LINK RECONFIGURATION COMMIT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
CFN	M				YES	ignore

9.1.14 RADIO LINK RECONFIGURATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
Cause	M				YES	ignore
RLs Causing Reconfiguration Failure		<i>0..<maxnoof RLS></i>			EACH	ignore
RL ID	M				–	
Cause	M				–	
Criticality Diagnostics	O				YES	ignore

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

9.1.15 RADIO LINK RECONFIGURATION CANCEL

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	

9.1.16 RADIO LINK RECONFIGURATION REQUEST

9.1.16.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
Allowed Queuing Time	O				YES	reject
UL DPCH Information		0..1			YES	reject
TFCS	O			TFCS for the UL.	–	
Mean Bit Rate	O				–	
DL DPCH Information		0..1			YES	reject
TFCS	O			TFCS for the DL.	–	
TFCI Signalling Mode	O				–	
Mean Bit Rate	O				–	
DCHs to Modify		0..<maxnoof DCHs>			GLOBAL	reject
DCH ID	M				–	
Transport Format Set	O			For the UL.	–	
Transport Format Set	O			For the DL.	–	
Allocation/Retention Priority	O				–	
Frame Handling Priority	O				–	
UL FP Mode	O				–	
ToAWS	O				–	
ToAWE	O				–	
DCHs to add		0..<maxnoof DCHs>			GLOBAL	reject
DCH ID	M				–	
DCH Combination Ind	O				–	
RLC Mode	M				–	
Transport Format Set	M			For the UL.	–	
Transport Format Set	M			For the DL.	–	
Allocation/Retention Priority	M				–	
Frame Handling Priority	M				–	
Payload CRC Presence Indicator	M				–	
UL FP mode	M				–	
ToAWS	M				–	
ToAWE	M				–	
DCHs to Delete		0..<maxnoof DCHs>			GLOBAL	reject
DCH ID	M				–	

Range Bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.

9.1.16.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
Allowed Queuing Time	O				YES	reject
Mean Bit Rate	O			For the UL	YES	reject
Mean Bit Rate	O			For the DL	YES	reject
UL CCTrCH Information		<i>0..<maxnoof CCTrCHs></i>			EACH	notify
CCTrCH ID	M				–	
TFCS	M				–	
DL CCTrCH Information		<i>0..<maxnoof CCTrCHs></i>			EACH	notify
CCTrCH ID	M				–	
TFCS	M				–	
DCHs to Modify		<i>0..<maxnoof DCHs></i>			GLOBAL	reject
DCH ID	M				–	
CCTrCH ID	O			UL CCTrCH in which the DCH is mapped.	–	
CCTrCH ID	O			DL CCTrCH in which the DCH is mapped	–	
Transport Format Set	O			For the UL.	–	
Transport Format Set	O			For the DL.	–	
Allocation/Retention Priority	O				–	
Frame Handling Priority	O				–	
UL FP Mode	O				–	
ToAWS	O				–	
ToAWE	O				–	
DCHs to Add		<i>0..<maxnoof DCHs></i>			GLOBAL	reject
DCH ID	M				–	
RLC Mode	M				–	
CCTrCH ID	M			UL CCTrCH in which the DCH is mapped.	–	
CCTrCH ID	M			DL CCTrCH in which the DCH is mapped	–	
DCH Combination Ind	O				–	
Transport Format Set	M			For the UL.	–	
Transport Format Set	M			For the DL.	–	
Allocation/Retention Priority	M				–	
Frame Handling Priority	M				–	
Payload CRC Presence Indicator	M				–	
UL FP Mode	M				–	
ToAWS	M				–	
ToAWE	M				–	
DCHs to Delete		<i>0..<maxnoof DCHs></i>			GLOBAL	reject
DCH ID	M				–	

Range Bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.

9.1.17 RADIO LINK RECONFIGURATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
RL Information Response		<i>0..<maxnoof RLS></i>			EACH	ignore
RL ID	M				–	
Maximum Uplink Eb/No	O		Uplink Eb/No		–	
Minimum Uplink Eb/No	O		Uplink Eb/No		–	
DCH to be Added		<i>0..<maxnoof DCHs></i>		Only one DCH per set of co-ordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLS.	GLOBAL	ignore
DCH ID	M				–	
Binding ID	M				–	
Transport Layer Address	M				–	
DCH to be Modified		<i>0..<maxnoof DCHs></i>		Only one DCH per set of co-ordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLS.	GLOBAL	ignore
DCH ID	M				–	
Binding ID	M				–	
Transport Layer Address	M				–	
Criticality Diagnostics	O				YES	ignore

Range Bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofRLs	Maximum number of RLS for a UE.

9.1.18 RADIO LINK FAILURE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	ignore
Transaction ID	M				–	
RL Information	M	<i>1 .. <MaxnoofRLs></i>			EACH	ignore
RL ID	M				–	
Cause	M				–	

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.

9.1.19 RADIO LINK RESTORE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	ignore
Transaction ID	M				–	
RL Information		1 .. <MaxnoofRLs>			EACH	ignore
RL ID	M				–	

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.

9.1.20 DL POWER CONTROL REQUEST [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	ignore
Transaction ID	M				–	
CHOICE <i>procedure scope</i>					YES	ignore
"ALL RL"					YES	ignore
DL Reference Power <i>"Individual RLs"</i>	M				–	
DL Reference Power Information		1..<maxnoof RLs>			GLOBAL	ignore
RL ID	M				–	
DL Reference Power	M		DL Power	The SRNS requested downlink power to be used by the downlink inner loop power control to eliminate the power drifting problem.	–	

Range Bound	Explanation
MaxnoofRLs	Maximum number of RLs for one UE.

9.1.21 PHYSICAL CHANNEL RECONFIGURATION REQUEST

9.1.21.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
RL Information		1			YES	reject
RL ID	M				–	
DL Code Information		1 .. <maxnoofDL Codes>			GLOBAL	notify
DL Scrambling Code	M				–	
FDD DL Channelisation Code Number	M				–	

Range bound	Explanation
MaxnoofDLcodes	Maximum number of DL codes for one UE

9.1.21.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
RL Information		1			YES	reject
RL ID	M				–	
UL CTrCH Information		1.. <maxnoofC CTrCHs>			GLOBAL	reject
CCTrCH ID	M				–	
UL DPCH Information		1.. <Maxnoof DPCHs>			EACH	notify
DPCH ID	M				–	
TDD Channelisation Code	O				–	
Burst Type	O				–	
Midamble Shift	O				–	
Time Slot	O				–	
TDD Physical Channel Offset	O				–	
Repetition Period	O				–	
Repetition Length	O				–	
TFCI Presence	O				–	
DL CTrCH Information		1.. <maxnoof CCTrCHs>			GLOBAL	reject
CCTrCH ID	M				–	
DL DPCH Information		1.. <Maxnoof DPCHs>			EACH	notify
DPCH ID	M				–	
TDD Channelisation Code	O				–	
Burst Type	O				–	
Midamble Shift	O				–	
Time Slot	O				–	
TDD Physical Channel Offset	O				–	
Repetition Period	O				–	
Repetition Length	O				–	
TFCI Presence	O				–	

Range bound	Explanation
MaxnoofDPCHs	Maximum no. of DPCHs for one CCTrCH.
MaxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.

9.1.22 PHYSICAL CHANNEL RECONFIGURATION COMMAND

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
CFN	M				YES	ignore
Criticality Diagnostics	O				YES	ignore

9.1.23 PHYSICAL CHANNEL RECONFIGURATION FAILURE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
Cause	M				YES	ignore
Criticality Diagnostics	O				YES	ignore

9.1.24 UPLINK SIGNALLING TRANSFER INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	ignore
Transaction ID	M				–	
UC-ID	M				YES	ignore
SAI	M				YES	ignore
C-RNTI	M				YES	ignore
S-RNTI	M				YES	ignore
D-RNTI	O				YES	ignore
L3 Information	M				YES	ignore
CN PS Domain Identifier	O				YES	ignore
CN CS Domain Identifier	O				YES	ignore
URA ID	M				YES	ignore
Multiple URAs Indicator	M				YES	ignore
RNCs with Cells in the Accessed URA		0 .. <MaxRNCin URA-1>			GLOBAL	ignore
RNC-Id	M				–	

Range bound	Explanation
MaxRNCinURA	Maximum number of RNC in one URA

9.1.25 DOWNLINK SIGNALLING TRANSFER REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	ignore
Transaction ID	M				–	
C-Id	M				YES	ignore
D-RNTI	M				YES	ignore
L3 Information	M				YES	ignore
D-RNTI Release Indication	M				YES	ignore

9.1.26 RELOCATION COMMIT

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	ignore
Transaction ID	M				–	
D-RNTI	O				YES	ignore
RANAP Relocation Information	O				YES	ignore

9.1.27 PAGING REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	ignore
Transaction ID	M				–	
CHOICE <i>paging area</i>					YES	ignore
"URA"					YES	ignore
URA-Id	M				–	
"Cell"					YES	ignore
C-Id	M				–	
SRNC-Id	M		RNC-Id		YES	ignore
S-RNTI	M				YES	ignore
DRX Parameter	M				YES	ignore

9.1.28 DEDICATED MEASUREMENT INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction Id	M				–	
Measurement Id	M				YES	reject
Dedicated Measurement Object Type	M				YES	reject
CHOICE <i>Dedicated Measurement Object Type</i>					YES	ignore
"RL"					YES	reject
RL Information		<i>1..<maxnoof RLs></i>			EACH	reject
RL-id	M				–	
DPCH Id	O				–	
Dedicated Measurement Type	M				YES	reject
Measurement Characteristics	M				YES	reject
Report Characteristics	M				YES	reject

Range bound	Explanation
MaxnoofRLs	Maximum number of individual RLs a measurement can be started on.

9.1.29 DEDICATED MEASUREMENT INITIATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction Id	M			Are both transaction id and Measurement id needed ?	–	
Measurement Id	M				YES	ignore
CHOICE <i>Dedicated Measurement Object Type</i>				Dedicated Measurement Object Type the measurement was initiated with	YES	ignore
"RL"					YES	ignore
RL Information		<i>1..<maxnoof RLS></i>			EACH	ignore
RL-id	M				–	
DPCH Id	O				–	
Dedicated Measurement Value	M				–	
"ALLRL"					YES	ignore
Dedicated Measurement Value	M				–	
CFN	O			Dedicated Measurement Time Reference	YES	ignore
Criticality Diagnostics	O				YES	ignore

Range bound	Explanation
MaxnoofRLs	Maximum number of individual RLS the measurement can be started on.

9.1.30 DEDICATED MEASUREMENT INITIATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction Id	M				–	
Measurement Id	M				YES	ignore
Cause	M				YES	ignore
Criticality Diagnostics	O				YES	ignore

9.1.31 DEDICATED MEASUREMENT REPORT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	ignore
Transaction Id	M				–	
Measurement Id	M				YES	ignore
CHOICE <i>Dedicated Measurement Object Type</i>				Dedicated Measurement Object Type the measurement was initiated with	YES	ignore
"RL"						
RL Information		1..<maxnoof RLs>			EACH	ignore
RL-Id	M				–	
DPCH Id	O				–	
Dedicated Measurement Value	M				–	
"ALLRL"					YES	ignore
Dedicated Measurement Value	M				–	
CFN	O			Dedicated Measurement Time Reference	YES	ignore

Range bound	Explanation
MaxnoofRLs	Maximum number of individual RLs the measurement can be started on.

9.1.32 DEDICATED MEASUREMENT TERMINATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	ignore
Transaction Id	M				–	
Measurement Id	M				YES	ignore

9.1.33 DEDICATED MEASUREMENT FAILURE INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	ignore
Transaction Id	M				–	
Measurement Id	M				YES	ignore
Cause	M				YES	ignore

9.1.34 COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	ignore
Transaction ID	M				–	
D-RNTI	M				YES	ignore
C-RNTI	O			Release of an individual C-RNTI.	YES	ignore

9.1.35 COMMON TRANSPORT CHANNEL RESOURCES REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
D-RNTI	M				YES	reject
Transport Bearer Request Indicator	M			Request a new transport bearer or to use an existing bearer for the user plane.	YES	reject
Transport Bearer ID	M			Indicates the lur transport bearer to be used for the user plane.	YES	reject

9.1.36 COMMON TRANSPORT CHANNEL RESOURCES RESPONSE

9.1.36.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
S-RNTI	M				YES	ignore
FACH Info for S-CCPCH coupled to PRACH					YES	ignore
Priority Indicator & Initial Window Size		1..16		Provide Information for each priority class used	GLOBAL	ignore
FACH Priority Indicator	M				–	
MAC-c SDU Length		1..<MaxNbMACcSDULength>			GLOBAL	ignore
MAC-c SDU Length	M				–	
FACH Initial Window Size	M				–	
FACH Info for optional S-CCPCH	O				YES	ignore
FDD S-CCPCH Offset	M			Corresponds to: $\tau_{S-CCPCH,k}$, see ref. [6]	–	
DL Scrambling Code	M				–	
FDD DL Channelisation Code Number	M				–	
TFCS	M			For the DL.	–	
Secondary CCPCH Slot Format	M				–	
Pilot Bits Used Indicator	M				–	
MultiplexingPosition	M				–	
STTD Indicator	M				–	
Priority Indicator & Initial Window Size		1..16		Provide Information for each priority class used	GLOBAL	ignore
FACH Priority Indicator	M				–	
Data Frame Size		1..<MaxNbMACcSDULength>			GLOBAL	ignore
.....MAC-c SDU Length	M				–	
FACH Initial Window Size	M				–	
Transport Layer Address	O				YES	ignore
Binding Identity	O				YES	ignore
Criticality Diagnostics	O				YES	ignore

Range Bound	Explanation
MaxNbMACcSDULength	Maximum number of different MAC-c SDU Lengths.

9.1.36.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
S-RNTI	M				YES	ignore
FACH Info for S-CCPCHs coupled to PRACH		0..1			YES	ignore
Priority Indicator & Initial Window Size		1..16		Provide Information for each priority class used	GLOBAL	ignore
FACH Priority Indicator	M				–	
MAC-c SDU Length		1..<MaxNbMACcSDULength>			GLOBAL	ignore
MAC-c SDU Length	M				–	
FACH Initial Window Size	M				–	
FACH Info for optional group of S-CCPCHs		0..1			YES	ignore
TFCS	M			For DL CCTrCH supporting several Secondary CCPCHs	–	
Secondary CCPCH	M	1..<MaxnoofSCCPCHs>			GLOBAL	ignore
TDD Channelisation Code	M				–	
Time Slot	M				–	
Burst Type	M				–	
Midamble shift	M				–	
TDD Physical Channel Offset	M				–	
Repetition Period	M				–	
Repetition Length	M				–	
STTD Indicator	M				–	
Priority Indicator & Initial Window Size		1..16		Provide Information for each priority class used	GLOBAL	ignore
FACH Priority Indicator	M				–	
Data Frame Size		1..<MaxNbMACcSDULength>			GLOBAL	ignore
.....MAC-c SDU Length	M				–	
FACH Initial Window Size	M				–	
Transport Layer Address	O				YES	ignore
Binding Identity	O				YES	ignore
Criticality Diagnostics	O				YES	ignore

Range Bound	Explanation
MaxNbMACcSDULength	Maximum number of different MAC-c SDU Lengths.
MaxnoofSCCPCHs	TBD

9.1.37 COMMON TRANSPORT CHANNEL RESOURCES FAILURE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
S-RNTI	M				YES	ignore
Cause	M				YES	ignore
Criticality Diagnostics	O				YES	ignore

9.1.38 COMPRESSED MODE PREPARE [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type					YES	reject
Transaction ID					–	
TGP1	M		Gap Period	Applies only to the first and all the subsequent odd gaps if TGP2 is present, see ref. [9].	YES	reject
TGP2	O		Gap Period		YES	reject
TGL	M				YES	reject
TGD	M				YES	reject
PD	M				YES	reject
UL/DL Compressed Mode Selection	M				YES	reject
Compressed Mode Method	M				YES	reject
Gap Position Mode	M				YES	reject
SN	C-Flex				YES	reject
Downlink Frame Type	M				YES	reject
Scrambling Code Change	C-SF/2				YES	reject
Power Control Mode	M				YES	reject
Power Resume Mode	M				YES	reject
Uplink Delta Eb/No	M				YES	reject
Uplink Delta Eb/No After	M				YES	reject

Condition	Explanation
Flex	This IE is present only if "Gap position Mode" equals to 'flexible'.
SF/2	This IE is present only if Compressed Mode Method equals to SF/2

9.1.39 COMPRESSED MODE READY [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
Criticality Diagnostics	O				YES	ignore

9.1.40 COMPRESSED MODE FAILURE [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
Cause	M				YES	ignore
Criticality Diagnostics	O				YES	ignore

9.1.41 COMPRESSED MODE COMMIT [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	ignore
Transaction ID	M				–	
CFN	M				YES	ignore

9.1.42 COMPRESSED MODE CANCEL [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M				YES	ignore
Transaction ID	M				–	

9.1.43 ERROR INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	ignore
Transaction Id	M				–	
Cause	C_ifalone				YES	ignore
Criticality Diagnostics	C_ifalone				YES	ignore

Condition	Explanation
C_ifalone	At least either of Cause IE or Criticality Diagnostics IE shall be present.


```
9.3.2 Elementary Procedure Definitions
-- *****
--
-- Elementary Procedure definitions
--
-- *****

RNSAP-PDU-Descriptions -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    Criticality,
    ProcedureID,
    TransactionID
FROM RNSAP-CommonDataTypes

    CommonTransportChannelResourcesFailure,
    CommonTransportChannelResourcesRequest,
    CommonTransportChannelResourcesReleaseRequest,
    CommonTransportChannelResourcesResponseFDD,
    CommonTransportChannelResourcesResponseTDD,
    CompressedModeCancel,
    CompressedModeCommit,
    CompressedModeFailure,
    CompressedModePrepare,
    CompressedModeReady,
    DedicatedMeasurementFailureIndication,
    DedicatedMeasurementInitiationFailure,
    DedicatedMeasurementInitiationRequest,
    DedicatedMeasurementInitiationResponse,
    DedicatedMeasurementReport,
    DedicatedMeasurementTerminationRequest,
    DL-PowerControlRequest,
    DownlinkSignallingTransferRequest,
    ErrorIndication,
    PagingRequest,
    PhysicalChannelReconfigurationCommand,
    PhysicalChannelReconfigurationFailure,
    PhysicalChannelReconfigurationRequestFDD,
    PhysicalChannelReconfigurationRequestTDD,
    PrivateMessage,
    RadioLinkAdditionFailureFDD,
    RadioLinkAdditionFailureTDD,
```

RadioLinkAdditionRequestFDD,
RadioLinkAdditionRequestTDD,
RadioLinkAdditionResponseFDD,
RadioLinkAdditionResponseTDD,
RadioLinkDeletionRequest,
RadioLinkDeletionResponse,
RadioLinkFailureIndication,
RadioLinkReconfigurationCancel,
RadioLinkReconfigurationCommit,
RadioLinkReconfigurationFailure,
RadioLinkReconfigurationPrepareFDD,
RadioLinkReconfigurationPrepareTDD,
RadioLinkReconfigurationReadyFDD,
RadioLinkReconfigurationReadyTDD,
RadioLinkReconfigurationRequestFDD,
RadioLinkReconfigurationRequestTDD,
RadioLinkReconfigurationResponseFDD,
RadioLinkReconfigurationResponseTDD,
RadioLinkRestoreIndication,
RadioLinkSetupFailureFDD,
RadioLinkSetupFailureTDD,
RadioLinkSetupRequestFDD,
RadioLinkSetupRequestTDD,
RadioLinkSetupResponseFDD,
RadioLinkSetupResponseTDD,
RelocationCommit,
UplinkSignallingTransferIndication

FROM RNSAP-PDU-Contents

id-commonTransportChannelResourcesInitiationFDD,
id-commonTransportChannelResourcesInitiationTDD,
id-commonTransportChannelResourcesRelease,
id-compressedModeCancellationFDD,
id-compressedModeCommitFDD,
id-compressedModePrepareFDD,
id-downlinkPowerControl,
id-downlinkSignallingTransfer,
id-errorIndication,
id-measurementFailure,
id-measurementInitiation,
id-measurementReporting,
id-measurementTermination,
id-pagingRequest,
id-physicalChannelReconfiguration,
id-privateMessage,
id-radioLinkAddition,
id-radioLinkDeletion,
id-radioLinkFailure,
id-radioLinkRestoration,
id-radioLinkSetup,
id-srnsRelocationCommit,

```

    id-synchronisedRadioLinkReconfigurationCancellation,
    id-synchronisedRadioLinkReconfigurationCommit,
    id-synchronisedRadioLinkReconfigurationPrepare,
    id-unSynchronisedRadioLinkReconfiguration,
    id-uplinkSignallingTransfer
FROM RNSAP-Constants;

-- *****
--
-- Interface Elementary Procedure Class
--
-- *****

RNSAP-ELEMENTARY-PROCEDURE ::= CLASS {
    &InitiatingMessage          ,
    &SuccessfulOutcome          OPTIONAL,
    &UnsuccessfulOutcome        OPTIONAL,
    &Outcome                    OPTIONAL,
    &procedureID                ProcedureID  UNIQUE,
    &criticality                Criticality   DEFAULT ignore
}
WITH SYNTAX {
    INITIATING MESSAGE          &InitiatingMessage
    [SUCCESSFUL OUTCOME         &SuccessfulOutcome]
    [UNSUCCESSFUL OUTCOME       &UnsuccessfulOutcome]
    [OUTCOME                    &Outcome]
    PROCEDURE ID                &procedureID
    [CRITICALITY                &criticality]
}

-- *****
--
-- Interface PDU Definition
--
-- *****

RNSAP-PDU ::= CHOICE {
    initiatingMessage  InitiatingMessage,
    succesfulOutcome  SuccessfulOutcome,
    unsuccessfulOutcome UnsuccessfulOutcome,
    outcome            Outcome,
    ...
}

InitiatingMessage ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID    ( {RNSAP-ELEMENTARY-PROCEDURES} ),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID TransactionID,
    value        RNSAP-ELEMENTARY-PROCEDURE.&InitiatingMessage  ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}

```

```
SuccessfulOutcome ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ( {RNSAP-ELEMENTARY-PROCEDURES} ),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID TransactionID,
    value       RNSAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}
```

```
UnsuccessfulOutcome ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ( {RNSAP-ELEMENTARY-PROCEDURES} ),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID TransactionID,
    value       RNSAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}
```

```
Outcome ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ( {RNSAP-ELEMENTARY-PROCEDURES} ),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID TransactionID,
    value       RNSAP-ELEMENTARY-PROCEDURE.&Outcome          ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}
```

```
-- *****
--
-- Interface Elementary Procedure List
--
-- *****
```

```
RNSAP-ELEMENTARY-PROCEDURES RNSAP-ELEMENTARY-PROCEDURE ::= {
    RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 |
    RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 |
    RNSAP-ELEMENTARY-PROCEDURES-CLASS-3 |
    ...
}
```

```
RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 RNSAP-ELEMENTARY-PROCEDURE ::= {
    radioLinkSetupFDD |
    radioLinkSetupTDD |
    radioLinkAdditionFDD |
    radioLinkAdditionTDD |
    radioLinkDeletion |
    synchronisedRadioLinkReconfigurationPreparationFDD |
    synchronisedRadioLinkReconfigurationPreparationTDD |
    unSynchronisedRadioLinkReconfigurationFDD |
    unSynchronisedRadioLinkReconfigurationTDD |
    physicalChannelReconfigurationFDD |
    physicalChannelReconfigurationTDD |
    measurementInitiation |
    compressedModePreparationFDD |
    commonTransportChannelResourcesInitiationFDD |
    commonTransportChannelResourcesInitiationTDD |
    ...
}
```

```

}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 RNSAP-ELEMENTARY-PROCEDURE ::= {
    uplinkSignallingTransfer          |
    downlinkSignallingTransfer        |
    srnsRelocationCommit              |
    paging                            |
    synchronisedRadioLinkReconfigurationCommit |
    synchronisedRadioLinkReconfigurationCancellation |
    radioLinkFailure                  |
    radioLinkRestoration              |
    measurementReporting              |
    measurementTermination            |
    measurementFailure                |
    downlinkPowerControlFDD           |
    compressedModeCommitFDD          |
    compressedModeCancellationFDD    |
    commonTransportChannelResourcesRelease |
    errorIndication                  |
    privateMessage                    |
    ...
}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-3 RNSAP-ELEMENTARY-PROCEDURE ::= {
    ...
}

-- *****
--
-- Interface Elementary Procedures
--
-- *****

radioLinkSetupFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkSetupRequestFDD
    SUCCESSFUL OUTCOME  RadioLinkSetupResponseFDD
    UNSUCCESSFUL OUTCOME RadioLinkSetupFailureFDD
    PROCEDURE ID       { procedureCode id-radioLinkSetup, ddMode fdd }
    CRITICALITY        reject
}

radioLinkSetupTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkSetupRequestTDD
    SUCCESSFUL OUTCOME  RadioLinkSetupResponseTDD
    UNSUCCESSFUL OUTCOME RadioLinkSetupFailureTDD
    PROCEDURE ID       { procedureCode id-radioLinkSetup, ddMode tdd }
    CRITICALITY        reject
}

radioLinkAdditionFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkAdditionRequestFDD

```

```

    SUCCESSFUL OUTCOME RadioLinkAdditionResponseFDD
    UNSUCCESSFUL OUTCOME RadioLinkAdditionFailureFDD
    PROCEDURE ID { procedureCode id-radioLinkAddition , ddMode fdd }
    CRITICALITY reject
}

radioLinkAdditionTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkAdditionRequestTDD
    SUCCESSFUL OUTCOME RadioLinkAdditionResponseTDD
    UNSUCCESSFUL OUTCOME RadioLinkAdditionFailureTDD
    PROCEDURE ID { procedureCode id-radioLinkAddition , ddMode tdd }
    CRITICALITY reject
}

radioLinkDeletion RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkDeletionRequest
    SUCCESSFUL OUTCOME RadioLinkDeletionResponse
    PROCEDURE ID { procedureCode id-radioLinkDeletion, ddMode common }
    CRITICALITY reject
}

synchronisedRadioLinkReconfigurationPreparationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkReconfigurationPrepareFDD
    SUCCESSFUL OUTCOME RadioLinkReconfigurationReadyFDD
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    PROCEDURE ID { procedureCode id-synchronisedRadioLinkReconfigurationPrepare, ddMode fdd }
    CRITICALITY reject
}

synchronisedRadioLinkReconfigurationPreparationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkReconfigurationPrepareTDD
    SUCCESSFUL OUTCOME RadioLinkReconfigurationReadyTDD
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    PROCEDURE ID { procedureCode id-synchronisedRadioLinkReconfigurationPrepare, ddMode tdd }
    CRITICALITY reject
}

unSynchronisedRadioLinkReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkReconfigurationRequestFDD
    SUCCESSFUL OUTCOME RadioLinkReconfigurationResponseFDD
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    PROCEDURE ID { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode fdd }
    CRITICALITY reject
}

unSynchronisedRadioLinkReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkReconfigurationRequestTDD
    SUCCESSFUL OUTCOME RadioLinkReconfigurationResponseTDD
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    PROCEDURE ID { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode tdd }
    CRITICALITY reject
}

```

```
}  
  
physicalChannelReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE PhysicalChannelReconfigurationRequestFDD  
    SUCCESSFUL OUTCOME PhysicalChannelReconfigurationCommand  
    UNSUCCESSFUL OUTCOME PhysicalChannelReconfigurationFailure  
    PROCEDURE ID { procedureCode id-physicalChannelReconfiguration, ddMode fdd }  
    CRITICALITY reject  
}  
  
physicalChannelReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE PhysicalChannelReconfigurationRequestTDD  
    SUCCESSFUL OUTCOME PhysicalChannelReconfigurationCommand  
    UNSUCCESSFUL OUTCOME PhysicalChannelReconfigurationFailure  
    PROCEDURE ID { procedureCode id-physicalChannelReconfiguration, ddMode tdd }  
    CRITICALITY reject  
}  
  
measurementInitiation RNSAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE DedicatedMeasurementInitiationRequest  
    SUCCESSFUL OUTCOME DedicatedMeasurementInitiationResponse  
    UNSUCCESSFUL OUTCOME DedicatedMeasurementInitiationFailure  
    PROCEDURE ID { procedureCode id-measurementInitiation, ddMode common }  
    CRITICALITY reject  
}  
  
compressedModePreparationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE CompressedModePrepare  
    SUCCESSFUL OUTCOME CompressedModeReady  
    UNSUCCESSFUL OUTCOME CompressedModeFailure  
    PROCEDURE ID { procedureCode id-compressedModePrepareFDD, ddMode fdd }  
    CRITICALITY reject  
}  
  
commonTransportChannelResourcesInitiationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE CommonTransportChannelResourcesRequest  
    SUCCESSFUL OUTCOME CommonTransportChannelResourcesResponseFDD  
    UNSUCCESSFUL OUTCOME CommonTransportChannelResourcesFailure  
    PROCEDURE ID { procedureCode id-commonTransportChannelResourcesInitiationFDD, ddMode common }  
    CRITICALITY reject  
}  
  
commonTransportChannelResourcesInitiationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE CommonTransportChannelResourcesRequest  
    SUCCESSFUL OUTCOME CommonTransportChannelResourcesResponseTDD  
    UNSUCCESSFUL OUTCOME CommonTransportChannelResourcesFailure  
    PROCEDURE ID { procedureCode id-commonTransportChannelResourcesInitiationTDD, ddMode common }  
    CRITICALITY reject  
}  
  
uplinkSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
```

```
INITIATING MESSAGE UplinkSignallingTransferIndication
PROCEDURE ID       { procedureCode id-uplinkSignallingTransfer, ddMode common }
CRITICALITY       ignore
}

downlinkSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DownlinkSignallingTransferRequest
  PROCEDURE ID       { procedureCode id-downlinkSignallingTransfer, ddMode common }
  CRITICALITY       ignore
}

srnsRelocationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RelocationCommit
  PROCEDURE ID       { procedureCode id-srnsRelocationCommit, ddMode common }
  CRITICALITY       ignore
}

paging RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE PagingRequest
  PROCEDURE ID       { procedureCode id-pagingRequest, ddMode common }
  CRITICALITY       ignore
}

synchronisedRadioLinkReconfigurationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkReconfigurationCommit
  PROCEDURE ID       { procedureCode id-synchronisedRadioLinkReconfigurationCommit, ddMode common }
  CRITICALITY       ignore
}

synchronisedRadioLinkReconfigurationCancellation RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkReconfigurationCancel
  PROCEDURE ID       { procedureCode id-synchronisedRadioLinkReconfigurationCancellation, ddMode common }
  CRITICALITY       ignore
}

radioLinkFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkFailureIndication
  PROCEDURE ID       { procedureCode id-radioLinkFailure, ddMode common }
  CRITICALITY       ignore
}

radioLinkRestoration RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkRestoreIndication
  PROCEDURE ID       { procedureCode id-radioLinkRestoration, ddMode common }
  CRITICALITY       ignore
}

measurementReporting RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DedicatedMeasurementReport
  PROCEDURE ID       { procedureCode id-measurementReporting, ddMode common }
  CRITICALITY       ignore
}
```



```
}

measurementTermination RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE DedicatedMeasurementTerminationRequest
    PROCEDURE ID       { procedureCode id-measurementTermination, ddMode common }
    CRITICALITY        ignore
}

measurementFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE DedicatedMeasurementFailureIndication
    PROCEDURE ID       { procedureCode id-measurementFailure, ddMode common }
    CRITICALITY        ignore
}

downlinkPowerControlFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE DL-PowerControlRequest
    PROCEDURE ID       { procedureCode id-downlinkPowerControl, ddMode fdd }
    CRITICALITY        ignore
}

compressedModeCommitFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE CompressedModeCommit
    PROCEDURE ID       { procedureCode id-compressedModeCommitFDD, ddMode fdd }
    CRITICALITY        ignore
}

compressedModeCancellationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE CompressedModeCancel
    PROCEDURE ID       { procedureCode id-compressedModeCancellationFDD, ddMode fdd }
    CRITICALITY        ignore
}

commonTransportChannelResourcesRelease RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE CommonTransportChannelResourcesReleaseRequest
    PROCEDURE ID       { procedureCode id-commonTransportChannelResourcesRelease, ddMode common }
    CRITICALITY        ignore
}

errorIndication RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE ErrorIndication
    PROCEDURE ID       { procedureCode id-errorIndication, ddMode common }
    CRITICALITY        ignore
}

privateMessage RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE PrivateMessage
    PROCEDURE ID       { procedureCode id-privateMessage, ddMode common }
    CRITICALITY        ignore
}

END
```

```
9.3.3 PDU Definitions
-- *****
--
-- PDU definitions for RNSAP.
--
-- *****

RNSAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    AllocationRetentionPriority,
    AllowedQueuingTime,
    BLER,
    BindingID,
    BurstType,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CPICH-EcIo,
    CPICH-Power,
    Cause,
    CellParameterID,
    ChipOffset,
    CompressedModeMethod,
    CriticalityDiagnostics,
    D-FieldLength,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-CombinationInd,
    DCH-ID,
    DL-ChannelisationCode,
    DL-DPCCH-SlotFormat,
    DL-DPCH-SlotNumber,
    DL-EbNo,
    DL-EbNoTarget,
    DL-FrameType,
    DL-Power,
    DL-ScramblingCode,
    DPCH-ID,
```

DRX-Parameter,
DedicatedMeasurementValue,
DiversityControlField,
DiversityMode,
FACH-DataFrameSize,
FACH-InitialWindowSize,
FACH-PriorityIndicator,
FDD-DL-ChannelisationCodeNumber,
FDD-S-CCPCH-Offset,
FrameHandlingPriority,
FrameOffset,
GapPeriod,
GapPositionMode,
L3-Information,
MAC-c-SDU-Length,
MaxNrOfUL-DPCHs,
MeanBitRate,
MeasurementCharacteristics,
MeasurementID,
MidambleShift,
MinUL-ChannelisationCodeLength,
MultipleURAsIndicator,
MultiplexingPosition,
Offset,
PD,
PSCH-PCCPCH-TimeSlot,
PSCH-TimeSlot,
PayloadCRC-PresenceIndicator,
PilotBitsUsedIndicator,
PowerControlMode,
PowerOffset,
PowerResumeMode,
PrimaryCCPCH-RSCP,
PrimaryCPICH-EcNo,
PrimaryCPICH-Power,
PrimaryScramblingCode,
PropagationDelay,
PunctureLimit,
RANAP-RelocationInformation,
RL-ID,
RLC-Mode,
RNC-ID,
RepetitionLength,
RepetitionPeriod,
ReportCharacteristics,
S-FieldLength,
S-RNTI,
SAI,
SN,
SRNC-ID,
SSDT-CellID,

```
SSDT-CellID-Length,  
SSDT-Indication,  
SSDT-SupportIndicator,  
ScaledUL-InterferenceLevel,  
ScramblingCode,  
ScramblingCodeChange,  
SecondaryCCPCH-SlotFormat,  
SyncCase,  
TDD-ChannelisationCode,  
TDD-PhysicalChannelOffset,  
TFCI-Coding,  
TFCI-Presence,  
TFCI-SignallingMode,  
TGD,  
TGL,  
TPC-StepSize,  
TimeSlot,  
ToAWE,  
ToAWS,  
TransportBearerID,  
TransportBearerRequestIndicator,  
TransportFormatCombinationSet,  
TransportFormatSet,  
TransportLayerAddress,  
UARFCN,  
UC-ID,  
UL-DL-CompressedModeSelection,  
UL-DPCCH-SlotFormat,  
UL-EbNo,  
UL-EbNoTarget,  
UL-FP-Mode,  
UL-ScramblingCode,  
URA-ID  
FROM RNSAP-IEs  
  
PrivateExtensionContainer{ },  
ProtocolExtensionContainer{ },  
ProtocolIE-ContainerList{ },  
-- ProtocolIE-ContainerPair{ },  
-- ProtocolIE-ContainerPairList{ },  
ProtocolIE-Container{ },  
RNSAP-PRIVATE-EXTENSION,  
RNSAP-PROTOCOL-EXTENSION,  
RNSAP-PROTOCOL-IES,  
RNSAP-PROTOCOL-IES-PAIR  
FROM RNSAP-Containers  
  
maxNoOfDL-Codes,  
maxNrOfCCTrCHs,  
maxNrOfDCHs,  
maxNrOfDL-Codes,
```

maxNrOfDPCHs,
maxNrOfFACH-FD-Size,
maxNrOfFDD-Neighbours,
maxNrOfMACcSDU-Length,
maxNrOfTDD-Neighbours,
maxNrOfRLs,
maxNrOfSCCPCHs,
maxRNCinURA,

id-AllowedQueuingTime,
id-AllRLsItem-DL-PC-Rqst,
id-ALLRLItem-DM-Rprt,
id-ALLRLItem-DM-Rspns,
id-BindingID,
id-C-ID,
id-C-RNTI,
id-CCTrCH-ID,
id-CFN,
id-CN-CS-DomainIdentifier,
id-CN-PS-DomainIdentifier,
id-Cause,
id-CombiningItem-RL-AdditionFailureFDD,
id-CombiningItem-RL-AdditionRspFDD,
id-CombiningItem-RL-AdditionRspTDD,
id-CombiningItem-RL-SetupFailureFDD,
id-CombiningItem-RL-SetupRspFDD,
id-CompressedModeMethod,
id-CriticalityDiagnostics,
id-D-RNTI,
id-D-RNTI-ReleaseIndication,
id-DCH-AddListIE,
id-DCH-AddItem-RL-ReconfPrepTDD,
id-DCH-AddItem-RL-ReconfReadyFDD,
id-DCH-AddItem-RL-ReconfRqstTDD,
id-DCH-AddListItem-RL-ReconfReadyFDD,
id-DCH-AddListItem-RL-ReconfRsp,
id-DCH-AddList-RL-ReconfPrepFDD,
id-DCH-AddList-RL-ReconfPrepTDD,
id-DCH-AddList-RL-ReconfRqstFDD,
id-DCH-AddList-RL-ReconfRqstTDD,
id-DCH-DeleteItem-RL-ReconfPrepTDD,
id-DCH-DeleteItem-RL-ReconfRqstFDD,
id-DCH-DeleteItem-RL-ReconfRqstTDD,
id-DCH-DeleteList-RL-ReconfPrepFDD,
id-DCH-DeleteList-RL-ReconfPrepTDD,
id-DCH-DeleteList-RL-ReconfRqstFDD,
id-DCH-DeleteList-RL-ReconfRqstTDD,
id-DCH-Information-RL-SetupReqFDD,
id-DCH-InformationItem-RL-SetupReqTDD,
id-DCH-InformationList-RL-SetupReqTDD,
id-DCH-InformationResponseListIE-RL-SetupRspTDD,

id-DCH-ModifyListIE,
id-DCH-ModifyItem-RL-ReconfPrepTDD,
id-DCH-ModifyItem-RL-ReconfReadyFDD,
id-DCH-ModifyItem-RL-ReconfRqstTDD,
id-DCH-ModifyListItem-RL-ReconfReadyFDD,
id-DCH-ModifyListItem-RL-ReconfRsp,
id-DCH-ModifyList-RL-ReconfPrepFDD,
id-DCH-ModifyList-RL-ReconfPrepTDD,
id-DCH-ModifyList-RL-ReconfRqstFDD,
id-DCH-ModifyList-RL-ReconfRqstTDD,
id-DL-CCTrCH-Information-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationIE-RL-AdditionRspTDD,
id-DL-CCTrCH-InformationIE-RL-SetupRspTDD,
id-DL-CCTrCH-InformationItem-RL-ReconfRqstTDD,
id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD,
id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD,
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD,
id-DL-CCTrCH-InformationItem-RL-SetupReqTDD,
id-DL-CCTrCH-InformationList-RL-SetupReqTDD,
id-DL-CodeInformationListItem-PhyChReconfRqstFDD,
id-DL-CodeInformationListItem-RL-AdditionFailureFDD,
id-DL-CodeInformationListItem-RL-AdditionRspFDD,
id-DL-CodeInformationListItem-RL-ReconfReadyFDD,
id-DL-CodeInformationListItem-RL-SetupFailureFDD,
id-DL-DPCH-Information,
id-DL-DPCH-Information-RL-SetupReqFDD,
id-DL-DPCH-InformationItem-RL-SetupRspTDD,
id-DL-DPCH-InformationItem-RL-AdditionRspTDD,
id-DL-DPCH-InformationItem-PhyChReconfRqstTDD,
id-DL-DPCH-InformationListIE-RL-ReconfReadyTDD,
id-DL-DPCH-InformationList-PhyChReconfRqstTDD,
id-DL-DPCH-InformationList-RL-ReconfReadyTDD,
id-DL-EbNoTarget,
id-DL-FrameType,
id-DL-MeanBitRate,
id-DL-ReferencePowerInformationListItem-DL-PC-Rqst,
id-DRX-Parameter,
id-DataFrameSizeListItem,
id-DedicatedMeasurementObjectType-DM-Rprrt,
id-DedicatedMeasurementObjectType-DM-Rqst,
id-DedicatedMeasurementObjectType-DM-Rspns,
id-DiversityIndicationItem-RL-AdditionRspTDD,
id-FACH-InfoForOptionalGroupS-CCPCH,
id-FACH-InfoForOptionals-CCPCH-FDD,
id-FACH-InfoForOptionalGroupS-CCPCH-CTCRRsp-TDD,
id-FACH-InfoForS-CCPCH-CoupledToPRACH,
id-GapPositionMode,
id-IndividualRLsItem-DL-PC-Rqst,
id-L3-Information,
id-MAC-c-SDU-LengthListItem,

id-MeasurementCharacteristics,
id-MeasurementID,
id-MultipleURAsIndicator,
id-NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD,
id-NeighbouringFDD-CellInformationItem-RL-AdditionRsp,
id-NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD,
id-NeighbouringFDD-CellInformationItem-RL-SetupRsp,
id-NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD,
id-NeighbouringTDD-CellInformationItem-RL-AdditionRsp,
id-NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD,
id-NeighbouringTDD-CellInformationItem-RL-SetupRsp,
id-NonCombiningItem-RL-AdditionRspTDD,
id-NonCombiningOrIENotPresentItem-RL-AdditionFailureFDD,
id-NonCombiningOrIENotPresentItem-RL-AdditionRspFDD,
id-NonCombiningOrIENotPresentItem-RL-SetupFailureFDD,
id-NonCombiningOrIENotPresentItem-RL-SetupRspFDD,
id-PD,
id-PagingArea-PagingRqst,
id-PowerControlMode,
id-PowerResumeMode,
id-PriorityIndicatorAndInitialWindowSizeListIE,
id-PriorityIndicatorAndInitialWindowSizeList2IE,
id-ProcedureScope-DL-PC-Rqst,
id-RANAP-RelocationInformation,
id-RL-Information-PhyChReconfRqstFDD,
id-RL-Information-PhyChReconfRqstTDD,
id-RL-Information-RL-AdditionRqstFDD,
id-RL-Information-RL-AdditionRqstTDD,
id-RL-Information-RL-DeletionRqst,
id-RL-Information-RL-FailureInd,
id-RL-Information-RL-ReconfPrepFDD,
id-RL-Information-RL-RestoreInd,
id-RL-Information-RL-SetupReqFDD,
id-RL-Information-RL-SetupReqTDD,
id-RL-InformationItem-DM-Rprt,
id-RL-InformationItem-DM-Rqst,
id-RL-InformationItem-DM-Rspns,
id-RL-InformationItem-RL-SetupReqFDD,
id-RL-InformationList-RL-AdditionRqstFDD,
id-RL-InformationList-RL-DeletionRqst,
id-RL-InformationList-RL-FailureInd,
id-RL-InformationList-RL-ReconfPrepFDD,
id-RL-InformationList-RL-RestoreInd,
id-RL-InformationResponse-RL-AdditionRspTDD,
id-RL-InformationResponse-RL-ReconfReadyTDD,
id-RL-InformationResponse-RL-SetupRspTDD,
id-RL-InformationResponseItem-RL-AdditionRspFDD,
id-RL-InformationResponseItem-RL-ReconfReadyFDD,
id-RL-InformationResponseItem-RL-ReconfRsp,
id-RL-InformationResponseItem-RL-SetupRspFDD,
id-RL-InformationResponseList-RL-AdditionRspFDD,

id-RL-InformationResponseList-RL-ReconfReadyFDD,
id-RL-InformationResponseList-RL-ReconfRsp,
id-RL-InformationResponseList-RL-SetupRspFDD,
id-RL-ReconfigurationFailure-RL-ReconfFail,
id-RL-ReconfigurationFailureList-RL-ReconfFail,
id-RLsItem-DM-Rprt,
id-RLsItem-DM-Rqst,
id-RLsItem-DM-Rspns,
id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind,
id-ReportCharacteristics,
id-S-RNTI,
id-SAI,
id-SN,
id-SRNC-ID,
id-ScramblingCodeChange,
id-SecondaryCCPCH-ListIE-CTCRRsp-TDD,
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
id-TGD,
id-TGL,
id-TGP1,
id-TGP2,
id-TransportBearerID,
id-TransportBearerRequestIndicator,
id-TransportLayerAddress,
id-UC-ID,
id-UL-CCTrCH-InformationIE-RL-SetupRspTDD,
id-UL-CCTrCH-InformationIE-RL-AdditionRspTDD,
id-UL-CCTrCH-InformationItem-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationItem-RL-SetupReqTDD,
id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD,
id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD,
id-UL-CCTrCH-InformationList-RL-SetupReqTDD,
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD,
id-UL-CCTrCH-Information-RL-ReconfPrepTDD, id-UL-DL-CompressedModeSelection,
id-UL-DPCH-Information,
id-UL-DPCH-Information-RL-SetupReqFDD,
id-UL-DPCH-InformationItem-RL-SetupRspTDD,
id-UL-DPCH-InformationItem-RL-AdditionRspTDD,
id-UL-DPCH-InformationItem-PhyChReconfRqstTDD,
id-UL-DPCH-InformationListIE-RL-ReconfReadyTDD,
id-UL-DPCH-InformationList-PhyChReconfRqstTDD,
id-UL-DPCH-InformationList-RL-ReconfReadyTDD,
id-UL-DeltaEbNo,
id-UL-DeltaEbNoAfter,
id-UL-EbNoTarget,
id-UL-MeanBitRate,
id-URA-ID,


```

id-UnsuccessfulRL-InformationResponse,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
FROM RNSAP-Constants;

-- *****
--
-- Common Container List
--
-- *****

DPCH-IE-ContainerList    { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 1, maxNrOfDPCHs, { IEsSetParam } }
RL-IE-ContainerList      { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 1, maxNrOfRLs, { IEsSetParam } }
CCTrCH-IE-ContainerList { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 1, maxNrOfCCTrCHs, { IEsSetParam } }

-- *****
--
-- RADIO LINK SETUP REQUEST FDD
--
-- *****

RadioLinkSetupRequestFDD ::= SEQUENCE {
    protocolIES          ProtocolIE-Container    {{RadioLinkSetupRequestFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupRequestFDD-Extensions}}          OPTIONAL,
    ...
}

RadioLinkSetupRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI          CRITICALITY reject TYPE S-RNTI          PRESENCE mandatory } |
    { ID id-D-RNTI          CRITICALITY reject TYPE D-RNTI          PRESENCE optional   } |
    { ID id-AllowedQueuingTime CRITICALITY reject TYPE AllowedQueuingTime PRESENCE optional   } |
    { ID id-UL-DPCH-Information-RL-SetupReqFDD CRITICALITY reject TYPE UL-DPCH-Information-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-DL-DPCH-Information-RL-SetupReqFDD CRITICALITY reject TYPE DL-DPCH-Information-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-DCH-Information-RL-SetupReqFDD CRITICALITY reject TYPE DCH-InformationList-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-RL-Information-RL-SetupReqFDD CRITICALITY notify TYPE RL-InformationList-RL-SetupReqFDD PRESENCE mandatory },
    ...
}

UL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    ul-ScramblingCode          UL-ScramblingCode,
    minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength,
    maxNrOfUL-DPCHs            MaxNrOfUL-DPCHs          OPTIONAL
    -- This IE is present only if minUL-ChannelisationCodeLength equals to 4 -- ,
    ul-PunctureLimit           PunctureLimit,
    ul-TransportFormatCombinationSet TransportFormatCombinationSet,
    ul-DPCCH-SlotFormat         UL-DPCCH-SlotFormat,
    ul-EbNoTarget               UL-EbNoTarget          OPTIONAL,
    diversityMode               DiversityMode,

```

```

d-FieldLength          D-FieldLength          OPTIONAL
-- This IE is present only if Feed Back mode diversity is activated -- ,
sSDT-CellIdLength      SSdT-CellID-Length    OPTIONAL,
s-FieldLength          S-FieldLength          OPTIONAL,
ul-meanBitRate         MeanBitRate          OPTIONAL,
iE-Extensions          ProtocolExtensionContainer { {UL-DPCH-Information-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
...
}

```

```

UL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

DL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
transportFormatCombinationSet          TransportFormatCombinationSet,
dl-DPCH-SlotNumber                    DL-DPCH-SlotNumber,
tFCI-SignallingMode                   TFCI-SignallingMode,
tFCI-Presence                          TFCI-Presence          OPTIONAL
-- This IE is present if Slot Format is from 12 to 16 --,
multiplexingPosition                  MultiplexingPosition,
powerOffsetInformation                 SEQUENCE {
    po1-ForTFCI-Bits                   PowerOffset,
    po2-ForTPC-Bits                     PowerOffset,
    po3-ForPilotBits                     PowerOffset,
    ...
},
dl-TPC-StepSize                       TPC-StepSize,
meanBitRate                            MeanBitRate          OPTIONAL,
iE-Extensions                          ProtocolExtensionContainer { {DL-DPCH-Information-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
...
}

```

```

DL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

DCH-InformationList-RL-SetupReqFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
dCH-ID                                DCH-ID,
dCH-CombinationInd                    DCH-CombinationInd    OPTIONAL,
rLC-Mode                              RLC-Mode,
ul-transportFormatSet                 TransportFormatSet,
dl-transportFormatSet                 TransportFormatSet,
ul-BLER                               BLER,
dl-BLER                               BLER,
allocationRetentionPriority            AllocationRetentionPriority,
frameHandlingPriority                 FrameHandlingPriority,
payloadCRC-PresenceIndicator          PayloadCRC-PresenceIndicator,
ul-FP-Mode                            UL-FP-Mode,
toAWS                                 ToAWS,
toAWE                                 ToAWE,

```

```

        iE-Extensions          ProtocolExtensionContainer { {DCH-InformationItem-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    }
    ...
}

DCH-InformationItem-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-SetupReqFDD ::= RL-IE-ContainerList { {RL-InformationItemIEs-RL-SetupReqFDD} }

RL-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-SetupReqFDD    CRITICALITY notify    TYPE RL-InformationItem-RL-SetupReqFDD    PRESENCE mandatory    },
    ...
}

RL-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    uC-ID                C-ID,
    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-InformationList-RL-SetupReqFDD --,
    dl-InitialTX-Power   DL-Power            OPTIONAL
    -- Initial DL transmission power -- ,
    cPICH-EcIo           CPICH-EcIo          OPTIONAL,
    sSDT-CellID          SSDT-CellID         OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationItem-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

```

```

RadioLinkSetupRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-S-RNTI          CRITICALITY reject TYPE S-RNTI          PRESENCE mandatory } |
  { ID id-D-RNTI          CRITICALITY reject TYPE D-RNTI          PRESENCE optional   } |
  { ID id-AllowedQueuingTime CRITICALITY reject TYPE AllowedQueuingTime PRESENCE optional   } |
  { ID id-UL-MeanBitRate    CRITICALITY reject TYPE MeanBitRate    PRESENCE optional   } |
  { ID id-DL-MeanBitRate    CRITICALITY reject TYPE MeanBitRate    PRESENCE optional   } |
  { ID id-UL-CCTrCH-InformationList-RL-SetupReqTDD CRITICALITY notify TYPE UL-CCTrChInformationList-RL-SetupReqTDD PRESENCE mandatory } |
  { ID id-DL-CCTrCH-InformationList-RL-SetupReqTDD CRITICALITY notify TYPE DL-CCTrChInformationList-RL-SetupReqTDD PRESENCE mandatory } |
  { ID id-DCH-InformationList-RL-SetupReqTDD CRITICALITY reject TYPE DCH-InformationList-RL-SetupReqTDD PRESENCE mandatory } |
  { ID id-RL-Information-RL-SetupReqTDD CRITICALITY reject TYPE RL-Information-RL-SetupReqTDD PRESENCE mandatory },
  ...
}

UL-CCTrChInformationList-RL-SetupReqTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrChInformationItemIEs-RL-SetupReqTDD} }

UL-CCTrChInformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationItem-RL-SetupReqTDD CRITICALITY notify TYPE UL-CCTrChInformationItem-RL-SetupReqTDD PRESENCE mandatory },
  ...
}

UL-CCTrChInformationItem-RL-SetupReqTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  ul-TFCS            TransportFormatCombinationSet,
  tFCI-Coding        TFCI-Coding,
  ul-PunctureLimit   PunctureLimit,
  iE-Extensions      ProtocolExtensionContainer { {UL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrChInformationList-RL-SetupReqTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrChInformationItemIEs-RL-SetupReqTDD} }

DL-CCTrChInformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationItem-RL-SetupReqTDD CRITICALITY notify TYPE DL-CCTrChInformationItem-RL-SetupReqTDD PRESENCE mandatory },
  ...
}

DL-CCTrChInformationItem-RL-SetupReqTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  dl-TFCS            TransportFormatCombinationSet,
  tFCI-Coding        TFCI-Coding,
  dl-PunctureLimit   PunctureLimit,
  iE-Extensions      ProtocolExtensionContainer { {DL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

}

DCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF
DCH-InformationItem-RL-SetupReqTDD

DCH-InformationItem-RL-SetupReqTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    ul-cCtRCH-ID          CcTtRCH-ID, -- UL CcTtRCH in which the DCH is mapped
    dl-cCtRCH-ID          CcTtRCH-ID, -- DL CcTtRCH in which the DCH is mapped
    dCH-CombinationInd    DCH-CombinationInd    OPTIONAL,
    rLC-Mode              RLC-Mode,
    ul-transportFormatSet TransportFormatSet,
    dl-transportFormatSet TransportFormatSet,
    ul-BLER               BLER,
    dl-BLER               BLER,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode            UL-FP-Mode,
    toAWS                 ToAWS,
    toAWE                 ToAWE,
    iE-Extensions         ProtocolExtensionContainer { {DCH-InformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-SetupReqTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    c-ID                 C-ID,
    frameOffset          FrameOffset,
    primaryCCPCH-RSCP    PrimaryCCPCH-RSCP    OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { {RL-Information-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- RADIO LINK SETUP RESPONSE FDD
--

```

```

-- *****
RadioLinkSetupResponseFDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{RadioLinkSetupResponseFDD-IEs}},
    protocolExtensions         ProtocolExtensionContainer {{RadioLinkSetupResponseFDD-Extensions}}
    ...
}

RadioLinkSetupResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE optional } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional } |
    { ID id-RL-InformationResponseList-RL-SetupRspFDD
      CRITICALITY ignore TYPE RL-InformationResponseList-RL-SetupRspFDD
      PRESENCE mandatory } |
    { ID id-UL-EbNoTarget          CRITICALITY ignore TYPE UL-EbNoTarget          PRESENCE optional } |
    { ID id-DL-EbNoTarget          CRITICALITY ignore TYPE DL-EbNoTarget          PRESENCE optional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-SetupRspFDD ::= RL-IE-ContainerList { {RL-InformationResponseItemIEs-RL-SetupRspFDD} }

RL-InformationResponseItemIEs-RL-SetupRspFDD RNSAP-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,
    sAI                  SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation   DL-CodeInformationList-RL-SetupRspFDD,
    sSDT-SupportIndicator SSdT-SupportIndicator,
    maxUL-EbNo           UL-EbNo,
    minUL-EbNo           UL-EbNo,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-SetupRspFDD

DL-CodeInformationItem-RL-SetupRspFDD ::= SEQUENCE {

```

```

dl-ScramblingCode          DL-ScramblingCode,
fdd-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
-- ** NOTE: How many alternatives are there, 2 or 3? **
diversityIndication        CHOICE {
    combining                Combining-RL-SetupRspFDD,
    nonCombiningOrIENotPresent  NonCombiningOrIENotPresent-RL-SetupRspFDD  }          OPTIONAL
-- This IE is present only if the RL is not the first on in the RL Information -- ,
iE-Extensions              ProtocolExtensionContainer { {DL-CodeInformationItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
...
}

DL-CodeInformationItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Combining-RL-SetupRspFDD ::= ProtocolIE-Container {{ CombiningItemIE-RL-SetupRspFDD }}

CombiningItemIE-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-CombiningItem-RL-SetupRspFDD  CRITICALITY ignore  TYPE CombiningItem-RL-SetupRspFDD  PRESENCE mandatory },
    ...
}

CombiningItem-RL-SetupRspFDD ::= SEQUENCE {
    rL-ID                    RL-ID,
    iE-Extensions            ProtocolExtensionContainer { { CombiningItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
    ...
}

CombiningItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NonCombiningOrIENotPresent-RL-SetupRspFDD ::= ProtocolIE-Container {{ NonCombiningOrIENotPresentItemIE-RL-SetupRspFDD }}

NonCombiningOrIENotPresentItemIE-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-NonCombiningOrIENotPresentItem-RL-SetupRspFDD  CRITICALITY ignore  TYPE NonCombiningOrIENotPresentItem-RL-SetupRspFDD  PRESENCE mandatory },
    ...
}

NonCombiningOrIENotPresentItem-RL-SetupRspFDD ::= SEQUENCE {
    dCH-InformationResponse-RL-SetupRspFDD  DCH-InformationResponseList-RL-SetupRspFDD  OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { { NonCombiningOrIENotPresentItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
    ...
}

NonCombiningOrIENotPresentItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **

```

```
DCH-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupRspFDD
```

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

```
DCH-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
-- ** NOTE: Both FDD and TDD messages use these definitions **
```

```
NeighbouringFDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF ProtocolIE-Container {{ NeighbouringFDD-CellInformationItemIE-RL-SetupRsp }}
```

```
NeighbouringFDD-CellInformationItemIE-RL-SetupRsp RNSAP-PROTOCOL-IES ::= {
    { ID id-NeighbouringFDD-CellInformationItem-RL-SetupRsp CRITICALITY ignore TYPE NeighbouringFDD-CellInformationItem-RL-SetupRsp PRESENCE mandatory },
    ...
}
```

```
NeighbouringFDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN               UARFCN,
    frameOffset          FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power   PrimaryCPICH-Power OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
    ...
}
```

```
NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
NeighbouringTDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF ProtocolIE-Container {{ NeighbouringTDD-CellInformationItemIE-RL-SetupRsp }}
```

```
NeighbouringTDD-CellInformationItemIE-RL-SetupRsp RNSAP-PROTOCOL-IES ::= {
    { ID id-NeighbouringTDD-CellInformationItem-RL-SetupRsp CRITICALITY ignore TYPE NeighbouringTDD-CellInformationItem-RL-SetupRsp PRESENCE mandatory },
    ...
}
```

```
NeighbouringTDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
    c-ID                C-ID,
```



```

cN-PS-DomainIdentifier      CN-PS-DomainIdentifier      OPTIONAL,
cN-CS-DomainIdentifier      CN-CS-DomainIdentifier      OPTIONAL,
uARFCN                      UARFCN,
frameOffset                 FrameOffset          OPTIONAL,
cellParameterID            CellParameterID,
syncCase                   SyncCase,
timeSlot                   TimeSlot          OPTIONAL
-- This IE is present only if SyncCase is Case1 -- ,
pSCH-TimeSlot              PSCH-TimeSlot          OPTIONAL
-- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
ul-EbNo                    UL-EbNo          OPTIONAL,
dl-EbNo                    DL-EbNo          OPTIONAL,
iE-Extensions              ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
...
}

NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkSetupResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****

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

RadioLinkSetupResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional } |
    { ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore TYPE RL-InformationResponse-RL-SetupRspTDD PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sAI                  SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    maxUL-EbNo          UL-EbNo,
    minUL-EbNo          UL-EbNo,

```

```

    ul-EbNoTarget          UL-EbNo          OPTIONAL,
    dl-EbNoTarget          DL-EbNo          OPTIONAL,
    ul-CCTrCHInformation   UL-CCTrCHInformationList-RL-SetupRspTDD,
    dl-CCTrCHInformation   DL-CCTrCHInformationList-RL-SetupRspTDD,
    dCH-InformationResponse DCH-InformationResponseList-RL-SetupRspTDD,
    neighbouringFDD-CellInformation   NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation   NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {RL-InformationResponse-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponse-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Container {{UL-CCTrCHInformationListIEs-RL-SetupRspTDD}}

UL-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationIE-RL-SetupRspTDD    CRITICALITY ignore TYPE UL-CCTrCHInformationListIE-RL-SetupRspTDD    PRESENCE mandatory },
    ...
}
UL-CCTrCHInformationListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-SetupRspTDD

UL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cTrCH-ID          CCTrCH-ID,
    ul-DPCH-Information   UL-DPCH-InformationList-RL-SetupRspTDD,
    iE-Extensions          ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationList-RL-SetupRspTDD ::= DPCH-IE-ContainerList { {UL-DPCH-InformationListIEs-RL-SetupRspTDD} }

UL-DPCH-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationItem-RL-SetupRspTDD    CRITICALITY ignore TYPE UL-DPCH-InformationItem-RL-SetupRspTDD    PRESENCE mandatory },
    ...
}

UL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dPCH-ID          DPCH-ID,
    tDD-ChannelisationCode   TDD-ChannelisationCode,
    burstType          BurstType,
    midambleShift       MidambleShift,
    timeSlot            TimeSlot,
    tDD-PhysicalChannelOffset   TDD-PhysicalChannelOffset,
    repetitionPeriod     RepetitionPeriod,
    repetitionLength     RepetitionLength,

```

```

    tFCI-Presence          TFCI-Presence,
    iE-Extensions          ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Container {{DL-CCTrCHInformationListIEs-RL-SetupRspTDD}}

DL-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationIE-RL-SetupRspTDD    CRITICALITY ignore TYPE DL-CCTrCHInformationListIE-RL-SetupRspTDD    PRESENCE mandatory },
    ...
}

DL-CCTrCHInformationListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-SetupRspTDD

DL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    dl-DPCH-Information       DL-DPCH-InformationList-RL-SetupRspTDD,
    iE-Extensions             ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationList-RL-SetupRspTDD ::=
DPCH-IE-ContainerList { {DL-DPCH-InformationListIEs-RL-SetupRspTDD} }

DL-DPCH-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationItem-RL-SetupRspTDD    CRITICALITY ignore TYPE DL-DPCH-InformationItem-RL-SetupRspTDD    PRESENCE mandatory },
    ...
}

DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dPCH-ID                  DPCH-ID,
    tDD-ChannelisationCode   TDD-ChannelisationCode,
    burstType                 BurstType,
    midambleShift            MidambleShift,
    timeSlot                  TimeSlot,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tFCI-Presence             TFCI-Presence,
    iE-Extensions             ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Container {{DCH-InformationResponseListIEs-RL-SetupRspTDD}}

DCH-InformationResponseListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponseListIE-RL-SetupRspTDD    CRITICALITY ignore    TYPE DCH-InformationResponseListIE-RL-SetupRspTDD    PRESENCE mandatory
    },
    ...
}

DCH-InformationResponseListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupRspTDD

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

DCH-InformationResponseItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP FAILURE FDD
--
-- *****

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

RadioLinkSetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                CRITICALITY ignore    TYPE D-RNTI                PRESENCE mandatory } |
    { ID id-CN-PS-DomainIdentifier    CRITICALITY ignore    TYPE CN-PS-DomainIdentifier    PRESENCE mandatory } |
    { ID id-CN-CS-DomainIdentifier    CRITICALITY ignore    TYPE CN-CS-DomainIdentifier    PRESENCE mandatory } |
    { ID id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
      CRITICALITY ignore    TYPE UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
      PRESENCE mandatory } |
    { ID id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD
      CRITICALITY ignore    TYPE SuccessfulRL-InformationResponseList-RL-SetupFailureFDD

```

```

        { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
        ...
    }

UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList { {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
      CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
      PRESENCE mandatory },
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    cause                Cause,
    iE-Extensions       ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs} }

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD
      CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-SetupFailureFDD
      PRESENCE mandatory },
    ...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sAI                  SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation   DL-CodeInformationList-RL-SetupFailureFDD,
    sSDT-SupportIndicator SSDT-SupportIndicator,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupFailureFDD OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupFailureFDD OPTIONAL,
    ul-EbNoTarget        UL-EbNo,
    maxUL-EbNo           UL-EbNo,
    minUL-EbNo           UL-EbNo,
    dl-EbNoTarget        DL-EbNo,
    iE-Extensions       ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupFailureFDD ::= ProtocolIE-Container {{ DL-CodeInformationListItemIE-RL-SetupFailureFDD }}

DL-CodeInformationListItemIE-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CodeInformationListItem-RL-SetupFailureFDD  CRITICALITY ignore  TYPE DL-CodeInformationListItem-RL-SetupFailureFDD  PRESENCE mandatory
},
  ...
}
DL-CodeInformationListItem-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF
  SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
    -- ** NOTE: How many alternatives are there, 2 or 3? **
    diversityIndication        CHOICE {
      combining                Combining-RL-SetupFailureFDD,
      nonCombiningOrIENotPresent  NonCombiningOrIENotPresent-RL-SetupFailureFDD,
      ...
    }
    -- This IE is present only if the RL is not the first on in the RL Information -- ,
    iE-Extensions              ProtocolExtensionContainer { {DL-CodeInformationListItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
  }

DL-CodeInformationListItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

Combining-RL-SetupFailureFDD ::= ProtocolIE-Container {{ CombiningItemIE-RL-SetupFailureFDD }}

CombiningItemIE-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-CombiningItem-RL-SetupFailureFDD  CRITICALITY ignore  TYPE CombiningItem-RL-SetupFailureFDD  PRESENCE mandatory },
  ...
}

CombiningItem-RL-SetupFailureFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  iE-Extensions  ProtocolExtensionContainer { { CombiningItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

CombiningItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

NonCombiningOrIENotPresent-RL-SetupFailureFDD ::= ProtocolIE-Container {{ NonCombiningOrIENotPresentItemIE-RL-SetupFailureFDD }}

NonCombiningOrIENotPresentItemIE-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-NonCombiningOrIENotPresentItem-RL-SetupFailureFDD CRITICALITY ignore TYPE NonCombiningOrIENotPresentItem-RL-SetupFailureFDD PRESENCE
    mandatory },
    ...
}

NonCombiningOrIENotPresentItem-RL-SetupFailureFDD ::= SEQUENCE {
    dCH-InformationResponse-RL-SetupFailureFDD DCH-InformationResponseList-RL-SetupFailureFDD OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { NonCombiningOrIENotPresentItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,
    ...
}

NonCombiningOrIENotPresentItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupFailureFDD

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

DCH-InformationResponseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringFDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF ProtocolIE-Container { { NeighbouringFDD-
CellInformationItemIE-RL-SetupFailureFDD }}

NeighbouringFDD-CellInformationItemIE-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD CRITICALITY ignore TYPE NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD
    PRESENCE mandatory },
    ...
}

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    uC-ID C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF ProtocolIE-Container {{ NeighbouringTDD-
CellInformationItemIE-RL-SetupFailureFDD }}

NeighbouringTDD-CellInformationItemIE-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD CRITICALITY ignore TYPE NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD
    PRESENCE mandatory },
    ...
}

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    uC-ID C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    cellParameterID CellParameterID,
    syncCase SyncCase,
    timeSlot TimeSlot,
    pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
    iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP FAILURE TDD
--
-- *****

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

RadioLinkSetupFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD

```



```

        { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
        ...
    }

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD ::= SEQUENCE {
    rL-ID          RL-ID,
    cause          Cause,
    iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupFailureTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION REQUEST FDD
--
-- *****

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

RadioLinkAdditionRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-EbNoTarget          CRITICALITY ignore TYPE UL-EbNo          PRESENCE mandatory } |
    { ID id-RL-InformationList-RL-AdditionRqstFDD CRITICALITY notify TYPE RL-InformationList-RL-AdditionRqstFDD PRESENCE mandatory },
    ...
}

RL-InformationList-RL-AdditionRqstFDD ::= RL-IE-ContainerList { {RL-Information-RL-AdditionRqstFDD-IEs} }

RL-Information-RL-AdditionRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-AdditionRqstFDD CRITICALITY ignore TYPE RL-Information-RL-AdditionRqstFDD PRESENCE mandatory },
    ...
}

RL-Information-RL-AdditionRqstFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    c-ID          C-ID,
    frameOffset    FrameOffset,
    chipOffset     ChipOffset,
    diversityControlField DiversityControlField,
}

```

```

    primaryCPICH-EcNo          PrimaryCPICH-EcNo          OPTIONAL,
    sSDT-CellID                SSDT-CellID              OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-AdditionRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

RadioLinkAdditionRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-AdditionRqstTDD    CRITICALITY reject    TYPE RL-Information-RL-AdditionRqstTDD    PRESENCE mandatory    },
    ...
}

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
    rL-ID                      RL-ID,
    c-ID                        C-ID,
    frameOffset                 FrameOffset,
    chipOffset                  ChipOffset,
    diversityControlField       DiversityControlField,
    primaryCCPCH-RSCP           PrimaryCCPCH-RSCP,
    iE-Extensions              ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-AdditionRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****

```

```

--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

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

RadioLinkAdditionResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE optional } |
    { ID id-RL-InformationResponseList-RL-AdditionRspFDD
      CRITICALITY ignore TYPE RL-InformationResponseList-RL-AdditionRspFDD
      PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-AdditionRspFDD ::= RL-IE-ContainerList { {RL-InformationResponseItemIEs-RL-AdditionRspFDD} }

RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-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,
    sAI                  SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation   DL-CodeInformationList-RL-AdditionRspFDD,
    sSDT-SupportIndicator SSdT-SupportIndicator,
    maxUL-EbNo          UL-EbNo,
    minUL-EbNo          UL-EbNo,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionRspFDD ::= ProtocolIE-Container {{ DL-CodeInformationListItemIE-RL-AdditionRspFDD }}

DL-CodeInformationListItemIE-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-DL-CodeInformationListItem-RL-AdditionRspFDD  CRITICALITY ignore  TYPE DL-CodeInformationListItem-RL-AdditionRspFDD  PRESENCE mandatory
  },
  ...
}

```

```

DL-CodeInformationListItem-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF
SEQUENCE {
  dl-ScramblingCode          DL-ScramblingCode,
  fDD-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
  -- ** NOTE: How many alternatives are there, 2 or 3? **
  diversityIndication        CHOICE {
    combining                  Combining-RL-AdditionRspFDD,
    nonCombiningOrIENotPresent  NonCombiningOrIENotPresent-RL-AdditionRspFDD,
    ...
  }
  -- This IE is present only if the RL is not the first on in the RL Information -- ,
  iE-Extensions              ProtocolExtensionContainer { {DL-CodeInformationListItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
  ...
}

```

```

DL-CodeInformationListItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

Combining-RL-AdditionRspFDD ::= ProtocolIE-Container {{ CombiningItemIE-RL-AdditionRspFDD }}

```

```

CombiningItemIE-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-CombiningItem-RL-AdditionRspFDD  CRITICALITY ignore  TYPE CombiningItem-RL-AdditionRspFDD  PRESENCE mandatory },
  ...
}

```

```

CombiningItem-RL-AdditionRspFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  iE-Extensions  ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
  ...
}

```

```

CombiningItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

NonCombiningOrIENotPresent-RL-AdditionRspFDD ::= ProtocolIE-Container {{ NonCombiningOrIENotPresentItemIE-RL-AdditionRspFDD }}

```

```

NonCombiningOrIENotPresentItemIE-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-NonCombiningOrIENotPresentItem-RL-AdditionRspFDD  CRITICALITY ignore  TYPE NonCombiningOrIENotPresentItem-RL-AdditionRspFDD  PRESENCE
mandatory },
  ...
}

```

```

NonCombiningOrIENotPresentItem-RL-AdditionRspFDD ::= SEQUENCE {
  dCH-InformationResponse-RL-AdditionRspFDD          DCH-InformationResponseList-RL-AdditionRspFDD OPTIONAL,

```

```

    iE-Extensions                ProtocolExtensionContainer { { NonCombiningOrIENotPresentItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    ...
}

NonCombiningOrIENotPresentItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-AdditionRspFDD

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

DCH-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF ProtocolIE-Container {{ NeighbouringFDD-CellInformationItemIE-RL-AdditionRsp }}

NeighbouringFDD-CellInformationItemIE-RL-AdditionRsp RNSAP-PROTOCOL-IES ::= {
    { ID id-NeighbouringFDD-CellInformationItem-RL-AdditionRsp CRITICALITY ignore TYPE NeighbouringFDD-CellInformationItem-RL-AdditionRsp PRESENCE
    mandatory },
    ...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
    uC-ID                        C-ID,
    cN-PS-DomainIdentifier       CN-PS-DomainIdentifier    OPTIONAL,
    cN-CS-DomainIdentifier       CN-CS-DomainIdentifier    OPTIONAL,
    uARFCN                       UARFCN,
    frameOffset                  FrameOffset              OPTIONAL,
    primaryScramblingCode        PrimaryScramblingCode,
    primaryCPICH-Power           PrimaryCPICH-Power       OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF ProtocolIE-Container {{ NeighbouringTDD-CellInformationItemIE-RL-AdditionRsp }}

```

```

NeighbouringTDD-CellInformationItemIE-RL-AdditionRsp RNSAP-PROTOCOL-IES ::= {
  { ID id-NeighbouringTDD-CellInformationItem-RL-AdditionRsp CRITICALITY ignore TYPE NeighbouringTDD-CellInformationItem-RL-AdditionRsp PRESENCE
  mandatory },
  ...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
  uC-ID C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN UARFCN,
  frameOffset FrameOffset OPTIONAL,
  cellParameterID CellParameterID,
  syncCase SyncCase,
  timeSlot TimeSlot,
  pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
  -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
  iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
  ...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkAdditionResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****

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

RadioLinkAdditionResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponse-RL-AdditionRspTDD
    CRITICALITY ignore TYPE RL-InformationResponse-RL-AdditionRspTDD PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics
    CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
  rL-ID RL-ID,

```

```

    sAI                SAI,
    ul-InterferenceLevel      ScaledUL-InterferenceLevel,
    ul-CCTrCHInformation      UL-CCTrCHInformationList-RL-AdditionRspTDD,
    dl-CCTrCHInformation      DL-CCTrCHInformationList-RL-AdditionRspTDD,
    diversityIndication      DiversityIndication-RL-AdditionRspTDD  OPTIONAL,
    minUL-EbNo                UL-EbNo,
    maxUL-EbNo                UL-EbNo,
    neighbouringFDD-CellInformation      NeighbouringFDD-CellInformationList-RL-SetupRsp  OPTIONAL,
    neighbouringTDD-CellInformation      NeighbouringTDD-CellInformationList-RL-SetupRsp  OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {RL-InformationResponse-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCHInformationList-RL-AdditionRspTDD ::= ProtocolIE-Container {{UL-CCTrCHInformationListIEs-RL-AdditionRspTDD}}

UL-CCTrCHInformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationIE-RL-AdditionRspTDD  CRITICALITY ignore  TYPE UL-CCTrCHInformationListIE-RL-AdditionRspTDD  PRESENCE mandatory },
    ...
}

UL-CCTrCHInformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-AdditionRspTDD

UL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    ul-DPCH-Information      UL-DPCH-InformationList-RL-AdditionRspTDD,
    iE-Extensions            ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationList-RL-AdditionRspTDD ::= DPCH-IE-ContainerList { {UL-DPCH-InformationListIEs-RL-AdditionRspTDD} }

UL-DPCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationItem-RL-AdditionRspTDD  CRITICALITY ignore  TYPE UL-DPCH-InformationItem-RL-AdditionRspTDD  PRESENCE mandatory },
    ...
}

UL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode      TDD-ChannelisationCode,
    burstType                BurstType,
    midambleShift            MidambleShift,
    timeSlot                TimeSlot,
    offset                Offset,
}

```

```

    tDD-PhysicalChannelOffset      TDD-PhysicalChannelOffset,
    repetitionPeriod                RepetitionPeriod,
    repetitionLength                RepetitionLength,
    tFCI-Presence                  TFCI-Presence,
    iE-Extensions                  ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCHInformationList-RL-AdditionRspTDD ::= ProtocolIE-Container {{DL-CCTrCHInformationListIEs-RL-AdditionRspTDD}}

DL-CCTrCHInformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationIE-RL-AdditionRspTDD    CRITICALITY ignore    TYPE DL-CCTrCHInformationListIE-RL-AdditionRspTDD    PRESENCE mandatory },
    ...
}

DL-CCTrCHInformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-AdditionRspTDD

DL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    dl-DPCH-Information      DL-DPCH-InformationList-RL-AdditionRspTDD,
    iE-Extensions            ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationList-RL-AdditionRspTDD ::= DPCH-IE-ContainerList { {DL-DPCH-InformationListIEs-RL-AdditionRspTDD} }

DL-DPCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationItem-RL-AdditionRspTDD    CRITICALITY ignore    TYPE DL-DPCH-InformationItem-RL-AdditionRspTDD    PRESENCE mandatory },
    ...
}

DL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode  TDD-ChannelisationCode,
    burstType              BurstType,
    midambleShift          MidambleShift,
    timeSlot               TimeSlot,
    tDD-PhysicalChannelOffset  TDD-PhysicalChannelOffset,
    repetitionPeriod        RepetitionPeriod,
    repetitionLength        RepetitionLength,
    tFCI-Presence          TFCI-Presence,
    iE-Extensions          ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

```



```

}

DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiversityIndication-RL-AdditionRspTDD ::= ProtocolIE-Container {{DiversityIndication-RL-AdditionRspTDD}}

DiversityIndicationIE-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DiversityIndicationItem-RL-AdditionRspTDD    CRITICALITY ignore    TYPE DiversityIndicationItem-RL-AdditionRspTDD    PRESENCE mandatory },
    ...
}

DiversityIndicationItem-RL-AdditionRspTDD ::= CHOICE {
    combining          Combining,
    nonCombining      NonCombining,
    ...
}

Combining ::= ProtocolIE-Container {{CombiningIE-RL-AdditionRspTDD}}

CombiningIE-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-CombiningItem-RL-AdditionRspTDD    CRITICALITY ignore    TYPE CombiningItem-RL-AdditionRspTDD    PRESENCE mandatory },
    ...
}

CombiningItem-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID              RL-ID,
    iE-Extensions     ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
    ...
}

CombiningItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NonCombining ::= ProtocolIE-Container {{NonCombiningIE-RL-AdditionRspTDD}}

NonCombiningIE-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-NonCombiningItem-RL-AdditionRspTDD    CRITICALITY ignore    TYPE NonCombiningItem-RL-AdditionRspTDD    PRESENCE mandatory },
    ...
}

NonCombiningItem-RL-AdditionRspTDD ::= SEQUENCE {
    dCH-InformationResponse-RL-AdditionRspFDD      DCH-InformationResponseList-RL-AdditionRspFDD,
    iE-Extensions     ProtocolExtensionContainer { { NonCombiningItem-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
    ...
}

NonCombiningItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

RadioLinkAdditionResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
-- *****
-- RADIO LINK ADDITION FAILURE FDD
-- *****

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

RadioLinkAdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
    PRESENCE mandatory } |
  { ID id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
    PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
  ...
}

UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    PRESENCE mandatory },
  ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  cause          Cause,
  iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList { {SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }

```

```

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    PRESENCE mandatory },
  ...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID RL-ID,
  sAI SAI,
  ul-InterferenceLevel ScaledUL-InterferenceLevel,
  dl-CodeInformation DL-CodeInformationList-RL-AdditionFailureFDD,
  sSDT-SupportIndicator SSdT-SupportIndicator,
  maxUL-EbNo UL-EbNo,
  minUL-EbNo UL-EbNo,
  neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD OPTIONAL,
  neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionFailureFDD ::= ProtocolIE-Container {{ DL-CodeInformationListItemIE-RL-AdditionFailureFDD }}

DL-CodeInformationListItemIE-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CodeInformationListItem-RL-AdditionFailureFDD CRITICALITY ignore TYPE DL-CodeInformationListItem-RL-AdditionFailureFDD PRESENCE
  mandatory },
  ...
}

DL-CodeInformationListItem-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF
SEQUENCE {
  dl-ScramblingCode DL-ScramblingCode,
  dl-ChannelisationCode DL-ChannelisationCode,
  diversityIndication CHOICE {
    combining Combining-RL-AdditionFailureFDD,
    nonCombiningOrIENotPresent NonCombiningOrIENotPresent-RL-AdditionFailureFDD,
    ...
  } OPTIONAL
  -- This IE is present only if the RL is not the first on in the RL Information -- ,
  iE-Extensions ProtocolExtensionContainer { {DL-CodeInformationListItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CodeInformationListItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

Combining-RL-AdditionFailureFDD ::= ProtocolIE-Container {{ CombiningItemIE-RL-AdditionFailureFDD }}

CombiningItemIE-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-CombiningItem-RL-AdditionFailureFDD   CRITICALITY ignore   TYPE CombiningItem-RL-AdditionFailureFDD   PRESENCE mandatory },
  ...
}

CombiningItem-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID                RL-ID,
  iE-Extensions        ProtocolExtensionContainer { { CombiningItem-RL-AdditionFailureFDD-ExtIEs } } OPTIONAL,
  ...
}

CombiningItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

NonCombiningOrIENotPresent-RL-AdditionFailureFDD ::= ProtocolIE-Container {{ NonCombiningOrIENotPresentItemIE-RL-AdditionFailureFDD }}

NonCombiningOrIENotPresentItemIE-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-NonCombiningOrIENotPresentItem-RL-AdditionFailureFDD   CRITICALITY ignore   TYPE NonCombiningOrIENotPresentItem-RL-AdditionFailureFDD
  PRESENCE mandatory },
  ...
}

NonCombiningOrIENotPresentItem-RL-AdditionFailureFDD ::= SEQUENCE {
  dCH-InformationResponse-RL-AdditionFailureFDD      DCH-InformationResponseList-RL-AdditionFailureFDD OPTIONAL,
  iE-Extensions        ProtocolExtensionContainer { { NonCombiningOrIENotPresentItem-RL-AdditionFailureFDD-ExtIEs } } OPTIONAL,
  ...
}

NonCombiningOrIENotPresentItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-AdditionFailureFDD

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

DCH-InformationResponseItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```
NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
ProtocolIE-Container {{ NeighbouringFDD-CellInformationItemIE-RL-AdditionFailureFDD }}
```

```
NeighbouringFDD-CellInformationItemIE-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD CRITICALITY ignore TYPE NeighbouringFDD-CellInformationItem-RL-
  AdditionFailureFDD PRESENCE mandatory },
  ...
}
```

```
NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  uC-ID C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN UARFCN,
  frameOffset FrameOffset OPTIONAL,
  primaryScramblingCode PrimaryScramblingCode,
  cPICH-Power CPICH-Power OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}
```

```
NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
ProtocolIE-Container {{ NeighbouringTDD-CellInformationItemIE-RL-AdditionFailureFDD }}
```

```
NeighbouringTDD-CellInformationItemIE-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD CRITICALITY ignore TYPE NeighbouringTDD-CellInformationItem-RL-
  AdditionFailureFDD PRESENCE mandatory },
  ...
}
```

```
NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  uC-ID C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN UARFCN,
  frameOffset FrameOffset OPTIONAL,
  cellParameterID CellParameterID,
  syncCase SyncCase,
  timeSlot TimeSlot,
  pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
  -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
  iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}
```

```
NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```

}

RadioLinkAdditionFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION FAILURE TDD
--
-- *****

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

RadioLinkAdditionFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics            CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponse ::= SEQUENCE {
    rL-ID                RL-ID,
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionFailureTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK DELETION REQUEST
--
-- *****

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

```

```

RadioLinkDeletionRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationList-RL-DeletionRqst CRITICALITY notify TYPE RL-InformationList-RL-DeletionRqst PRESENCE mandatory },
  ...
}

RL-InformationList-RL-DeletionRqst ::= RL-IE-ContainerList { {RL-Information-RL-DeletionRqst-IEs} }

RL-Information-RL-DeletionRqst-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-DeletionRqst CRITICALITY notify TYPE RL-Information-RL-DeletionRqst PRESENCE mandatory },
  ...
}

RL-Information-RL-DeletionRqst ::= SEQUENCE {
  rL-ID RL-ID,
  iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-DeletionRqst-ExtIEs} } OPTIONAL,
  ...
}

RL-Information-RL-DeletionRqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkDeletionRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK DELETION RESPONSE
--
-- *****

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

RadioLinkDeletionResponse-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

RadioLinkDeletionResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE FDD
--

```

-- *****

```
RadioLinkReconfigurationPrepareFDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationPrepareFDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareFDD-Extensions}}
  ...
}
```

```
RadioLinkReconfigurationPrepareFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-AllowedQueuingTime          CRITICALITY reject TYPE AllowedQueuingTime          PRESENCE mandatory } |
  { ID id-UL-DPCH-Information          CRITICALITY reject TYPE UL-DPCH-Information          PRESENCE optional } |
  { ID id-DL-DPCH-Information          CRITICALITY reject TYPE DL-DPCH-Information          PRESENCE optional } |
  { ID id-DCH-ModifyList-RL-ReconfPrepFDD CRITICALITY reject TYPE DCH-ModifyList-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-DCH-AddList-RL-ReconfPrepFDD CRITICALITY reject TYPE DCH-AddList-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-DCH-DeleteList-RL-ReconfPrepFDD CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-RL-InformationList-RL-ReconfPrepFDD CRITICALITY reject TYPE RL-InformationList-RL-ReconfPrepFDD PRESENCE mandatory }
  ...
}
```

```
UL-DPCH-Information ::= SEQUENCE {
  ul-ScramblingCode          UL-ScramblingCode          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                      TransportFormatCombinationSet OPTIONAL,
  ul-DPCCH-SlotFormat        UL-DPCCH-SlotFormat        OPTIONAL,
  sSDT-CellIDLength          SSDT-CellID-Length          OPTIONAL,
  s-FieldLength              S-FieldLength              OPTIONAL,
  meanBitRate                MeanBitRate                OPTIONAL,
  iE-Extensions              ProtocolExtensionContainer { {UL-DPCH-Information-ExtIEs} } OPTIONAL,
  ...
}
```

```
UL-DPCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
DL-DPCH-Information ::= SEQUENCE {
  tFCS                      TransportFormatCombinationSet OPTIONAL,
  dl-DPCCH-SlotFormat        DL-DPCCH-SlotFormat        OPTIONAL,
  tFCI-SignallingMode        TFCI-SignallingMode        OPTIONAL,
  tFCI-Presence              TFCI-Presence              OPTIONAL
  -- This IE is present if Slot Format is from 12 to 16 --,
  multiplexingPosition        MultiplexingPosition        OPTIONAL,
  meanBitRate                MeanBitRate                OPTIONAL,
  iE-Extensions              ProtocolExtensionContainer { {DL-DPCH-Information-ExtIEs} } OPTIONAL,
  ...
}
```

```
DL-DPCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```



```

}
...
}
DCH-ModifyList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
    dCH-ID DCH-ID,
    ul-TransportformatSet TransportFormatSet OPTIONAL,
    dl-TransportformatSet TransportFormatSet OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority FrameHandlingPriority OPTIONAL,
    ul-FP-Mode UL-FP-Mode OPTIONAL,
    toAWS ToAWS OPTIONAL,
    toAWE ToAWE OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {DCH-ModifyList-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}
DCH-ModifyList-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
DCH-AddList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
    dCH-ID DCH-ID,
    rLC-Mode RLC-Mode,
    dCH-CombinationInd DCH-CombinationInd OPTIONAL,
    ul-TransportformatSet TransportFormatSet,
    dl-TransportformatSet TransportFormatSet,
    ul-BLER BLER,
    dl-BLER BLER,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode UL-FP-Mode,
    toAWS ToAWS,
    toAWE ToAWE,
    iE-Extensions ProtocolExtensionContainer { {DCH-AddList-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}
DCH-AddList-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
DCH-DeleteList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
    dCH-ID DCH-ID,
    iE-Extensions ProtocolExtensionContainer { {DCH-DeleteList-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

DCH-DeleteList-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-ReconfPrepFDD ::= RL-IE-ContainerList { {RL-Information-RL-ReconfPrepFDD-IEs} }

RL-Information-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-ReconfPrepFDD      CRITICALITY reject  TYPE RL-Information-RL-ReconfPrepFDD      PRESENCE mandatory  },
    ...
}

RL-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sSDT-Indication      SSdT-Indication      OPTIONAL,
    sSDT-CellIdentity    SSdT-CellID         OPTIONAL
    -- The IE may be present if the sSDT-Indication is set to 'sSDT-active-in-the-UE' --,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationPrepareFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- *****

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

RadioLinkReconfigurationPrepareTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime      CRITICALITY reject  TYPE AllowedQueuingTime      PRESENCE optional  } |
    { ID id-UL-MeanBitRate          CRITICALITY reject  TYPE MeanBitRate            PRESENCE optional  } |
    { ID id-DL-MeanBitRate          CRITICALITY reject  TYPE MeanBitRate            PRESENCE optional  } |
    { ID id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD
      CRITICALITY notify  TYPE UL-CCTrCH-InformationList-RL-ReconfPrepTDD PRESENCE mandatory } |
    { ID id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD
      CRITICALITY notify  TYPE DL-CCTrCH-InformationList-RL-ReconfPrepTDD PRESENCE mandatory } |
    { ID id-DCH-ModifyList-RL-ReconfPrepTDD      CRITICALITY reject  TYPE DCH-ModifyList-RL-ReconfPrepTDD      PRESENCE mandatory } |
    { ID id-DCH-AddList-RL-ReconfPrepTDD        CRITICALITY reject  TYPE DCH-AddList-RL-ReconfPrepTDD        PRESENCE mandatory } |
    { ID id-DCH-DeleteList-RL-ReconfPrepTDD     CRITICALITY reject  TYPE DCH-DeleteList-RL-ReconfPrepTDD     PRESENCE mandatory } ,
}

```

```

}
...
}
UL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrCH-Information-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-Information-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-Information-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-CCTrCH-Information-RL-ReconfPrepTDD PRESENCE mandatory },
  ...
}

UL-CCTrCH-Information-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  tFCS              TransportFormatCombinationSet OPTIONAL,
  tFCI-Coding       TFCI-Coding OPTIONAL,
  punctureLimit     PunctureLimit OPTIONAL,
  iE-Extensions     ProtocolExtensionContainer { {UL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrCH-Information-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-Information-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-Information-RL-ReconfPrepTDD CRITICALITY notify TYPE DL-CCTrCH-Information-RL-ReconfPrepTDD PRESENCE mandatory },
  ...
}

DL-CCTrCH-Information-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  tFCS              TransportFormatCombinationSet OPTIONAL,
  tFCI-Coding       TFCI-Coding OPTIONAL,
  punctureLimit     PunctureLimit OPTIONAL,
  iE-Extensions     ProtocolExtensionContainer { {DL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-RL-ReconfPrepTDD

DCH-ModifyItem-RL-ReconfPrepTDD ::= 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,
ul-FP-Mode                UL-FP-Mode           OPTIONAL,
toAWS                     ToAWS               OPTIONAL,
toAWE                     ToAWE               OPTIONAL,
iE-Extensions             ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

```

```

DCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

DCH-AddList-RL-ReconfPrepTDD           ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfPrepTDD

```

```

DCH-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
dCH-ID                DCH-ID,
rLC-Mode              RLC-Mode,
ul-CCTrCH-ID         CCTrCH-ID,
dl-CCTrCH-ID         CCTrCH-ID,
dCH-CombinationInd   DCH-CombinationInd OPTIONAL,
ul-TransportformatSet TransportFormatSet,
dl-TransportformatSet TransportFormatSet,
ul-BLER              BLER,
dl-BLER              BLER,
allocationRetentionPriority AllocationRetentionPriority,
frameHandlingPriority FrameHandlingPriority,
payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
ul-FP-Mode           UL-FP-Mode,
toAWS                ToAWS,
toAWE                ToAWE,
iE-Extensions       ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

```

```

DCH-AddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-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 RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
RadioLinkReconfigurationPrepareTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- RADIO LINK RECONFIGURATION READY FDD
--
-- *****

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

RadioLinkReconfigurationReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseList-RL-ReconfReadyFDD
      CRITICALITY ignore TYPE RL-InformationResponseList-RL-ReconfReadyFDD
      PRESENCE optional } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-ReconfReadyFDD ::= RL-IE-ContainerList { {RL-InformationResponse-RL-ReconfReadyFDD-IEs} }

RL-InformationResponse-RL-ReconfReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-ReconfReadyFDD
      CRITICALITY ignore TYPE RL-InformationResponseItem-RL-ReconfReadyFDD
      PRESENCE mandatory },
    ...
}

RL-InformationResponseItem-RL-ReconfReadyFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    max-UL-EbNo   UL-EbNo,
    min-UL-EbNo   UL-EbNo,
    dl-CodeInformationList DL-CodeInformationList-RL-ReconfReadyFDD OPTIONAL,
    dCHsToBeAdded  DCH-AddList-RL-ReconfReadyFDD          OPTIONAL,
    dCHsToBeModified DCH-ModifyList-RL-ReconfReadyFDD     OPTIONAL,
    iE-Extensions  ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

DL-CodeInformationList-RL-ReconfReadyFDD ::= ProtocolIE-Container { { DL-CodeInformationListItemIE-RL-ReconfReadyFDD } }

DL-CodeInformationListItemIE-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CodeInformationListItem-RL-ReconfReadyFDD          CRITICALITY ignore  TYPE DL-CodeInformationListItem-RL-ReconfReadyFDD  PRESENCE
mandatory  },
  ...
}

DL-CodeInformationListItem-RL-ReconfReadyFDD ::= SEQUENCE (SIZE (0..maxNrOfDL-Codes)) OF
SEQUENCE {
  dl-ScramblingCode          DL-ScramblingCode,
  fdd-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
  iE-Extensions              ProtocolExtensionContainer { { DL-CodeInformationList-RL-ReconfReadyFDD-ExtIEs } } OPTIONAL,
  ...
}

DL-CodeInformationList-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-AddList-RL-ReconfReadyFDD          ::= ProtocolIE-Container { { DCH-AddListItemIE-RL-ReconfReadyFDD } }

DCH-AddListItemIE-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-AddListItem-RL-ReconfReadyFDD          CRITICALITY ignore  TYPE DCH-AddListItem-RL-ReconfReadyFDD          PRESENCE mandatory  },
  ...
}

DCH-AddListItem-RL-ReconfReadyFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
  dCH-ID          DCH-ID,
  bindingID       BindingID,
  transportLayerAddress  TransportLayerAddress,
  iE-Extensions    ProtocolExtensionContainer { { DCH-AddListItem-RL-ReconfReadyFDD-ExtIEs } } OPTIONAL,
  ...
}

DCH-AddListItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-ModifyList-RL-ReconfReadyFDD          ::= ProtocolIE-Container { { DCH-ModifyListItemIE-RL-ReconfReadyFDD } }

DCH-ModifyListItemIE-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-ModifyListItem-RL-ReconfReadyFDD          CRITICALITY ignore  TYPE DCH-ModifyListItem-RL-ReconfReadyFDD          PRESENCE mandatory  },
  ...
}

DCH-ModifyListItem-RL-ReconfReadyFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
  dCH-ID          DCH-ID,
  bindingID       BindingID,

```

```

        transportLayerAddress      TransportLayerAddress,
        iE-Extensions              ProtocolExtensionContainer { {DCH-ModifyListItem-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
        ...
    }

DCH-ModifyListItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationReadyFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION READY TDD
--
-- *****

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

RadioLinkReconfigurationReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponse-RL-ReconfReadyTDD
      CRITICALITY ignore TYPE RL-InformationResponse-RL-ReconfReadyTDD PRESENCE optional } |
    { ID id-CriticalityDiagnostics
      CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponse-RL-ReconfReadyTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    max-UL-EbNo          UL-EbNo,
    min-UL-EbNo          UL-EbNo,
    ul-CCTrCH-Information UL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
    dl-CCTrCH-Information DL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
    dCHsToBeAdded        DCH-AddList-RL-ReconfReadyTDD OPTIONAL,
    dCHsToBeModified     DCH-ModifyList-RL-ReconfReadyTDD OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponse-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponse-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= ProtocolIE-Container {{UL-CCTrCHInformationListIEs-RL-ReconfReadyTDD}}

UL-CCTrCHInformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD   CRITICALITY ignore   TYPE UL-CCTrCHInformationListIE-RL-ReconfReadyTDD   PRESENCE mandatory
  },
  ...
}
UL-CCTrCHInformationListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-RL-ReconfReadyTDD

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

UL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-DPCH-InformationList-RL-ReconfReadyTDD ::= ProtocolIE-Container {{UL-DPCH-InformationListIEs-RL-ReconfReadyTDD}}

UL-DPCH-InformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationListIE-RL-ReconfReadyTDD   CRITICALITY ignore   TYPE UL-DPCH-InformationListIE-RL-ReconfReadyTDD   PRESENCE mandatory
  },
  ...
}

UL-DPCH-InformationListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationItem-RL-ReconfReadyTDD

UL-DPCH-InformationItem-RL-ReconfReadyTDD ::= SEQUENCE {
  dPCH-ID          DPCH-ID,
  tDD-ChannelisationCode      TDD-ChannelisationCode      OPTIONAL,
  burstType          BurstType          OPTIONAL,
  midambleShift      MidambleShift      OPTIONAL,
  timeSlot           TimeSlot           OPTIONAL,
  tDD-PhysicalChannelOffset    TDD-PhysicalChannelOffset    OPTIONAL,
  repetitionPeriod   RepetitionPeriod   OPTIONAL,
  repetitionLength   RepetitionLength   OPTIONAL,
  tFCI-Presence      TFCI-Presence      OPTIONAL,
  iE-Extensions     ProtocolExtensionContainer { {UL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= ProtocolIE-Container {{DL-CCTrCHInformationListIEs-RL-ReconfReadyTDD}}

DL-CCTrCHInformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD   CRITICALITY ignore   TYPE DL-CCTrCHInformationListIE-RL-ReconfReadyTDD   PRESENCE mandatory
  },

```



```

}
...
}
DL-CCTrCHInformationListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-RL-ReconfReadyTDD
DL-CCTrCH-InformationItem-RL-ReconfReadyTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    dl-DPCH-Information      DL-DPCH-InformationList-RL-ReconfReadyTDD,
    iE-Extensions            ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationList-RL-ReconfReadyTDD ::= ProtocolIE-Container { {DL-DPCH-InformationListIEs-RL-ReconfReadyTDD} }

DL-DPCH-InformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationListIE-RL-ReconfReadyTDD    CRITICALITY ignore    TYPE DL-DPCH-InformationListIE-RL-ReconfReadyTDD    PRESENCE mandatory
    },
    ...
}

DL-DPCH-InformationListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationItem-RL-ReconfReadyTDD
DL-DPCH-InformationItem-RL-ReconfReadyTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode  TDD-ChannelisationCode    OPTIONAL,
    burstType               BurstType                OPTIONAL,
    midambleShift           MidambleShift            OPTIONAL,
    timeSlot                TimeSlot                 OPTIONAL,
    tDD-PhysicalChannelOffset  TDD-PhysicalChannelOffset    OPTIONAL,
    repetitionPeriod        RepetitionPeriod         OPTIONAL,
    repetitionLength        RepetitionLength         OPTIONAL,
    tFCI-Presence           TFCI-Presence            OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {DL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfReadyTDD ::= ProtocolIE-Container { {DCH-AddList-RL-ReconfReadyTDD-IEs} }

DCH-AddList-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddListIE    CRITICALITY ignore    TYPE DCH-AddListIE-RL-ReconfReadyTDD    PRESENCE mandatory
    },
    ...
}

DCH-AddListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfReadyTDD

```

```

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

DCH-AddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfReadyTDD ::= ProtocolIE-Container { {DCH-ModifyList-RL-ReconfReadyTDD-IEs} }

DCH-ModifyList-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyListIE                CRITICALITY ignore TYPE DCH-ModifyListIE-RL-ReconfReadyTDD PRESENCE mandatory },
    ...
}

DCH-ModifyListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-RL-ReconfReadyTDD

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

DCH-ModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationReadyTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION COMMIT
--
-- *****

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

RadioLinkReconfigurationCommit-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CFN                CRITICALITY ignore TYPE CFN PRESENCE mandatory },

```

```

}
...
}
RadioLinkReconfigurationCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- RADIO LINK RECONFIGURATION FAILURE
--
-- *****

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

RadioLinkReconfigurationFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE mandatory } |
    { ID id-RL-ReconfigurationFailureList-RL-ReconfFail
      CRITICALITY ignore TYPE RL-ReconfigurationFailureList-RL-ReconfFail
      PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
    ...
}

RL-ReconfigurationFailureList-RL-ReconfFail ::= RL-IE-ContainerList { {RL-ReconfigurationFailure-RL-ReconfFail-IEs} }

RL-ReconfigurationFailure-RL-ReconfFail-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-ReconfigurationFailure-RL-ReconfFail CRITICALITY ignore TYPE RL-ReconfigurationFailure-RL-ReconfFail PRESENCE mandatory },
    ...
}

RL-ReconfigurationFailure-RL-ReconfFail ::= SEQUENCE {
    rL-ID          RL-ID,
    cause          Cause,
    iE-Extensions  ProtocolExtensionContainer { {RL-ReconfigurationFailure-RL-ReconfFail-ExtIEs} } OPTIONAL,
    ...
}

RL-ReconfigurationFailure-RL-ReconfFail-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkReconfigurationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****

```

```

--
-- RADIO LINK RECONFIGURATION CANCEL
--
-- *****

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

RadioLinkReconfigurationCancel-IEs RNSAP-PROTOCOL-IES ::= {
    ...
}

RadioLinkReconfigurationCancel-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST FDD
--
-- *****

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

RadioLinkReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY reject TYPE AllowedQueuingTime          PRESENCE mandatory } |
    { ID id-UL-DPCH-Information          CRITICALITY reject TYPE UL-DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } |
    { ID id-DL-DPCH-Information          CRITICALITY reject TYPE DL-DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } |
    { ID id-DCH-ModifyList-RL-ReconfRqstFDD CRITICALITY reject TYPE DCH-ModifyList-RL-ReconfRqstFDD PRESENCE mandatory } |
    { ID id-DCH-AddList-RL-ReconfRqstFDD CRITICALITY reject TYPE DCH-AddList-RL-ReconfRqstFDD PRESENCE mandatory } |
    { ID id-DCH-DeleteList-RL-ReconfRqstFDD CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfRqstFDD PRESENCE mandatory },
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    tFCS          TransportFormatCombinationSet OPTIONAL,
    meanBitRate   MeanBitRate OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```
DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    tFCS                TransportFormatCombinationSet    OPTIONAL,
    tFCI-SignallingMode TFCI-SignallingMode OPTIONAL,
    meanBitRate         MeanBitRate    OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { {DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
DCH-ModifyList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
    dCH-ID                DCH-ID,
    ul-TransportformatSet TransportFormatSet    OPTIONAL,
    dl-TransportformatSet TransportFormatSet    OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority FrameHandlingPriority  OPTIONAL,
    ul-FP-Mode            UL-FP-Mode    OPTIONAL,
    toAWS                 ToAWS        OPTIONAL,
    toAWE                 ToAWE        OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {DCH-ModifyList-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
DCH-ModifyList-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
DCH-AddList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
    dCH-ID                DCH-ID,
    rLC-Mode              RLC-Mode,
    dCH-CombinationInd    DCH-CombinationInd  OPTIONAL,
    ul-TransportformatSet TransportFormatSet,
    dl-TransportformatSet TransportFormatSet,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode            UL-FP-Mode,
    toAWS                 ToAWS,
    toAWE                 ToAWE,
    iE-Extensions        ProtocolExtensionContainer { {DCH-AddList-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
DCH-AddList-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```

DCH-DeleteList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
    dCH-ID DCH-ID,
    iE-Extensions ProtocolExtensionContainer { {DCH-DeleteList-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-DeleteList-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--
-- *****

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

RadioLinkReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime CRITICALITY reject TYPE AllowedQueuingTime PRESENCE optional } |
    { ID id-UL-MeanBitRate CRITICALITY reject TYPE MeanBitRate PRESENCE optional } |
    { ID id-DL-MeanBitRate CRITICALITY reject TYPE MeanBitRate PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD
        CRITICALITY notify TYPE UL-CCTrCH-InformationList-RL-ReconfRqstTDD PRESENCE optional } |
    { ID id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD
        CRITICALITY notify TYPE DL-CCTrCH-InformationList-RL-ReconfRqstTDD PRESENCE optional } |
    { ID id-DCH-ModifyList-RL-ReconfRqstTDD CRITICALITY reject TYPE DCH-ModifyList-RL-ReconfRqstTDD PRESENCE optional } |
    { ID id-DCH-AddList-RL-ReconfRqstTDD CRITICALITY reject TYPE DCH-AddList-RL-ReconfRqstTDD PRESENCE optional } |
    { ID id-DCH-DeleteList-RL-ReconfRqstTDD CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfRqstTDD PRESENCE optional },
    ...
}

UL-CCTrCH-InformationList-RL-ReconfRqstTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrCH-InformationList-RL-ReconfRqstTDD-IEs} }

UL-CCTrCH-InformationList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationItem-RL-ReconfRqstTDD CRITICALITY notify TYPE UL-CCTrCH-InformationItem-RL-ReconfRqstTDD PRESENCE mandatory },
    ...
}

UL-CCTrCH-InformationItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCCTrCH-ID CCTrCH-ID,

```

```

    tFCS                TransportFormatCombinationSet,
    iE-Extensions        ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-InformationItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-ReconfRqstTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrCH-InformationList-RL-ReconfRqstTDD-IEs} }

DL-CCTrCH-InformationList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationItem-RL-ReconfRqstTDD CRITICALITY notify TYPE DL-CCTrCH-InformationItem-RL-ReconfRqstTDD PRESENCE mandatory },
    ...
}

DL-CCTrCH-InformationItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCtTrCH-ID          CCTrCH-ID,
    tFCS                TransportFormatCombinationSet,
    iE-Extensions        ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF DCH-ModifyItem-RL-ReconfRqstTDD

DCH-ModifyItem-RL-ReconfRqstTDD ::= 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,
    ul-FP-Mode          UL-FP-Mode OPTIONAL,
    toAWS               ToAWS OPTIONAL,
    toAWE               ToAWE OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfRqstTDD

```

```

DCH-AddItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    rLC-Mode              RLC-Mode,
    ul-CCTrCH-ID         CCTrCH-ID,
    dl-CCTrCH-ID         CCTrCH-ID,
    dCH-CombinationInd   DCH-CombinationInd OPTIONAL,
    ul-TransportformatSet TransportFormatSet,
    dl-TransportformatSet TransportFormatSet,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority FrameHandlingPriority,
    ul-FP-Mode           UL-FP-Mode,
    toAWS                ToAWS,
    toAWE                ToAWE,
    iE-Extensions        ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-AddItem-RL-ReconfRqstTDD-ExtIEs RNSAP-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 RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE FDD
--
-- *****

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

```



```

RadioLinkReconfigurationResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseList-RL-ReconfRsp      CRITICALITY ignore      TYPE RL-InformationResponseList-RL-ReconfRsp      PRESENCE
  mandatory } |
  { ID id-CriticalityDiagnostics      CRITICALITY ignore      TYPE CriticalityDiagnostics      PRESENCE optional },
  ...
}

RL-InformationResponseList-RL-ReconfRsp ::= RL-IE-ContainerList { {RL-InformationResponse-RL-ReconfRsp-IEs} }

RL-InformationResponse-RL-ReconfRsp-IEs RNSAP-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,
  max-UL-EbNo                          UL-EbNo          OPTIONAL,
  min-UL-EbNo                          UL-EbNo          OPTIONAL,
  dCHsToBeAdded                        DCH-AddList-RL-ReconfRsp      OPTIONAL,
  dCHsToBeModified                    DCH-ModifyList-RL-ReconfRsp   OPTIONAL,
  iE-Extensions                        ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfRsp-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-ReconfRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-AddList-RL-ReconfRsp ::= ProtocolIE-Container { {DCH-AddListItemIE-RL-ReconfRsp} }

DCH-AddListItemIE-RL-ReconfRsp RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-AddListItem-RL-ReconfRsp      CRITICALITY ignore      TYPE DCH-AddListItem-RL-ReconfRsp      PRESENCE mandatory },
  ...
}

DCH-AddListItem-RL-ReconfRsp ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
  dCH-ID                                DCH-ID,
  bindingID                             BindingID,
  transportLayerAddress                 TransportLayerAddress,
  iE-Extensions                        ProtocolExtensionContainer { {DCH-AddListItem-RL-ReconfRspFDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-AddListItem-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-ModifyList-RL-ReconfRsp ::= ProtocolIE-Container { {DCH-ModifyListItemIE-RL-ReconfRsp} }

DCH-ModifyListItemIE-RL-ReconfRsp RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-DCH-ModifyListItem-RL-ReconfRsp CRITICALITY ignore TYPE DCH-ModifyListItem-RL-ReconfRsp PRESENCE mandatory },
    ...
}

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

DCH-ModifyListItem-RL-ReconfRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE TDD
--
-- *****

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

RadioLinkReconfigurationResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RadioLinkReconfigurationResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK FAILURE INDICATION
--
-- *****

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

```

```

}

RadioLinkFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationList-RL-FailureInd   CRITICALITY ignore   TYPE RL-InformationList-RL-FailureInd   PRESENCE mandatory },
  ...
}

RL-InformationList-RL-FailureInd ::= RL-IE-ContainerList { {RL-Information-RL-FailureInd-IEs} }

RL-Information-RL-FailureInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-FailureInd       CRITICALITY ignore   TYPE RL-Information-RL-FailureInd       PRESENCE mandatory },
  ...
}

RL-Information-RL-FailureInd ::= SEQUENCE {
  rL-ID                RL-ID,
  cause                Cause,
  iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-FailureInd-ExtIEs} } OPTIONAL,
  ...
}

RL-Information-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RESTORE INDICATION
--
-- *****

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

RadioLinkRestoreIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationList-RL-RestoreInd   CRITICALITY ignore   TYPE RL-InformationList-RL-RestoreInd   PRESENCE mandatory },
  ...
}

RL-InformationList-RL-RestoreInd ::= RL-IE-ContainerList { {RL-Information-RL-RestoreInd-IEs} }

RL-Information-RL-RestoreInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-RestoreInd       CRITICALITY ignore   TYPE RL-Information-RL-RestoreInd       PRESENCE mandatory },

```

```

}
...
}
RL-Information-RL-RestoreInd ::= SEQUENCE {
    rL-ID                RL-ID,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-RestoreInd-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkRestoreIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DOWNLINK POWER CONTROL REQUEST
--
-- *****

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

DL-PowerControlRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-ProcedureScope-DL-PC-Rqst          CRITICALITY ignore  TYPE ProcedureScope-DL-PC-Rqst          PRESENCE mandatory  },
    ...
}

ProcedureScope-DL-PC-Rqst ::= CHOICE {
    allRLs                AllRLs-DL-PC-Rqst,
    individualRLs         IndividualRLs-DL-PC-Rqst,
    ...
}

AllRLs-DL-PC-Rqst ::= ProtocolIE-Container {{ AllRLsItemIE-DL-PC-Rqst }}

AllRLsItemIE-DL-PC-Rqst RNSAP-PROTOCOL-IES ::= {
    { ID id-AllRLsItem-DL-PC-Rqst          CRITICALITY ignore  TYPE AllRLsItem-DL-PC-Rqst          PRESENCE mandatory  },
    ...
}

AllRLsItem-DL-PC-Rqst ::= SEQUENCE {
    dl-ReferencePower      DL-Power,
    iE-Extensions         ProtocolExtensionContainer { { AllRLsItem-DL-PC-Rqst-ExtIEs} } OPTIONAL,
    ...
}

```

```

}

AllRlsItem-DL-PC-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

IndividualRls-DL-PC-Rqst ::= ProtocolIE-Container {{ IndividualRlsItemIE-DL-PC-Rqst }}

IndividualRlsItemIE-DL-PC-Rqst RNSAP-PROTOCOL-IES ::= {
    { ID id-IndividualRlsItem-DL-PC-Rqst CRITICALITY ignore TYPE IndividualRlsItem-DL-PC-Rqst PRESENCE mandatory },
    ...
}

IndividualRlsItem-DL-PC-Rqst ::= SEQUENCE {
    dl-ReferencePowerInformationList DL-ReferencePowerInformationList-DL-PC-Rqst,
    iE-Extensions ProtocolExtensionContainer { { IndividualRlsItem-DL-PC-Rqst-ExtIEs } } OPTIONAL,
    ...
}

IndividualRlsItem-DL-PC-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-ReferencePowerInformationList-DL-PC-Rqst ::= ProtocolIE-Container { {DL-ReferencePowerInformationListItemIE-DL-PC-Rqst} }

DL-ReferencePowerInformationListItemIE-DL-PC-Rqst RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-ReferencePowerInformationListItem-DL-PC-Rqst CRITICALITY ignore TYPE DL-ReferencePowerInformationListItem-DL-PC-Rqst PRESENCE mandatory
    },
    ...
}

DL-ReferencePowerInformationListItem-DL-PC-Rqst ::= SEQUENCE (SIZE(1..maxNrOfRLs)) OF
SEQUENCE {
    rL-ID RL-ID,
    dl-Power DL-Power,
    iE-Extensions ProtocolExtensionContainer { {DL-ReferencePowerInformationListItem-DL-PC-Rqst-ExtIEs} } OPTIONAL,
    ...
}

DL-ReferencePowerInformationListItem-DL-PC-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-PowerControlRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST FDD
--

```

```
-- *****
```

```
PhysicalChannelReconfigurationRequestFDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{PhysicalChannelReconfigurationRequestFDD-IEs}},
    protocolExtensions         ProtocolExtensionContainer {{PhysicalChannelReconfigurationRequestFDD-Extensions}}
    ...
}

PhysicalChannelReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-PhyChReconfRqstFDD    CRITICALITY reject    TYPE RL-Information-PhyChReconfRqstFDD    PRESENCE mandatory    },
    ...
}

RL-Information-PhyChReconfRqstFDD ::= SEQUENCE {
    rL-ID                      RL-ID,
    dl-CodeInformations        DL-CodeInformationList-PhyChReconfRqstFDD,
    iE-Extensions              ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-PhyChReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CodeInformationList-PhyChReconfRqstFDD ::= ProtocolIE-Container { {DL-CodeInformationListItemIE-PhyChReconfRqstFDD} }

DL-CodeInformationListItemIE-PhyChReconfRqstFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CodeInformationListItem-PhyChReconfRqstFDD    CRITICALITY notify    TYPE DL-CodeInformationListItem-PhyChReconfRqstFDD    PRESENCE mandatory    },
    ...
}

DL-CodeInformationListItem-PhyChReconfRqstFDD ::= SEQUENCE (SIZE(1..maxNrOfDL-Codes)) OF
    SEQUENCE {
        dl-scramblingCode        DL-ScramblingCode,
        fdd-DL-ChannelisationCodeNumber    FDD-DL-ChannelisationCodeNumber,
        iE-Extensions            ProtocolExtensionContainer { {DL-CodeInformationListItem-PhyChReconfRqstFDD-ExtIEs} } OPTIONAL,
        ...
    }

DL-CodeInformationListItem-PhyChReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PhysicalChannelReconfigurationRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST TDD
```

```

--
-- *****
PhysicalChannelReconfigurationRequestTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{PhysicalChannelReconfigurationRequestTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{PhysicalChannelReconfigurationRequestTDD-Extensions}}
    ...
}

PhysicalChannelReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-PhyChReconfRqstTDD    CRITICALITY reject    TYPE RL-Information-PhyChReconfRqstTDD    PRESENCE mandatory    },
    ...
}

RL-Information-PhyChReconfRqstTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    ul-CCTrCH-Information    UL-CCTrCH-InformationList-PhyChReconfRqstTDD,
    dl-CCTrCH-Information    DL-CCTrCH-InformationList-PhyChReconfRqstTDD,
    iE-Extensions          ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationList-PhyChReconfRqstTDD ::= ProtocolIE-Container { {UL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs} }

UL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD    CRITICALITY reject    TYPE UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD    PRESENCE
    mandatory    } ,
    ...
}

UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-PhyChReconfRqstTDD

UL-CCTrCH-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    cCtRCH-ID                CCTrCH-ID,
    ul-DPCH-Information    UL-DPCH-InformationList-PhyChReconfRqstTDD,
    iE-Extensions          ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationList-PhyChReconfRqstTDD ::= DPCH-IE-ContainerList { {UL-DPCH-InformationListIEs-PhyChReconfRqstTDD} }

UL-DPCH-InformationListIEs-PhyChReconfRqstTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationItem-PhyChReconfRqstTDD    CRITICALITY notify    TYPE UL-DPCH-InformationItem-PhyChReconfRqstTDD    PRESENCE mandatory    },
    ...
}

```

```

}

UL-DPCH-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode OPTIONAL,
    burstType              BurstType OPTIONAL,
    midambleShift          MidambleShift OPTIONAL,
    timeSlot               TimeSlot OPTIONAL,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset OPTIONAL,
    repetitionPeriod       RepetitionPeriod OPTIONAL,
    repetitionLength       RepetitionLength OPTIONAL,
    tFCI-Presence          TFCI-Presence OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {UL-DPCH-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-PhyChReconfRqstTDD ::= ProtocolIE-Container { {DL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs} }

DL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD CRITICALITY reject TYPE DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD PRESENCE
    mandatory } ,
    ...
}

DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-PhyChReconfRqstTDD

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

DL-CCTrCH-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationList-PhyChReconfRqstTDD ::= DPCH-IE-ContainerList {{DL-DPCH-InformationListIEs-PhyChReconfRqstTDD}}

DL-DPCH-InformationListIEs-PhyChReconfRqstTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationItem-PhyChReconfRqstTDD CRITICALITY notify TYPE DL-DPCH-InformationItem-PhyChReconfRqstTDD PRESENCE mandatory },
    ...
}

DL-DPCH-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,

```



```

tDD-ChannelisationCode      TDD-ChannelisationCode      OPTIONAL,
burstType                    BurstType                    OPTIONAL,
midambleShift                MidambleShift                OPTIONAL,
timeSlot                     TimeSlot                     OPTIONAL,
tDD-PhysicalChannelOffset    TDD-PhysicalChannelOffset    OPTIONAL,
repetitionPeriod             RepetitionPeriod             OPTIONAL,
repetitionLength             RepetitionLength             OPTIONAL,
tFCI-Presence                TFCI-Presence                OPTIONAL,
iE-Extensions                ProtocolExtensionContainer { {DL-DPCH-InformationList-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-InformationList-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

PhysicalChannelReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION COMMAND
--
-- *****

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

PhysicalChannelReconfigurationCommand-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CFN          CRITICALITY ignore TYPE CFN          PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

PhysicalChannelReconfigurationCommand-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION FAILURE
--
-- *****

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

```

```

}
...
}
PhysicalChannelReconfigurationFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

PhysicalChannelReconfigurationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- UPLINK SIGNALLING TRANSFER INDICATION
--
-- *****

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

UplinkSignallingTransferIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UC-ID          CRITICALITY ignore TYPE UC-ID          PRESENCE mandatory } |
  { ID id-SAI            CRITICALITY ignore TYPE SAI            PRESENCE mandatory } |
  { ID id-C-RNTI        CRITICALITY ignore TYPE C-RNTI        PRESENCE mandatory } |
  { ID id-S-RNTI        CRITICALITY ignore TYPE S-RNTI        PRESENCE mandatory } |
  { ID id-D-RNTI        CRITICALITY ignore TYPE D-RNTI        PRESENCE optional } |
  { ID id-L3-Information CRITICALITY ignore TYPE L3-Information PRESENCE mandatory } |
  { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional } |
  { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional } |
  { ID id-URA-ID        CRITICALITY ignore TYPE URA-ID        PRESENCE mandatory } |
  { ID id-MultipleURAsIndicator CRITICALITY ignore TYPE MultipleURAsIndicator PRESENCE mandatory } |
  { ID id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind
    CRITICALITY ignore TYPE RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind
    PRESENCE mandatory },
  ...
}

-- All RNC-IDs share same criticality!
RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind ::= SEQUENCE (SIZE (1..maxRNCinURA)) OF
SEQUENCE {
  rNC-ID          RNC-ID,
  iE-Extensions  ProtocolExtensionContainer { {RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind-ExtIEs} } OPTIONAL,
  ...
}

RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
UplinkSignallingTransferIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- DOWNLINK SIGNALLING TRANSFER REQUEST
--
-- *****

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

DownlinkSignallingTransferRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-C-ID          CRITICALITY ignore TYPE C-ID          PRESENCE mandatory } |
    { ID id-D-RNTI       CRITICALITY ignore TYPE D-RNTI       PRESENCE mandatory } |
    { ID id-L3-Information CRITICALITY ignore TYPE L3-Information PRESENCE mandatory } |
    { ID id-D-RNTI-ReleaseIndication CRITICALITY ignore TYPE D-RNTI-ReleaseIndication PRESENCE mandatory },
    ...
}

DownlinkSignallingTransferRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- RELOCATION COMMIT
--
-- *****

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

RelocationCommit-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI       CRITICALITY ignore TYPE D-RNTI       PRESENCE mandatory } |
    { ID id-RANAP-RelocationInformation CRITICALITY ignore TYPE RANAP-RelocationInformation PRESENCE mandatory },
    ...
}

RelocationCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

}

-- *****
--
-- PAGING REQUEST
--
-- *****

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

PagingRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-PagingArea-PagingRqst          CRITICALITY ignore TYPE PagingArea-PagingRqst          PRESENCE mandatory } |
    { ID id-SRNC-ID                        CRITICALITY ignore TYPE SRNC-ID                        PRESENCE mandatory } |
    { ID id-S-RNTI                          CRITICALITY ignore TYPE S-RNTI                          PRESENCE mandatory } |
    { ID id-DRX-Parameter                   CRITICALITY ignore TYPE DRX-Parameter                   PRESENCE mandatory },
    ...
}

PagingArea-PagingRqst ::= CHOICE {
    uRA          URA-ID,
    cell         C-ID,
    ...
}

PagingRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION REQUEST
--
-- *****

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

DedicatedMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID                    CRITICALITY reject TYPE MeasurementID                    PRESENCE mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rqst CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rqst PRESENCE mandatory } |
    { ID id-MeasurementCharacteristics        CRITICALITY reject TYPE MeasurementCharacteristics        PRESENCE mandatory } |
    { ID id-ReportCharacteristics             CRITICALITY reject TYPE ReportCharacteristics             PRESENCE mandatory },
    ...
}

```

```

DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {
    rLs                RLS-DM-Rqst,
    ...
}

RLs-DM-Rqst ::= ProtocolIE-Container {{ RLSItemIE-DM-Rqst }}

RLsItemIE-DM-Rqst RNSAP-PROTOCOL-IES ::= {
    { ID id-RLsItem-DM-Rqst    CRITICALITY reject    TYPE    RLSItem-DM-Rqst    PRESENCE    mandatory },
    ...
}

RLsItem-DM-Rqst ::= SEQUENCE {
    rL-InformationList        RL-InformationList-DM-Rqst,
    iE-Extensions              ProtocolExtensionContainer { { RLSItem-DM-Rqst-ExtIEs } } OPTIONAL,
    ...
}

RLsItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-DM-Rqst                ::= RL-IE-ContainerList { {RL-Information-DM-Rqst-IEs} }

RL-Information-DM-Rqst-IEs RNSAP-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 RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementInitiationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION RESPONSE
--
-- *****

```

```

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

DedicatedMeasurementInitiationResponse-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rspns CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rspns PRESENCE mandatory } |
    { ID id-CFN                    CRITICALITY ignore TYPE CFN                    PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

DedicatedMeasurementObjectType-DM-Rspns ::= CHOICE {
    rLs          RLS-DM-Rspns,
    allRL        ALLRL-DM-Rspns,
    ...
}

RLs-DM-Rspns ::= ProtocolIE-Container {{ RLSItemIE-DM-Rspns }}

RLsItemIE-DM-Rspns RNSAP-PROTOCOL-IES ::= {
    { ID id-RLsItem-DM-Rspns CRITICALITY ignore TYPE RLSItem-DM-Rspns PRESENCE mandatory },
    ...
}

RLsItem-DM-Rspns ::= SEQUENCE {
    rL-InformationList          RL-InformationList-DM-Rspns,
    iE-Extensions               ProtocolExtensionContainer { {RLsItem-DM-Rspns-ExtIEs} } OPTIONAL,
    ...
}

RLsItem-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-DM-Rspns ::= RL-IE-ContainerList { {RL-Information-DM-Rspns-IEs} }

RL-Information-DM-Rspns-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rspns CRITICALITY ignore TYPE RL-InformationItem-DM-Rspns PRESENCE mandatory },
    ...
}

RL-InformationItem-DM-Rspns ::= SEQUENCE {
    rL-ID          RL-ID,
    dPCH-ID        DPCH-ID          OPTIONAL,
    dedicatedMeasurementValue DedicatedMeasurementValue,
    iE-Extensions ProtocolExtensionContainer { {RL-InformationItem-DM-Rspns-ExtIEs} } OPTIONAL,
    ...
}

```

```
RL-InformationItem-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}  
  
ALLRL-DM-Rspns ::= ProtocolIE-Container {{ ALLRLItemIE-DM-Rspns }}  
  
ALLRLItemIE-DM-Rspns RNSAP-PROTOCOL-IES ::= {  
    { ID id-ALLRLItem-DM-Rspns CRITICALITY ignore TYPE ALLRLItem-DM-Rspns PRESENCE mandatory },  
    ...  
}
```

```

ALLRLItem-DM-Rspns ::= SEQUENCE {
    allRL-Information          AllRL-Information-DM-Rspns,
    iE-Extensions              ProtocolExtensionContainer { { ALLRLItem-DM-Rspns-ExtIEs } } OPTIONAL,
    ...
}

ALLRLItem-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

AllRL-Information-DM-Rspns ::= SEQUENCE {
    dedicatedMeasurementValue    DedicatedMeasurementValue,
    iE-Extensions                ProtocolExtensionContainer { {AllRL-Information-DM-Rspns-ExtIEs} } OPTIONAL,
    ...
}

AllRL-Information-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementInitiationResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION FAILURE
--
-- *****

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

DedicatedMeasurementInitiationFailure-IEs RNSAP-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 },
    ...
}

DedicatedMeasurementInitiationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT REPORT
--

```



```

-- *****
DedicatedMeasurementReport ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{DedicatedMeasurementReport-IEs}},
    protocolExtensions          ProtocolExtensionContainer {{DedicatedMeasurementReport-Extensions}}
    ...
}

DedicatedMeasurementReport-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rprt CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rprt PRESENCE mandatory } |
    { ID id-CFN                    CRITICALITY ignore TYPE CFN                    PRESENCE optional },
    ...
}

DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
    rLs                RLs-DM-Rprt,
    allRL              ALLRL-DM-Rprt,
    ...
}

RLs-DM-Rprt ::= ProtocolIE-Container {{ RLsItemIE-DM-Rprt }}

RLsItemIE-DM-Rprt RNSAP-PROTOCOL-IES ::= {
    { ID id-RLsItem-DM-Rprt CRITICALITY ignore TYPE RLsItem-DM-Rprt PRESENCE mandatory },
    ...
}

RLsItem-DM-Rprt ::= SEQUENCE {
    rL-InformationList          RL-InformationList-DM-Rprt,
    iE-Extensions              ProtocolExtensionContainer { { RLsItem-DM-Rprt-ExtIEs } } OPTIONAL,
    ...
}

RLsItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-DM-Rprt ::= RL-IE-ContainerList { {RL-Information-DM-Rprt-IEs} }

RL-Information-DM-Rprt-IEs RNSAP-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,
    dedicatedMeasurementValue DedicatedMeasurementValue,
    iE-Extensions            ProtocolExtensionContainer { {RL-InformationItem-DM-Rprt-ExtIEs} } OPTIONAL,
    ...
}

```

```

}

RL-InformationItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

ALLRL-DM-Rprt ::= ProtocolIE-Container {{ ALLRLItemIE-DM-Rprt }}

ALLRLItemIE-DM-Rprt RNSAP-PROTOCOL-IES ::= {
    { ID id-ALLRLItem-DM-Rprt    CRITICALITY ignore    TYPE ALLRLItem-DM-Rprt    PRESENCE mandatory },
    ...
}

ALLRLItem-DM-Rprt ::= SEQUENCE {
    allRL-Information-DM-Rprt    AllRL-Information-DM-Rprt,
    iE-Extensions                ProtocolExtensionContainer { { ALLRLItem-DM-Rprt-ExtIEs } } OPTIONAL,
    ...
}

ALLRLItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

AllRL-Information-DM-Rprt ::= SEQUENCE {
    dedicatedMeasurementValue    DedicatedMeasurementValue,
    iE-Extensions                ProtocolExtensionContainer { {AllRL-Information-DM-Rprt-ExtIEs} } OPTIONAL,
    ...
}

AllRL-Information-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementReport-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT TERMINATION REQUEST
--
-- *****

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

DedicatedMeasurementTerminationRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID        CRITICALITY ignore    TYPE MeasurementID        PRESENCE mandatory },

```

```

}
...
}
DedicatedMeasurementTerminationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- DEDICATED MEASUREMENT FAILURE INDICATION
--
-- *****

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

DedicatedMeasurementFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID      CRITICALITY ignore TYPE MeasurementID      PRESENCE mandatory } |
    { ID id-Cause              CRITICALITY ignore TYPE Cause              PRESENCE mandatory },
    ...
}

DedicatedMeasurementFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST
--
-- *****

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

CommonTransportChannelResourcesReleaseRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI            CRITICALITY ignore TYPE D-RNTI            PRESENCE mandatory } |
    { ID id-C-RNTI            CRITICALITY ignore TYPE C-RNTI            PRESENCE optional },
    ...
}

CommonTransportChannelResourcesReleaseRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES REQUEST
--
-- *****

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

CommonTransportChannelResourcesRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY reject TYPE D-RNTI          PRESENCE mandatory } |
    { ID id-TransportBearerRequestIndicator CRITICALITY reject TYPE TransportBearerRequestIndicator PRESENCE mandatory } |
    { ID id-TransportBearerID CRITICALITY reject TYPE TransportBearerID PRESENCE mandatory },
    ...
}

CommonTransportChannelResourcesRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RESPONSE FDD
--
-- *****

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

CommonTransportChannelResourcesResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE mandatory } |
    { ID id-FACH-InfoForS-CCPCH-CoupledToPRACH CRITICALITY ignore TYPE FACH-InfoForS-CCPCH-CoupledToPRACH PRESENCE mandatory } |
    { ID id-FACH-InfoForOptionals-CCPCH-FDD CRITICALITY ignore TYPE FACH-InfoForOptionals-CCPCH-FDD PRESENCE optional } |
    { ID id-TransportLayerAddress CRITICALITY ignore TYPE TransportLayerAddress PRESENCE optional } |
    { ID id-BindingID        CRITICALITY ignore TYPE BindingID        PRESENCE optional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

FACH-InfoForS-CCPCH-CoupledToPRACH ::= SEQUENCE {
    priorityIndicatorAndInitialWindowSizees PriorityIndicatorAndInitialWindowSizeList,
    IE-Extensions ProtocolExtensionContainer { {FACH-InfoForS-CCPCH-CoupledToPRACH-ExtIEs} } OPTIONAL,
    ...
}

```

```

FACH-InfoForS-CCPCH-CoupledToPRACH-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
PriorityIndicatorAndInitialWindowSizeList ::= ProtocolIE-Container {{PriorityIndicatorAndInitialWindowSizeList-IEs}}

PriorityIndicatorAndInitialWindowSizeList-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-PriorityIndicatorAndInitialWindowSizeListIE CRITICALITY ignore TYPE PriorityIndicatorAndInitialWindowSizeListIE PRESENCE mandatory },
    ...
}

PriorityIndicatorAndInitialWindowSizeListIE ::= SEQUENCE (SIZE (1..16)) OF
    SEQUENCE {
        FACH-PriorityIndicator          FACH-PriorityIndicator,
        MAC-c-SDU-Lengths              MAC-c-SDU-LengthList,
        FACH-InitialWindowSize         FACH-InitialWindowSize,
        IE-Extensions                  ProtocolExtensionContainer { {PriorityIndicatorAndInitialWindowSizeList-ExtIEs} } OPTIONAL,
        ...
    }

PriorityIndicatorAndInitialWindowSizeList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MAC-c-SDU-LengthList ::= ProtocolIE-Container {{ MAC-c-SDU-LengthListItemIE }}

MAC-c-SDU-LengthListItemIE RNSAP-PROTOCOL-IES ::= {
    { ID id-MAC-c-SDU-LengthListItem CRITICALITY ignore TYPE MAC-c-SDU-LengthListItem PRESENCE mandatory },
    ...
}

MAC-c-SDU-LengthListItem ::= SEQUENCE (SIZE (1..maxNrOfMACcSDU-Length)) OF
    SEQUENCE {
        MAC-c-SDU-Length              MAC-c-SDU-Length,
        IE-Extensions                ProtocolExtensionContainer { {MAC-c-SDU-LengthList-ExtIEs} } OPTIONAL,
        ...
    }

MAC-c-SDU-LengthList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-InfoForOptionalS-CCPCH-FDD ::= SEQUENCE {
    FDD-S-CCPCH-Offset              FDD-S-CCPCH-Offset,
    dl-ScramblingCode              DL-ScramblingCode,
    FDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    dl-TFCS                        TransportFormatCombinationSet,
    secondaryCCPCH-SlotFormat      SecondaryCCPCH-SlotFormat,
    pilotBitsUsedIndicator          PilotBitsUsedIndicator,
    multiplexingPosition            MultiplexingPosition,
    sSDT-Indication                SSdT-Indication,
    priorityIndicatorAndInitialWindowSizeList PriorityIndicatorAndInitialWindowSizeList2,

```

```

    iE-Extensions          ProtocolExtensionContainer { {FACH-InfoForOptionalS-CCPCH-ExtIEs} } OPTIONAL,
    ...
}

FACH-InfoForOptionalS-CCPCH-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PriorityIndicatorAndInitialWindowSizeList2 ::= ProtocolIE-Container {{PriorityIndicatorAndInitialWindowSizeList2-IEs}}

PriorityIndicatorAndInitialWindowSizeList2-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-PriorityIndicatorAndInitialWindowSizeList2IE    CRITICALITY ignore    TYPE PriorityIndicatorAndInitialWindowSizeList2IE    PRESENCE mandatory
    },
    ...
}

PriorityIndicatorAndInitialWindowSizeList2IE ::= SEQUENCE (SIZE (1..16)) OF
    SEQUENCE {
        fACH-PriorityIndicator          FACH-PriorityIndicator,
        dataFrameSize                   DataFrameSizeList,
        fACH-InitialWindowSize          FACH-InitialWindowSize,
        iE-Extensions                   ProtocolExtensionContainer { {PriorityIndicatorAndInitialWindowSizeList2-ExtIEs} } OPTIONAL,
        ...
    }

PriorityIndicatorAndInitialWindowSizeList2-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DataFrameSizeList ::= ProtocolIE-Container {{ DataFrameSizeListItemIE }}

DataFrameSizeListItemIE RNSAP-PROTOCOL-IES ::= {
    { ID id-DataFrameSizeListItem    CRITICALITY ignore    TYPE DataFrameSizeListItem    PRESENCE mandatory },
    ...
}

DataFrameSizeListItem ::= SEQUENCE (SIZE (1..maxNrOfMACcSDU-Length)) OF
    SEQUENCE {
        mAC-c-SDU-Length                MAC-c-SDU-Length,
        iE-Extensions                   ProtocolExtensionContainer { {MAC-c-SDU-LengthList2-ExtIEs} } OPTIONAL,
        ...
    }

MAC-c-SDU-LengthList2-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonTransportChannelResourcesResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****

```

```

--
-- COMMON TRANSPORT CHANNEL RESOURCES RESPONSE TDD
--
-- *****

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

CommonTransportChannelResourcesResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE mandatory } |
    { ID id-FACH-InfoForS-CCPCH-CoupledToPRACH CRITICALITY ignore TYPE FACH-InfoForS-CCPCH-CoupledToPRACH PRESENCE optional } |
    { ID id-FACH-InfoForOptionalGroupS-CCPCH-CTCRRsp-TDD CRITICALITY ignore TYPE FACH-InfoForOptionalGroupOfS-CCPCH-CTCRRsp-TDD PRESENCE optional } |
    { ID id-TransportLayerAddress CRITICALITY ignore TYPE TransportLayerAddress PRESENCE optional } |
    { ID id-BindingID CRITICALITY ignore TYPE BindingID PRESENCE optional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

FACH-InfoForOptionalGroupOfS-CCPCH-CTCRRsp-TDD ::= SEQUENCE {
    dl-TFCS          TransportFormatCombinationSet,
    secondaryCCPCHs SecondaryCCPCH-List-CTCRRsp-TDD,
    iE-Extensions   ProtocolExtensionContainer { {FACH-InfoForOptionalGroupOfS-CCPCH-ExtIEs} } OPTIONAL,
    ...
}

FACH-InfoForOptionalGroupOfS-CCPCH-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCCPCH-List-CTCRRsp-TDD ::= ProtocolIE-Container {{SecondaryCCPCH-List-CTCRRsp-TDD-IEs}}

SecondaryCCPCH-List-CTCRRsp-TDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SecondaryCCPCH-ListIE-CTCRRsp-TDD CRITICALITY ignore TYPE SecondaryCCPCH-ListIE-CTCRRsp-TDD PRESENCE mandatory },
    ...
}

SecondaryCCPCH-ListIE-CTCRRsp-TDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF
SEQUENCE {
    tDD-ChannelisationCode TDD-ChannelisationCode,
    timeSlot               TimeSlot,
    burstType              BurstType,
    midambleShift          MidambleShift,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod       RepetitionPeriod,
    repetitionLength       RepetitionLength,
    sSDT-Indication        SSdT-Indication,
    priorityIndicatorAndInitialWindowSizeList PriorityIndicatorAndInitialWindowSizeList2,
}

```

```

        iE-Extensions          ProtocolExtensionContainer { {SecondaryCCPCH-TDD-List-ExtIEs} } OPTIONAL,
        ...
    }

SecondaryCCPCH-TDD-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonTransportChannelResourcesResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES FAILURE
--
-- *****

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

CommonTransportChannelResourcesFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE mandatory } |
    { ID id-Cause           CRITICALITY ignore TYPE Cause          PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

CommonTransportChannelResourcesFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMPRESSED MODE PREPARE
--
-- *****

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

CompressedModePrepare-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-TGP1          CRITICALITY reject TYPE GapPeriod          PRESENCE mandatory } |
    { ID id-TGP2          CRITICALITY reject TYPE GapPeriod          PRESENCE optional } |
    { ID id-TGL           CRITICALITY reject TYPE TGL                PRESENCE mandatory } |

```



```

{ ID id-TGD                CRITICALITY reject TYPE TGD                PRESENCE mandatory } |
{ ID id-PD                 CRITICALITY reject TYPE PD                 PRESENCE mandatory } |
{ ID id-UL-DL-CompressedModeSelection  CRITICALITY reject TYPE UL-DL-CompressedModeSelection  PRESENCE mandatory } |
{ ID id-CompressedModeMethod  CRITICALITY reject TYPE CompressedModeMethod  PRESENCE mandatory } |
{ ID id-GapPositionMode      CRITICALITY reject TYPE GapPositionMode      PRESENCE mandatory } |
{ ID id-SN                   CRITICALITY reject TYPE SN                   PRESENCE conditional
-- This IE is present only if "GapPositionMode" equals to "flexible" --
} |
{ ID id-DL-FrameType        CRITICALITY reject TYPE DL-FrameType        PRESENCE mandatory } |
{ ID id-ScramblingCodeChange  CRITICALITY reject TYPE ScramblingCodeChange  PRESENCE conditional
-- This IE is present only if "CompressedModeMethod" equals to "SF/2" --
} |
{ ID id-PowerControlMode     CRITICALITY reject TYPE PowerControlMode     PRESENCE mandatory } |
{ ID id-PowerResumeMode     CRITICALITY reject TYPE PowerResumeMode     PRESENCE mandatory } |
{ ID id-UL-DeltaEbNo        CRITICALITY reject TYPE UL-EbNo            PRESENCE mandatory } |
{ ID id-UL-DeltaEbNoAfter   CRITICALITY reject TYPE UL-EbNo            PRESENCE mandatory },
...
}

```

```
CompressedModePrepare-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
```

```
...
}
```

```

-- *****
--
-- COMPRESSED MODE READY
--
-- *****

```

```
CompressedModeReady ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CompressedModeReady-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CompressedModeReady-Extensions}}
    ...
}

```

```
CompressedModeReady-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CriticalityDiagnostics  CRITICALITY ignore TYPE CriticalityDiagnostics  PRESENCE optional },
    ...
}

```

```
CompressedModeReady-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

-- *****
--
-- COMPRESSED MODE FAILURE
--
-- *****

```

```
CompressedModeFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CompressedModeFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CompressedModeFailure-Extensions}}
    ...
}

```

```

}
...
}
CompressedModeFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}
CompressedModeFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
-- *****
--
-- COMPRESSED MODE COMMIT
--
-- *****

CompressedModeCommit ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{CompressedModeCommit-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{CompressedModeCommit-Extensions}}
  ...
}
CompressedModeCommit-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CFN          CRITICALITY ignore TYPE CFN          PRESENCE mandatory },
  ...
}
CompressedModeCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
-- *****
--
-- COMPRESSED MODE CANCEL
--
-- *****

CompressedModeCancel ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{CompressedModeCancel-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{CompressedModeCancel-Extensions}}
  ...
}
CompressedModeCancel-IEs RNSAP-PROTOCOL-IES ::= {
  ...
}
CompressedModeCancel-Extensions RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
-- *****
--
-- ERROR INDICATION
--
-- *****

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

ErrorIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause                CRITICALITY ignore TYPE Cause                PRESENCE conditional
    -- At least either of Cause IE or Criticality IE shall be present --      } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE conditional
    -- At least either of Cause IE or Criticality IE shall be present --      },
    ...
}

ErrorIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PRIVATE MESSAGE
--
-- *****

PrivateMessage ::= SEQUENCE {
    privateExtensions         PrivateExtensionContainer {{PrivateExtensions}},
    ...
}

PrivateExtensions RNSAP-PRIVATE-EXTENSION ::= {
    ...
}

END

9.3.4 Information Element Definitions
-- *****
--
-- Information Element Definitions
--
-- *****

```

```
RNSAP-IEs -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxNrOfErrors,
    maxRateMatching,
    maxNrOfTFCs,
    maxNrOfTFs,
    maxTTI-Count
FROM RNSAP-Constants

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM RNSAP-CommonDataTypes

    ProtocolExtensionContainer{},
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;

-- A

AllocationRetentionPriority ::= FrameHandlingPriority

AllowedQueuingTime ::= INTEGER (0..60)
-- seconds

-- B

-- ** NOTE: Size in tabular 1.4,... **
BindingID ::= OCTET STRING (SIZE (1..MAX))

BLER ::= INTEGER (-63..0)
-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER

BurstType ::= ENUMERATED {
    type1 (1),
    type2 (2)
}

-- C

Cause ::= CHOICE {
    radioNetwork          CauseRadioNetwork,
    transmissionNetwork  CauseTransmissionNetwork,
    protocol              CauseProtocol,
    misc                  CauseMisc,
}
```

```
    ...
}

CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    om-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    ...
}

CauseProtocol ::= ENUMERATED {
    transaction-not-allowed,
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    unspecified,
    ...
}

CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    ul-scrambling-code-already-in-use,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    measurement-not-supported-for-the-object,
    macrodiversity-combining-not-possible,
    reconfiguration-not-allowed,
    synchronisation-failure,
    unspecified,
    ...
}

CauseTransmissionNetwork ::= ENUMERATED {
    transmission-link-failure,
    transmission-port-not-available,
    unspecified,
    ...
}

C-ID                ::= INTEGER (0..65535)

CCTrCH-ID           ::= INTEGER (0..15)

CellParameterID     ::= INTEGER (0..127)

CFN                  ::= INTEGER (0..255)
```

```

ChannelCodingType ::= ENUMERATED {
    no-coding,
    convolutional-coding,
    turbo-coding--,
-- ...
}

-- ** TODO **
ChipOffset          ::= INTEGER

CodingRate ::= ENUMERATED {
    half,
    third--,
-- ...
}

CompressedModeMethod ::= ENUMERATED {
    none,
    puncturing,
    sF2,
    gating
}

CPICH-EcIo          ::= INTEGER

CRC-Size            ::= INTEGER (0| 8| 12| 16| 24)

CriticalityDiagnostics ::= SEQUENCE {
    procedureCode      ProcedureCode          OPTIONAL,
    triggeringMessage  TriggeringMessage     OPTIONAL,
    criticalityResponse Criticality           OPTIONAL,
    transactionID     TransactionID         OPTIONAL,
    iEsCriticalityResponses CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions     ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

CriticalityDiagnostics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
SEQUENCE {
    criticalityResponse Criticality,
    iE-ID               ProtocolIE-ID,
    iE-Extensions       ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,
    ...
}

CriticalityDiagnostics-IE-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```
}

-- ** TODO **
CTFC ::= INTEGER
-- See formula (must be resolved)

CN-CS-DomainIdentifier ::= SEQUENCE {
    pLMN-ID          PLMN-ID,
    iE-Extensions    ProtocolExtensionContainer { {CN-CS-DomainIdentifier-ExtIEs} } OPTIONAL,
    LAC              LAC
}

CN-CS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CN-PS-DomainIdentifier ::= SEQUENCE {
    pLMN-ID          PLMN-ID,
    LAC              LAC,
    iE-Extensions    ProtocolExtensionContainer { {CN-PS-DomainIdentifier-ExtIEs} } OPTIONAL,
    rAC              RAC
}

CN-PS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **TODO**
CPICH-Power ::= INTEGER

C-RNTI ::= INTEGER (0..65535)

-- D

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

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

DedicatedMeasurementObjectType ::= ENUMERATED {
    r1,
    all-r1,
    ...
}
-- ** OR:
-- DedicatedMeasurementObjectType ::= INTEGER {
--    rL(0),
--    allRL(1)
-- } (0..255)
-- **

DedicatedMeasurementType ::= ENUMERATED {
```

```

    sir,
    sir-error,
    transmitted-code-power,
    rSCP,
    ...
}
-- timeslotTSCP is used by TDD only

-- ** OR:
-- DedicatedMeasurementType ::= INTEGER {
--   sIR(0),
--   sIR-Error(1),
--   transmittedCodePower(2),
--   rSCP(3)
-- } (0..255)
-- **

-- ** NOTE: Extensibility added **
-- **TODO**

DedicatedMeasurementValue ::= SEQUENCE {
    sIR-Value          ScaledSIR-Value          OPTIONAL,
    sIR-ErrorValue     ScaledSIR-ErrorValue     OPTIONAL,
    transmittedCodePowerValue ScaledTransmittedCodePowerValue OPTIONAL, -- Relative to CPICH
    rSCP               TBD                     OPTIONAL, -- TDD only
    iE-Extensions     ProtocolExtensionContainer { {DedicatedMeasurementValue-ExtIEs} } OPTIONAL,
    ...
}

DedicatedMeasurementValue-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
DiversityControlField ::= INTEGER

-- ** TODO **
DiversityMode ::= INTEGER

-- ** TODO **
DL-ChannelisationCode ::= INTEGER

-- ** TODO **
DL-DPCCH-SlotFormat ::= INTEGER

-- ** TODO **
DL-DPCH-SlotNumber ::= INTEGER

DL-EbNo ::= ScaledUL-EbNo

DL-EbNoTarget ::= ScaledUL-EbNo

```



```

-- ** TODO **
DL-Power ::= INTEGER

D-RNTI ::= INTEGER (0..1048576)
-- ** OR:
-- D-RNTI ::= BIT STRING (SIZE (20))
-- **

D-RNTI-ReleaseIndication ::= ENUMERATED {
    not-release-D-RNTI,
    release-D-RNTI
}

-- ** TODO **
DL-ScramblingCode ::= INTEGER

DL-FrameType ::= ENUMERATED {
    typeA,
    typeB,
    ...
}

DPCH-ID ::= INTEGER (0..239)

-- **TODO**
DRX-Parameter ::= TBD

-- **TODO**
DSCH-TransportFormatCombinationSet ::= INTEGER

-- **TODO**
DSCH-TFS ::= INTEGER

-- **TODO**
D-FieldLength ::= INTEGER

-- E

EventA ::= SEQUENCE {
    measurementTreshold MeasurementThreshold,
    measurementHysteresisTime ScaledMeasurementHysteresisTime OPTIONAL,
    IE-Extensions ProtocolExtensionContainer { {EventA-ExtIEs} } OPTIONAL,
    ...
}

EventA-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

EventB ::= SEQUENCE {

```

```

    measurementTreshold      MeasurementThreshold,
    measurementHysteresisTime ScaledMeasurementHysteresisTime  OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { {EventB-ExtIEs} } OPTIONAL,
    ...
}

EventC ::= SEQUENCE {
    measurementIncreaseThreshold      MeasurementIncreaseThreshold,
    measurementChangeTime            ScaledMeasurementChangeTime,
    ...
}

EventB-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

EventD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

EventE-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

EventF-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```
}  
  
-- F  
  
FACH-DataFrameSize      ::= INTEGER (1..5000)  
-- Size of data frame in number of bits  
  
FACH-InitialWindowSize  ::= INTEGER { unlimited(255) } (0..255)  
-- Number of FACH data frames.  
-- 255 = Unlimited number of FACH data frames  
  
-- ** TODO **  
FACH-InfoForOptionalS-CCPCH  ::= INTEGER  
  
-- ** TODO **  
FACH-InfoForS-CCPCH-CoupledToPRACH ::= INTEGER  
  
-- ** TODO **  
FDD-DL-ChannelisationCodeNumber ::= INTEGER  
  
-- ** TODO **  
FDD-FL-ChannelisationCodeNumber ::= INTEGER  
  
-- ** TODO **  
FDD-S-CCPCH-Offset        ::= INTEGER  
  
FACH-PriorityIndicator    ::= INTEGER { lowest(0), highest(15) } (0..15)  
FrameHandlingPriority     ::= INTEGER { lowest(0), highest(15) } (0..15)  
  
FrameOffset              ::= INTEGER (0..255)  
-- Frames  
  
-- G  
  
GapPositionMode ::= ENUMERATED {  
    fixed,  
    flexible  
}  
  
GapPeriod              ::= INTEGER (0..255)  
  
-- H  
-- I  
  
-- **TODO**  
InitialDL-TX-Power     ::= INTEGER  
  
-- J  
-- K  
-- L
```

```
LAC ::= OCTET STRING (SIZE (2)) --(EXCEPT ('0000'H|'FFFF'H))

-- ** TODO **
L3-Information ::= INTEGER

-- M

-- ** TODO **
MaxNrOfUL-DPCHs ::= INTEGER

MAC-c-SDU-Length ::= INTEGER (1..5000)

-- **TODO**
MACd-MACsh-TransportFormatSet ::= INTEGER

-- **NOTE: extensibility**
MeasurementCharacteristics ::= SEQUENCE {
    measurementFrequency TBD,
    averagingDuration TBD,
    IE-Extensions ProtocolExtensionContainer { {MeasurementCharacteristics-ExtIEs} } OPTIONAL,
    ...
}

MeasurementCharacteristics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
MeanBitRate ::= INTEGER

MeasurementID ::= INTEGER (0..1048576)
-- **OR:
-- MeasurementID ::= BIT STRING (SIZE (20))
-- **

MultipleURAsIndicator ::= ENUMERATED {
    single-URA-exists,
    multiple-URAs-exist
}

-- ** TODO **
MCC-Digit ::= OCTET STRING (SIZE (3))
-- FFS
-- Reference: 24.008

-- ** TODO **
MNC-Digit ::= OCTET STRING (SIZE (3))
-- FFS
-- Reference: 24.008
```

```
ScaledMeasurementChangeTime ::= INTEGER (1..1000)
-- MeasurementChangeTime = ScaledMeasurementChangeTime * 10
-- Unit is ms

-- ** TODO **
MeasurementDecreaseThreshold ::= INTEGER

ScaledMeasurementHysteresisTime ::= INTEGER (1..1000)
-- MeasurementHysteresisTime = ScaledMeasurementHysteresisTime * 10
-- Unit is ms

-- ** TODO **
MeasurementIncreaseThreshold ::= INTEGER

-- ** TODO **
MeasurementThreshold ::= INTEGER

MidambleShift ::= INTEGER (0..15)

MinUL-ChannelisationCodeLength ::= INTEGER

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

-- N
NrOfTransportBlocks ::= INTEGER (0..4095)

-- O
Offset ::= INTEGER (0..63)

-- P
PD ::= INTEGER (0..2047, ...)

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    crc-not-included,
    crc-included--,
    ...
}

PSCH-TimeSlot ::= INTEGER (0..6)

Periodic ::= SEQUENCE {
    reportPeriodicity ReportPeriodicity,
    iE-Extensions ProtocolExtensionContainer { {Periodic-ExtIEs} } OPTIONAL,
    ...
}
```

```
Periodic-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
PilotBitsUsedIndicator ::= INTEGER

-- ** TODO **
PLMN-ID ::= SEQUENCE {
    mCC-digit      MCC-Digit,
    iE-Extensions  ProtocolExtensionContainer { {PLMN-ID-ExtIEs} } OPTIONAL,
    mNC-digit      MNC-Digit
}
-- FFS

PLMN-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PowerControlMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

PowerOffset ::= INTEGER (0..24)

PowerResumeMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

-- ** TODO **
PrimaryCPICH-Power ::= INTEGER

PrimaryCPICH-EcNo ::= INTEGER (-30..30)

-- ** TODO **
PrimaryCCPCH-RSCP ::= INTEGER

PrimaryScramblingCode ::= ScramblingCode

PropagationDelay ::= INTEGER (0..255)

SyncCase ::= ENUMERATED {
    case1,
    case2,
    case3--,
-- ...
```

```
}

-- ** TODO **
PSCH-CCPCH-TimeSlot      ::= TimeSlot

-- ** TODO **
PSCH-PCCPCH-TimeSlot     ::= TimeSlot

-- ** TODO **
P-CPICH-Power            ::= INTEGER

PunctureLimit           ::= INTEGER (0..100)
-- Unit is %

-- Q
-- R

-- ** TODO **
RAC                      ::= INTEGER

-- ** TODO **
-- OCTET STRING?
RANAP-RelocationInformation ::= BIT STRING

RateMatchingAttribute    ::= INTEGER (1..maxRateMatching)

RepetitionLength         ::= INTEGER (1..63)

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

-- This is changed from the tabular format because it seems that
-- this is what is wanted.
ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          Periodic,
    eventA            EventA,
    eventB            EventB,
    eventC            EventC,
    eventD            EventD,
    eventE            EventE,
    eventF            EventF,
    ...
}
```

```

}

-- Changed
ReportPeriodicity ::= CHOICE {
    msec          INTEGER (1..1000),
    min           INTEGER (1..60)
}

RLC-Mode ::= ENUMERATED {
    acknowledged-mode,
    unacknowledged-mode,
    transparent-mode
}

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

RNC-ID         ::= INTEGER (0..4095)

-- S

-- Changed BIT STRING -> OCTET STRING
SAC           ::= OCTET STRING (SIZE (2))

SAI ::= SEQUENCE {
    pLMN-ID          PLMN-ID,
    lAC              LAC,
    sAC              SAC,
    iE-Extensions   ProtocolExtensionContainer { {SAI-ExtIEs} } OPTIONAL
}

SAI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
ScramblingCode          ::= INTEGER

ScramblingCodeChange ::= ENUMERATED {
    no-code-change,
    code-change
}

ScaledSIR-ErrorValue          ::= INTEGER (-100..100)
-- ScaledSIR-ErrorValue = SIR-ErrorValue * 10
-- If SIR-ErrorValue <= -10 ScaledSIR-ErrorValue shall be set to -100
-- If SIR-ErrorValue >= 10 ScaledSIR-ErrorValue shall be set to 100
-- SIR-ErrorValue step 0.1 dB

ScaledSIR-Value          ::= INTEGER (-100..200)
-- ScaledSIR-Value = SIR-Value * 10
-- SIR-Value step 0.1 dB

```



```
ScaledTransmittedCodePowerValue ::= INTEGER (-350..150)
-- ScaledTransmittedCodePowerValue = TransmittedCodePowerValue * 10
-- TransmittedCodePowerValue step 0.1 dB

-- ** TODO **
SharedChannelType ::= INTEGER

-- ** TODO **
SecondaryCCPCH-SlotFormat ::= INTEGER

SN ::= TimeSlot

SpreadingFactorOfChannelisationCode ::= ENUMERATED {
    v256,
    v128,
    v64,
    v32,
    v16,
    v8,
    v4,
    v2,
    v1
}

-- Changed
S-FieldLength ::= INTEGER (1..2)

S-RNTI ::= INTEGER (0..1048575)
-- From 0 to 2^20-1

-- ** TODO **
SRNC-ID ::= INTEGER

SSDT-CellID ::= 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
}

SSDT-SupportIndicator ::= ENUMERATED {
    sSDT-not-supported,
    sSDT-supported
}

-- T

-- ** TODO **
TBD ::= NULL
-- Remove this type

TDD-ChannelisationCode ::= INTEGER (1..31)

TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TFCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32
}

TFCI-Presence ::= ENUMERATED {
    not-present,
    present
}

TFCI-SignallingMode ::= ENUMERATED {
    normal,
    split
}

-- ** TODO **
TimeReference ::= INTEGER
-- TimeReference ::= INTEGER (0..255)

TimeSlot ::= INTEGER (0..14)

ToAWE ::= INTEGER (0..2559)

ToAWS ::= INTEGER (0..1279)

TPC-StepSize ::= ENUMERATED {
    half,
    one
}
```

```

TGD ::= INTEGER (0..255)

TGL ::= INTEGER (3| 4| 7| 10| 14)

TransmissionTimeInterval ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80--,
-- ...
}

TransportBearerID ::= INTEGER (0..4095)

-- Compare title and IE name in table TransportBearerRequestIndicator vs.
-- FACH-PriorityIndicator
TransportBearerRequestIndicator ::= INTEGER { lowest (0), highest (15) } (0..15)

TransportBlockSize ::= INTEGER (1..5000)
-- Unit is bits

TransportFormatCombinationSet ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
    SEQUENCE {
        cTFC CTFC,
        iE-Extensions ProtocolExtensionContainer { {TransportFormatCombinationSet-ExtIEs} } OPTIONAL,
        ...
    }

TransportFormatCombinationSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet ::= SEQUENCE {
    dynamicParts TransportFormatSet-DynamicPartList,
    semi-staticPart TransportFormatSet-Semi-staticPart,
    iE-Extensions ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
    SEQUENCE {
        nrOfTransportBlocks NrOfTransportBlocks,
        transportBlockSize TransportBlockSize OPTIONAL
        -- This IE is only present if nrOfTransportBlocks is greater than 0 --,
        mode TransportFormatSet-ModeDP,
        iE-Extensions ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-ExtIEs} } OPTIONAL,
    }

```

```

    }
    ...
}

TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeDP ::= CHOICE {
    tdd          TransmissionTimeIntervalList,
    -- This IE is mandatory if not defined as semistatic parameter, otherwise it is absent --
    ...
}

TransmissionTimeIntervalList ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
    SEQUENCE {
        transmissionTimeInterval    TransmissionTimeInterval,
        iE-Extensions               ProtocolExtensionContainer { {TransmissionTimeIntervalList-ExtIEs} } OPTIONAL,
        ...
    }

TransmissionTimeIntervalList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-Semi-staticPart ::= SEQUENCE {
    transmissionTime          TransmissionTimeInterval,
    channelCoding             ChannelCodingType,
    codingRate                CodingRate OPTIONAL
    -- This IE is only present if channelCoding is 'convolutional' or 'turbo' --,
    rateMatchingAttribute     RateMatchingAttribute,
    crc-Size                 CRC-Size,
    mode                     TransportFormatSet-ModeSSP OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {TransportFormatSet-Semi-staticPart-ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-Semi-staticPart-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
    tdd          SecondInterleavingMode,
    ...
}

SecondInterleavingMode ::= ENUMERATED {
    frame-related,
    timeslot-related,
    ...
}

```

```

-- TransportLayerAddress      ::= BIT STRING (1..160, ...)
TransportLayerAddress        ::= OCTET STRING (SIZE (1..20, ...))

-- U

UARFCN                       ::= INTEGER (0..698, ...)

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

UL-DeltaEbNo                 ::= INTEGER (-60..100)

UL-DeltaEbNoAfter           ::= INTEGER (-60..100)

-- ** TODO **
UL-EbNo                     ::= INTEGER

-- ** TODO **
UL-EbNoTarget               ::= INTEGER

UC-ID ::= SEQUENCE {
    rNC-ID          RNC-ID,
    c-ID            C-ID,
    iE-Extensions  ProtocolExtensionContainer { {UC-ID-ExtIEs} } OPTIONAL,
    ...
}

UC-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

ScaledUL-EbNo               ::= INTEGER (0..255)
-- Ul-EbNo = ScaledUL-EbNo / 10

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

ScaledUL-InterferenceLevel  ::= INTEGER (-1280..-600)
-- UL-InterferenceLevel = UL-InterferenceLevel / 10

-- Relation to the ScramblingCode??
UL-ScramblingCode ::= SEQUENCE {
    ul-ScramblingCodeNumber  UL-ScramblingCodeNumber,

```

```

    ul-ScramblingCodeLength    UL-ScramblingCodeLength,
    iE-Extensions              ProtocolExtensionContainer { {UL-ScramblingCode-ExtIEs} } OPTIONAL
}

```

```

UL-ScramblingCode-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long
}

```

```

UL-ScramblingCodeNumber ::= INTEGER (0..16777215)

```

```

URA-ID ::= INTEGER (0..65535)

```

```

-- V
-- W
-- X
-- Y
-- Z

```

```

END

```

9.3.5 Common Definitions

```

-- *****
--
-- Common definitions
--
-- *****

```

```

RNSAP-CommonDataTypes -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

```

```

BEGIN

```

```

Criticality ::= ENUMERATED { reject, ignore, notify }

```

```

Presence ::= ENUMERATED { optional, conditional, mandatory }

```

```

PrivateExtensionID ::= CHOICE {
    local          INTEGER (0..65535),
    global         OBJECT IDENTIFIER
}

```

```

ProcedureCode ::= INTEGER (0..255)

```

```

ProcedureID ::= SEQUENCE {
    procedureCode ProcedureCode,
    ddMode        ENUMERATED { tdd, fdd, common }
}

```

```

}

ProtocolExtensionID ::= INTEGER (0..65535)

ProtocolIE-ID       ::= INTEGER (0..65535)

TransactionID      ::= INTEGER (0..65535)

TriggeringMessage  ::= ENUMERATED { initiating-message, successful-outcome, unsuccessful-outcome, outcome }

```

END

9.3.6 Constant Definitions

```

-- *****
--
-- Constant definitions
--
-- *****

```

```

RNSAP-Constants -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

```

BEGIN

```

-- *****
--
-- Elementary Procedures
--
-- *****

```

```

id-commonTransportChannelResourcesInitiationFDD      INTEGER ::= 0
id-commonTransportChannelResourcesInitiationTDD      INTEGER ::= 1
id-commonTransportChannelResourcesRelease            INTEGER ::= 2
id-compressedModeCancellationFDD                    INTEGER ::= 3
id-compressedModeCommitFDD                          INTEGER ::= 4
id-compressedModePrepareFDD                         INTEGER ::= 5
id-downlinkPowerControl                             INTEGER ::= 6
id-downlinkSignallingTransfer                        INTEGER ::= 7
id-errorIndication                                  INTEGER ::= 8
id-measurementFailure                                INTEGER ::= 9
id-measurementInitiation                             INTEGER ::= 10
id-measurementReporting                              INTEGER ::= 11
id-measurementTermination                           INTEGER ::= 12
id-pagingRequest                                    INTEGER ::= 13
id-physicalChannelReconfiguration                    INTEGER ::= 14
id-privateMessage                                    INTEGER ::= 15
id-radioLinkAddition                                INTEGER ::= 16
id-radioLinkDeletion                                INTEGER ::= 17
id-radioLinkFailure                                  INTEGER ::= 18
id-radioLinkRestoration                             INTEGER ::= 19
id-radioLinkSetup                                    INTEGER ::= 20
id-srnsRelocationCommit                             INTEGER ::= 21

```

```

id-synchronisedRadioLinkReconfigurationCancellation      INTEGER ::= 22
id-synchronisedRadioLinkReconfigurationCommit           INTEGER ::= 23
id-synchronisedRadioLinkReconfigurationPrepare          INTEGER ::= 24
id-unSynchronisedRadioLinkReconfiguration              INTEGER ::= 25
id-uplinkSignallingTransfer                             INTEGER ::= 26

```

```

-- *****
--
-- Extension constants
--
-- *****

```

```

maxPrivateExtensions          INTEGER ::= 65535
maxProtocolExtensions         INTEGER ::= 65535
maxProtocolIEs                INTEGER ::= 65535

```

```

-- *****
--
-- Lists
--
-- *****

```

```

maxRateMatching              INTEGER ::= 10
maxNrOfTFCs                  INTEGER ::= 10
maxNrOfTFs                   INTEGER ::= 10

maxNoOfDL-Codes              INTEGER ::= 10
maxNrOfCCTrCHs               INTEGER ::= 10
maxNrOfDCHs                  INTEGER ::= 10
maxNrOfDL-Codes              INTEGER ::= 10
maxNrOfDPCHs                 INTEGER ::= 10
maxNrOfErrors                INTEGER ::= 10
maxNrOfFACH-FD-Size          INTEGER ::= 10
maxNrOfFDD-Neighbours        INTEGER ::= 10
maxNrOfMACcSDU-Length        INTEGER ::= 10
maxNrOfTDD-Neighbours        INTEGER ::= 10
maxNrOfRLs                   INTEGER ::= 10
maxNrOfSCCPCHs               INTEGER ::= 10
maxRNCinURA                 INTEGER ::= 10
maxTTI-Count                 INTEGER ::= 10

```

```

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

```

```

id-AllowedQueuingTime        INTEGER ::= 0
id-AllRLsItem-DL-PC-Rqst    INTEGER ::= 1
id-ALLRLItem-DM-Rprt        INTEGER ::= 2
id-ALLRLItem-DM-Rspns       INTEGER ::= 3

```



```

id-BindingID                INTEGER ::= 4
id-C-ID                     INTEGER ::= 5
id-C-RNTI                   INTEGER ::= 6
id-CCTrCH-ID                INTEGER ::= 7
id-CFN                      INTEGER ::= 8
id-CN-CS-DomainIdentifier   INTEGER ::= 9
id-CN-PS-DomainIdentifier   INTEGER ::= 10
id-Cause                    INTEGER ::= 11
id-CombiningItem-RL-AdditionFailureFDD INTEGER ::= 12
id-CombiningItem-RL-AdditionRspFDD   INTEGER ::= 13
id-CombiningItem-RL-AdditionRspTDD   INTEGER ::= 14
id-CombiningItem-RL-SetupFailureFDD  INTEGER ::= 15
id-CombiningItem-RL-SetupRspFDD      INTEGER ::= 16
id-CompressedModeMethod      INTEGER ::= 17
id-D-RNTI                   INTEGER ::= 18
id-D-RNTI-ReleaseIndication  INTEGER ::= 19
id-DCH-AddListIE            INTEGER ::= 20
id-DCH-AddItem-RL-ReconfPrepTDD      INTEGER ::= 21
id-DCH-AddItem-RL-ReconfReadyFDD     INTEGER ::= 22
id-DCH-AddItem-RL-ReconfRqstTDD     INTEGER ::= 23
id-DCH-AddListItem-RL-ReconfReadyFDD INTEGER ::= 24
id-DCH-AddListItem-RL-ReconfRsp     INTEGER ::= 25
id-DCH-AddList-RL-ReconfPrepFDD     INTEGER ::= 26
id-DCH-AddList-RL-ReconfPrepTDD     INTEGER ::= 27
id-DCH-AddList-RL-ReconfRqstFDD     INTEGER ::= 28
id-DCH-AddList-RL-ReconfRqstTDD     INTEGER ::= 29
id-DCH-DeleteItem-RL-ReconfPrepTDD  INTEGER ::= 30
id-DCH-DeleteItem-RL-ReconfRqstFDD  INTEGER ::= 31
id-DCH-DeleteItem-RL-ReconfRqstTDD  INTEGER ::= 32
id-DCH-DeleteList-RL-ReconfPrepFDD  INTEGER ::= 33
id-DCH-DeleteList-RL-ReconfPrepTDD  INTEGER ::= 34
id-DCH-DeleteList-RL-ReconfRqstFDD  INTEGER ::= 35
id-DCH-DeleteList-RL-ReconfRqstTDD  INTEGER ::= 36
id-DCH-Information-RL-SetupReqFDD    INTEGER ::= 37
id-DCH-InformationItem-RL-SetupReqTDD INTEGER ::= 38
id-DCH-InformationList-RL-SetupReqTDD INTEGER ::= 39
id-DCH-InformationResponseListIE-RL-SetupRspTDD INTEGER ::= 40
id-DCH-ModifyListIE         INTEGER ::= 41
id-DCH-ModifyItem-RL-ReconfPrepTDD   INTEGER ::= 42
id-DCH-ModifyItem-RL-ReconfReadyFDD  INTEGER ::= 43
id-DCH-ModifyItem-RL-ReconfRqstTDD   INTEGER ::= 44
id-DCH-ModifyListItem-RL-ReconfReadyFDD INTEGER ::= 45
id-DCH-ModifyListItem-RL-ReconfRsp   INTEGER ::= 46
id-DCH-ModifyList-RL-ReconfPrepFDD   INTEGER ::= 47
id-DCH-ModifyList-RL-ReconfPrepTDD   INTEGER ::= 48
id-DCH-ModifyList-RL-ReconfRqstFDD   INTEGER ::= 49
id-DCH-ModifyList-RL-ReconfRqstTDD   INTEGER ::= 50
id-DL-CCTrCH-Information-RL-ReconfPrepTDD INTEGER ::= 51
id-DL-CCTrCH-InformationIE-RL-AdditionRspTDD INTEGER ::= 52
id-DL-CCTrCH-InformationIE-RL-SetupRspTDD INTEGER ::= 53
id-DL-CCTrCH-InformationItem-RL-ReconfRqstTDD INTEGER ::= 54

```

id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD	INTEGER ::= 55	
id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD	INTEGER ::= 56	
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD	INTEGER ::= 57	
id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD	INTEGER ::= 58	
id-DL-CCTrCH-InformationItem-RL-SetupReqTDD	INTEGER ::= 59	
id-DL-CCTrCH-InformationList-RL-SetupReqTDD	INTEGER ::= 60	
id-DL-CodeInformationListItem-PhyChReconfRqstFDD	INTEGER ::= 61	
id-DL-CodeInformationListItem-RL-AdditionFailureFDD	INTEGER ::= 62	
id-DL-CodeInformationListItem-RL-AdditionRspFDD	INTEGER ::= 63	
id-DL-CodeInformationListItem-RL-ReconfReadyFDD	INTEGER ::= 64	
id-DL-CodeInformationListItem-RL-SetupFailureFDD	INTEGER ::= 65	
id-DL-DPCH-Information	INTEGER ::= 66	
id-DL-DPCH-Information-RL-SetupReqFDD	INTEGER ::= 67	
id-DL-DPCH-InformationItem-RL-SetupRspTDD	INTEGER ::= 68	
id-DL-DPCH-InformationItem-RL-AdditionRspTDD	INTEGER ::= 69	
id-DL-DPCH-InformationItem-PhyChReconfRqstTDD	INTEGER ::= 70	
id-DL-DPCH-InformationListIE-RL-ReconfReadyTDD	INTEGER ::= 71	
id-DL-DPCH-InformationList-PhyChReconfRqstTDD	INTEGER ::= 72	
id-DL-DPCH-InformationList-RL-ReconfReadyTDD	INTEGER ::= 73	
id-DL-EbNoTarget	INTEGER ::= 74	
id-DL-FrameType	INTEGER ::= 75	
id-DL-MeanBitRate	INTEGER ::= 76	
id-DL-ReferencePowerInformationListItem-DL-PC-Rqst	INTEGER ::= 77	
id-DRX-Parameter	INTEGER ::= 78	
id-DataFrameSizeListItem	INTEGER ::= 79	
id-DedicatedMeasurementObjectType-DM-Rprt	INTEGER ::= 80	
id-DedicatedMeasurementObjectType-DM-Rqst	INTEGER ::= 81	
id-DedicatedMeasurementObjectType-DM-Rspns	INTEGER ::= 82	
id-DiversityIndicationItem-RL-AdditionRspTDD	INTEGER ::= 83	
id-FACH-InfoForOptionalGroups-CCPCH	INTEGER ::= 84	
id-FACH-InfoForOptionalS-CCPCH-FDD	INTEGER ::= 85	
id-FACH-InfoForOptionalGroups-CCPCH-CTCRRsp-TDD	INTEGER ::= 86	
id-FACH-InfoForS-CCPCH-CoupledToPRACH	INTEGER ::= 87	
id-GapPositionMode	INTEGER ::= 88	
id-IndividualRLsItem-DL-PC-Rqst	INTEGER ::= 89	
id-L3-Information	INTEGER ::= 90	
id-MAC-c-SDU-LengthListItem	INTEGER ::= 91	
id-MeasurementCharacteristics	INTEGER ::= 92	
id-MeasurementID	INTEGER ::= 93	
id-MultipleURAsIndicator	INTEGER ::= 94	
id-NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD	INTEGER ::= 95	
id-NeighbouringFDD-CellInformationItem-RL-AdditionRsp	INTEGER ::= 96	
id-NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD	INTEGER ::= 97	
id-NeighbouringFDD-CellInformationItem-RL-SetupRsp	INTEGER ::= 98	
id-NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD	INTEGER ::= 99	
id-NeighbouringTDD-CellInformationItem-RL-AdditionRsp	INTEGER ::= 100	
id-NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD	INTEGER ::= 101	
id-NeighbouringTDD-CellInformationItem-RL-SetupRsp	INTEGER ::= 102	
id-NonCombiningItem-RL-AdditionRspTDD	INTEGER ::= 103	
id-NonCombiningOrIENotPresentItem-RL-AdditionFailureFDD	INTEGER ::= 104	
id-NonCombiningOrIENotPresentItem-RL-AdditionRspFDD	INTEGER ::= 105	

id-NonCombiningOrIENotPresentItem-RL-SetupFailureFDD	INTEGER ::= 106
id-NonCombiningOrIENotPresentItem-RL-SetupRspFDD	INTEGER ::= 107
id-PD	INTEGER ::= 108
id-PagingArea-PagingRqst	INTEGER ::= 109
id-PowerControlMode	INTEGER ::= 110
id-PowerResumeMode	INTEGER ::= 111
id-PriorityIndicatorAndInitialWindowSizeListIE	INTEGER ::= 112
id-PriorityIndicatorAndInitialWindowSizeList2IE	INTEGER ::= 113
id-ProcedureScope-DL-PC-Rqst	INTEGER ::= 114
id-RANAP-RelocationInformation	INTEGER ::= 115
id-RL-Information-PhyChReconfRqstFDD	INTEGER ::= 116
id-RL-Information-PhyChReconfRqstTDD	INTEGER ::= 117
id-RL-Information-RL-AdditionRqstFDD	INTEGER ::= 118
id-RL-Information-RL-AdditionRqstTDD	INTEGER ::= 119
id-RL-Information-RL-DeletionRqst	INTEGER ::= 120
id-RL-Information-RL-FailureInd	INTEGER ::= 121
id-RL-Information-RL-ReconfPrepFDD	INTEGER ::= 122
id-RL-Information-RL-RestoreInd	INTEGER ::= 123
id-RL-Information-RL-SetupReqFDD	INTEGER ::= 124
id-RL-Information-RL-SetupReqTDD	INTEGER ::= 125
id-RL-InformationItem-DM-Rprt	INTEGER ::= 126
id-RL-InformationItem-DM-Rqst	INTEGER ::= 127
id-RL-InformationItem-DM-Rspns	INTEGER ::= 128
id-RL-InformationItem-RL-SetupReqFDD	INTEGER ::= 129
id-RL-InformationList-RL-AdditionRqstFDD	INTEGER ::= 130
id-RL-InformationList-RL-DeletionRqst	INTEGER ::= 131
id-RL-InformationList-RL-FailureInd	INTEGER ::= 132
id-RL-InformationList-RL-ReconfPrepFDD	INTEGER ::= 133
id-RL-InformationList-RL-RestoreInd	INTEGER ::= 134
id-RL-InformationResponse-RL-AdditionRspTDD	INTEGER ::= 135
id-RL-InformationResponse-RL-ReconfReadyTDD	INTEGER ::= 136
id-RL-InformationResponse-RL-SetupRspTDD	INTEGER ::= 137
id-RL-InformationResponseItem-RL-AdditionRspFDD	INTEGER ::= 138
id-RL-InformationResponseItem-RL-ReconfReadyFDD	INTEGER ::= 139
id-RL-InformationResponseItem-RL-ReconfRsp	INTEGER ::= 140
id-RL-InformationResponseItem-RL-SetupRspFDD	INTEGER ::= 141
id-RL-InformationResponseList-RL-AdditionRspFDD	INTEGER ::= 142
id-RL-InformationResponseList-RL-ReconfReadyFDD	INTEGER ::= 143
id-RL-InformationResponseList-RL-ReconfRsp	INTEGER ::= 144
id-RL-InformationResponseList-RL-SetupRspFDD	INTEGER ::= 145
id-RL-ReconfigurationFailure-RL-ReconfFail	INTEGER ::= 146
id-RL-ReconfigurationFailureList-RL-ReconfFail	INTEGER ::= 147
id-RLsItem-DM-Rprt	INTEGER ::= 148
id-RLsItem-DM-Rqst	INTEGER ::= 149
id-RLsItem-DM-Rspns	INTEGER ::= 150
id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind	INTEGER ::= 151
id-ReportCharacteristics	INTEGER ::= 152
id-S-RNTI	INTEGER ::= 153
id-SAI	INTEGER ::= 154
id-SN	INTEGER ::= 155
id-SRNC-ID	INTEGER ::= 156

```

id-ScramblingCodeChange                INTEGER ::= 157
id-SecondaryCCPCH-ListIE-CTCRRsp-TDD   INTEGER ::= 158
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD  INTEGER ::= 159
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD     INTEGER ::= 160
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD  INTEGER ::= 161
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD   INTEGER ::= 162
id-TGD                                  INTEGER ::= 163
id-TGL                                  INTEGER ::= 164
id-TGP1                                 INTEGER ::= 165
id-TGP2                                 INTEGER ::= 166
id-TransportBearerID                    INTEGER ::= 167
id-TransportBearerRequestIndicator       INTEGER ::= 168
id-TransportLayerAddress                 INTEGER ::= 169
id-UC-ID                                 INTEGER ::= 170
id-UL-CCTrCH-InformationIE-RL-SetupRspTDD  INTEGER ::= 171
id-UL-CCTrCH-InformationIE-RL-AdditionRspTDD  INTEGER ::= 172
id-UL-CCTrCH-InformationItem-RL-ReconfRqstTDD  INTEGER ::= 173
id-UL-CCTrCH-InformationItem-RL-SetupReqTDD  INTEGER ::= 174
id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD  INTEGER ::= 175
id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD  INTEGER ::= 176
id-UL-CCTrCH-InformationList-RL-SetupReqTDD  INTEGER ::= 177
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD  INTEGER ::= 178
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD  INTEGER ::= 179
id-UL-CCTrCH-Information-RL-ReconfPrepTDD      INTEGER ::= 180
id-UL-DL-CompressedModeSelection          INTEGER ::= 181
id-UL-DPCH-Information                   INTEGER ::= 182
id-UL-DPCH-Information-RL-SetupReqFDD        INTEGER ::= 183
id-UL-DPCH-InformationItem-RL-SetupRspTDD    INTEGER ::= 184
id-UL-DPCH-InformationItem-RL-AdditionRspTDD  INTEGER ::= 185
id-UL-DPCH-InformationItem-PhyChReconfRqstTDD  INTEGER ::= 186
id-UL-DPCH-InformationListIE-RL-ReconfReadyTDD  INTEGER ::= 187
id-UL-DPCH-InformationList-PhyChReconfRqstTDD  INTEGER ::= 188
id-UL-DPCH-InformationList-RL-ReconfReadyTDD  INTEGER ::= 189
id-UL-DeltaEbNo                          INTEGER ::= 190
id-UL-DeltaEbNoAfter                      INTEGER ::= 191
id-UL-EbNoTarget                          INTEGER ::= 192
id-UL-MeanBitRate                          INTEGER ::= 193
id-URA-ID                                 INTEGER ::= 194
id-UnsuccessfulRL-InformationResponse        INTEGER ::= 195
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD  INTEGER ::= 196
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD     INTEGER ::= 197
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD     INTEGER ::= 198
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD  INTEGER ::= 199
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD   INTEGER ::= 200
id-CriticalityDiagnostics                  INTEGER ::= 201

```

END

9.3.7 Container Definitions

```

-- *****
--
-- Container definitions

```

```

--
-- *****
RNSAP-Containers -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    Criticality,
    Presence,
    PrivateExtensionID,
    ProtocolExtensionID,
    ProtocolIE-ID
FROM RNSAP-CommonDataTypes

    maxPrivateExtensions,
    maxProtocolExtensions,
    maxProtocolIEs
FROM RNSAP-Constants;

-- *****
--
-- Class Definition for Protocol IEs
--
-- *****

RNSAP-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
--
-- *****

```

```

RNSAP-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
--
-- *****

RNSAP-PROTOCOL-EXTENSION ::= CLASS {
    &id                ProtocolExtensionID          UNIQUE,
    &criticality       Criticality,
    &Extension
}
WITH SYNTAX {
    ID                &id
    CRITICALITY       &criticality
    EXTENSION         &Extension
}

-- *****
--
-- Class Definition for Private Extensions
--
-- *****

RNSAP-PRIVATE-EXTENSION ::= CLASS {
    &id                PrivateExtensionID,
    &criticality       Criticality,
    &Extension
}
WITH SYNTAX {
    ID                &id
    CRITICALITY       &criticality
    EXTENSION         &Extension
}

```

```

-- *****
--
-- Container for Protocol IEs
--
-- *****

ProtocolIE-Container {RNSAP-PROTOCOL-IES : IEsSetParam} ::=
  SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Field {RNSAP-PROTOCOL-IES : IEsSetParam} ::= SEQUENCE {
  id          RNSAP-PROTOCOL-IES.&id          ({IEsSetParam}),
  criticality RNSAP-PROTOCOL-IES.&criticality ({IEsSetParam}@id),
  value       RNSAP-PROTOCOL-IES.&Value       ({IEsSetParam}@id)
}

-- *****
--
-- Container for Protocol IE Pairs
--
-- *****

--ProtocolIE-ContainerPair {RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
-- SEQUENCE (SIZE (0..maxProtocolIEs)) OF
-- ProtocolIE-FieldPair {{IEsSetParam}}

-- ProtocolIE-FieldPair {RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::= SEQUENCE {
-- id          RNSAP-PROTOCOL-IES-PAIR.&id          ({IEsSetParam}),
-- firstCriticality RNSAP-PROTOCOL-IES-PAIR.&firstCriticality ({IEsSetParam}@id),
-- firstValue      RNSAP-PROTOCOL-IES-PAIR.&FirstValue      ({IEsSetParam}@id),
-- secondCriticality RNSAP-PROTOCOL-IES-PAIR.&secondCriticality ({IEsSetParam}@id),
-- secondValue     RNSAP-PROTOCOL-IES-PAIR.&SecondValue     ({IEsSetParam}@id)
--}

-- *****
--
-- Container Lists for Protocol IE Containers
--
-- *****

ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, RNSAP-PROTOCOL-IES : IEsSetParam} ::=
  SEQUENCE (SIZE (lowerBound..upperBound)) OF
    ProtocolIE-Container {{IEsSetParam}}

-- ProtocolIE-ContainerPairList {INTEGER : lowerBound, INTEGER : upperBound, RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
-- SEQUENCE (SIZE (lowerBound..upperBound)) OF
-- ProtocolIE-ContainerPair {{IEsSetParam}}

-- *****
--

```

```
-- Container for Protocol Extensions
--
-- *****

ProtocolExtensionContainer {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=
  SEQUENCE (SIZE (1..maxProtocolExtensions)) OF
    ProtocolExtensionField {{ExtensionSetParam}}

ProtocolExtensionField {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
  id                RNSAP-PROTOCOL-EXTENSION.&id                ({ExtensionSetParam}),
  criticality       RNSAP-PROTOCOL-EXTENSION.&criticality       ({ExtensionSetParam}{@id}),
  extensionValue    RNSAP-PROTOCOL-EXTENSION.&Extension         ({ExtensionSetParam}{@id})
}

-- *****
--
-- Container for Private Extensions
--
-- *****

PrivateExtensionContainer {RNSAP-PRIVATE-EXTENSION : ExtensionSetParam} ::=
  SEQUENCE (SIZE (1..maxPrivateExtensions)) OF
    PrivateExtensionField {{ExtensionSetParam}}

PrivateExtensionField {RNSAP-PRIVATE-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
  id                RNSAP-PRIVATE-EXTENSION.&id                ({ExtensionSetParam}),
  criticality       RNSAP-PRIVATE-EXTENSION.&criticality       ({ExtensionSetParam}{@id}),
  extensionValue    RNSAP-PRIVATE-EXTENSION.&Extension         ({ExtensionSetParam}{@id})
}

END
```


CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.423 CR 002r3

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **RAN#7**
list expected approval meeting # here

↑

for approval
for information

strategic
non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: RAN WG3 **Date:** 2000-03-01

Subject: Addition of IEs required by the DRAC procedure in RNSAP messages

Work item:

Category: F Correction
A Corresponds to a correction in an earlier release
B Addition of feature
C Functional modification of feature
D Editorial modification
(only one category shall be marked with an X)

Release: Phase 2
Release 96
Release 97
Release 98
Release 99
Release 00

Reason for change: This CR proposes to align RAN3 specifications to RAN2 specifications by adding some IEs in some RNSAP messages in order to support the DRAC procedure over Iur.

Clauses affected: 8.3.1, 8.3.2, 8.3.4, 8.3.7, 9.1.3.1, 9.1.4.1, 9.1.7.1, 9.1.11.1, 9.1.12.1, 9.1.16.1, 9.1.17.1, addition of new 9.2.2.x sections.

Other specs affected: Other 3G core specifications → List of CRs:
Other GSM core specifications → List of CRs:
MS test specifications → List of CRs:
BSS test specifications → List of CRs:
O&M specifications → List of CRs:

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

8.3.1 Radio Link Setup

8.3.1.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more radio links.

This procedure shall use the connection-oriented service of the signalling bearer.

8.3.1.2 Successful Operation

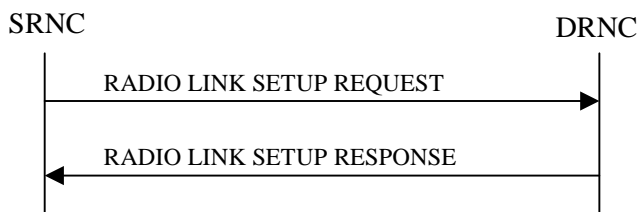


Figure 14: Radio Link Setup procedure: Successful Operation

When the SRNC makes an algorithmic decision to add the first cell or set of cells from a DRNS to the active set of a specific RRC connection, the RADIO LINK SETUP REQUEST message is sent to the corresponding DRNC to request setup of the radio link(s).

The message is also used to establish the connection-oriented service of the signalling bearer in the DRNC. The message includes the S-RNTI associated to the UE, and, if the UE context is already present in the DRNC, the corresponding D-RNTI.

[FDD - The Diversity Control Field indicates for each RL except for the first RL whether the DRNS shall combine the RL with any of the other RLs or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS shall decide for any of the alternatives. When an RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

If the RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

If the *Initial DL TX Power* IE and *UL Eb/No Target* IE [FDD] are present in the message, the DRNS shall use the indicated DL TX Power and UL Eb/No Target [FDD] as initial value.

If the *Primary CPICH Eb/No* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] is present, the DRNC should use them when deciding the Initial DL TX Power.

If the RADIO LINK SETUP REQUEST message includes the *DCH Combination Indicator* IE for a DCH, the DRNS shall treat all DCHs with the same value of this IE as a set of co-ordinated DCHs. The included *RLC Mode* IE of the DCH may be used by the DRNS to optimise the power control.

The *Allocation/Retention Priority* IE defines the priority level that should be used by the DRNS to prioritise the allocation and the retention of the resources used by the DCH. The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise the discard/delay of the data frames of the DCH.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH as the new DCH FP Mode in the Uplink of the user plane for this DCH.

The DRNS shall use the included *ToAWS* IE for a DCH as the new Time of Arrival Window Start Point in the user plane for this DCH.

The DRNS shall use the included *ToAWE* IE for a DCH as the new Time of Arrival Window End Point in the user plane for this DCH.

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

At the reception of the RADIO LINK SETUP REQUEST message, DRNS allocates requested type of channelisation codes and other physical channel resources for each RL and assigns a binding identifier and a transport layer address for each DCH or set of co-ordinated DCHs. This information shall be sent to the SRNS in the message RADIO LINK SETUP RESPONSE when all the RLs have been successfully setup.

If the *Initial DL TX Power* and the *UL Eb/No Target* IEs are not present in the RADIO LINK SETUP REQUEST message, then DRNC shall include the suggested initial UL Eb/No Target and the DL Eb/No Target in the RADIO LINK SETUP RESPONSE message.

In the case of combining one or more RLs the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that the RL is combined with another RL. In this case the Reference RL ID shall be included to indicate with which RL the combination is performed. The Reference RL ID shall be included for all but one of the combined RLs, for which the *Transport Layer Address* IE and the *Binding ID* IE shall be included.

In the case of not combining an RL with another RL, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH of the RL in the RADIO LINK SETUP RESPONSE message.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *Binding Identifier* IE and the *Transport Layer Address* IE shall be included only for one of the DCH in the set of co-ordinated DCHs.

[FDD - Irrespective of SSdT activation, the DRNS 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 DRNS.]

The DRNS shall also provide the SRNC with the UTRAN Cell Identifier (UC-Id) and information of the neighbouring cells to the cell(s) where the radio link(s) are added.

If a neighbouring cell is controlled by another RNC, the DRNC shall report also the node identifications (i.e. RNC, CN domain nodes) of the RNC controlling the neighbouring cell.

If there was no UE context for this UE in the DRNS before the RADIO LINK SETUP REQUEST message was received the DRNC shall include the node identifications of the CN Domain nodes that the RNC is connected to (using LAC and RAC of the current cell), and the D-RNTI in the RADIO LINK SETUP RESPONSE message.

[FDD - If the *DRAC Control IE* is present set to “requested” in the RADIO LINK SETUP REQUEST message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message the *Secondary CCPCH Info IE* and the *to be received on FACH*, for each added Radio Link.

If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK SETUP RESPONSE message.]

8.3.1.3 Unsuccessful Operation

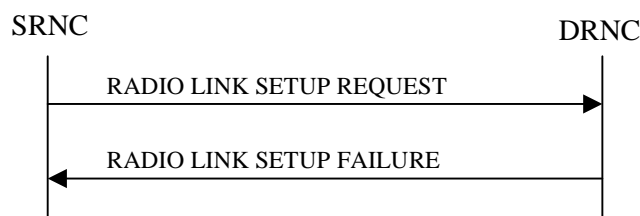


Figure 22: Radio Link Setup procedure: Unsuccessful Operation

In unsuccessful case (i.e. one or more RLs can not be setup) the RADIO LINK SETUP FAILURE message shall be sent to the SRNC, indicating the reason for failure. If some radio links were established successfully, the DRNC shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message.

Typical cause values are:

Radio Network Layer Causes:

- UL Scrambling Code Already in Use
- DL Radio Resources not Available
- UL Radio Resources not Available
- Unknown C-ID
- Macrodiversity Combining not Possible
- Requested Configuration not Supported
- Cell not Available
- Power Level not Supported

Transport Layer Causes:

- Transport Link Failure

Protocol Causes:

- Transaction not Allowed

Miscellaneous Causes:

- Control Processing Overload
- HW Failure
- Not enough User Plane Processing Resources

8.3.1.4 Abnormal Conditions

If the DRNC receives either an S-RNTI or a D-RNTI which already has RL(s) established the DRNC shall send the RADIO LINK SETUP FAILURE message to the SRNC, indicating the reason for failure.

8.3.2 Radio Link Addition

8.3.2.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more additional RLs towards a UE when there is already at least one RL established to the concerning UE via this DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

8.3.2.2 Successful Operation

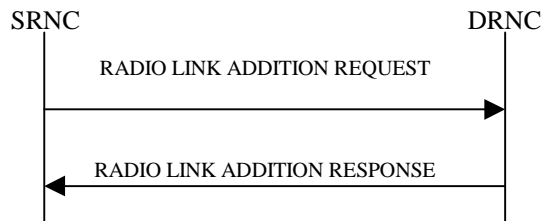


Figure 33: Radio Link Addition procedure: Successful Operation

The procedure is initiated with a RADIO LINK ADDITION REQUEST message sent from the SRNC to the DRNC.

Upon reception, the DRNS 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.

[FDD - The Diversity Control Field indicates for each RL whether the DRNS shall combine the new RL with existing RL(s) or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS shall decide for any of the alternatives. When a new RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

If the *Primary CCPCH Ec/Io* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] measured by the UE is included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power. If the *Primary CCPCH Ec/Io* IE is not present, the DRNS sets the Initial DL TX Power accordingly to the power used by the existing RLs.

[FDD - The DRNS shall use the provided UL Eb/No Target value as the current target for the inner-loop power control.]

[FDD - If the RADIO LINK ADDITION REQUEST message contains an *SSDT Cell Identity* IE, SSDT may be activated for the concerned new RL, with the indicated SSDT Cell Identity used for that RL.]

The DRNS shall activate any feedback mode diversity according to the received settings.

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

In the case of combining an RL with existing RL(s) the DRNC 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 DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the Transport Layer Address and the binding ID for the transport bearer to be established for each DCH of the RL in the RADIO LINK ADDITION RESPONSE message.

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

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

For any cell neighbouring of a cell in which a RL was added, the DRNC shall provide in the RADIO LINK ADDITION RESPONSE message the UTRAN Cell Identifier (UC-Id), the Frequency Number, the Primary Scrambling Code and the node identification of CN nodes connected to the RNC controlling the neighbouring cell if the neighbouring cell is not controlled by the DRNC. In addition, if the information is available, the DRNC shall also provide the CPICH Power level and Frame Offset of the neighbouring cell.

The DRNC shall also provide the configured uplink Maximum Eb/No and UL Minimum Eb/No for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. These values are taken into consideration by DRNS admission control and shall be used by the SRNC as limits for the UL inner-loop power control target.

The DRNC shall also provide the selected scrambling- and channelisation codes of the new RLs in order to enable the SRNC to inform the UE about the selected codes.

After sending of the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The DRNS shall start transmission on the new RL after synchronisation is achieved in the Iur user plane as specified in ref. ~~[Error! Reference source not found.]~~ ~~[Error! Reference source not found.]~~.

~~[FDD - If the UE has been allocated one or several DCH controlled by DRAC (*DRAC Control* IE was present set to "requested" - in the RADIO LINK ADDITION SETUP REQUEST message for at least one DCH) and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message the *Secondary CCPCH Info* IE and the to be received on FACH, for each added Radio Link. If the DRNC does not support DRAC, and it shall not provide these IEs in the RADIO LINK ADDITION RESPONSE message.]~~

8.3.2.3 Unsuccessful Operation

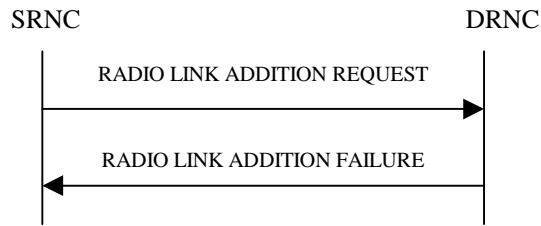


Figure 44: Radio Link Addition procedure: Unsuccessful Operation

If the establishment of at least one RL is unsuccessful, the DRNC shall send a RADIO LINK ADDITION FAILURE as response.

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

Typical cause values are:

Radio Network Layer Causes:

- DL Radio Resources not Available
- UL Radio Resources not Available
- Unknown C-ID
- Macrodiversity Combining not Possible
- Cell not Available
- Power Level not Supported

Transport Layer Causes:

- Transport Link Failure

Miscellaneous Causes:

- Control Processing Overload
- HW Failure
- Not enough User Plane Processing Resources

8.3.2.4 Abnormal Conditions

-

8.3.4 Synchronised Radio Link Reconfiguration Preparation

8.3.4.1 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 DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

8.3.4.2 Successful Operation

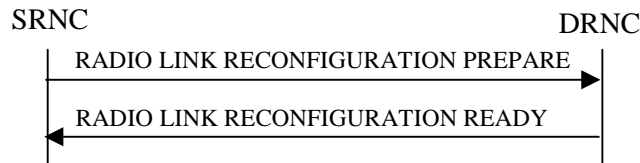


Figure 55: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

The Synchronised Radio Link Reconfiguration Preparation procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION PREPARE message to the DRNC.

Upon reception, the DRNS 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.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

DCH Modification :

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this information when reserving resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Frame Handling Priority* IE for a DCH to be modified, the DRNS 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 DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (UL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (DL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *UL DCH FP Mode* IE for a DCH to be modified, the DRNS shall apply the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes on the *ToAWS* IE for a DCH to be modified, the DRNS shall apply the new ToAWS in the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes on the *ToAWE* IE for a DCH to be modified, the DRNS shall apply the new ToAWE in the user plane for this DCH in the new configuration.

[FDD - If the *DRAC Control* IE is present and set to "requested" in the RADIO LINK RECONFIGURATION PREPARE message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the *Secondary CCPCH Info* IE and the to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, and it shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]

DCH Addition:

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be added to the Radio Link(s), the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *DCH Combination Indicator* IE for a DCH to be added, the DRNS shall

1. treat all DCHs with the same value of this IE as a set of co-ordinated DCHs and
2. include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration

The DRNS should use the *Allocation/Retention Priority* IE received for a DCH to be added when reserving resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

The DRNS 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 DRNS once the new configuration has been activated.

The DRNS may use the included *RLC Mode* IE to optimise the power control.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH to be added as the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWS* IE for a DCH to be added as the new Time of Arrival Window Start Point in the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWE* IE for a DCH to be added as the new Time of Arrival Window End Point in the user plane for this DCH in the new configuration.

[FDD - If the *DRAC Control* IE is present set to "requested" in the RADIO LINK RECONFIGURATION PREPARE message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the *Secondary CCPCH Info* IE and the to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, and it shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]

DCH Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be deleted from the Radio Link(s), the DRNS shall not include this DCH in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the DRNS shall not include this set of co-ordinated DCHs in the new configuration

Physical Channel Modification:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Uplink Scrambling Code* IE, the DRNS shall apply this Uplink Scrambling Code to the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Uplink Channelisation Code* IEs, the DRNS shall apply the new Uplink Channelisation Code(s) in the new configuration.

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Spreading Factor of Channelisation Code (DL)* IE, for each *Spreading Factor of Channelisation Code (DL)* IE the DRNS shall allocate one new Downlink Channelisation Code per Radio Link and apply the new Downlink Channelisation Code(s) to the new configuration. Each Downlink Channelisation Code allocated for the new configuration shall be included as a *Channelisation Code (DL)* IE in the RADIO LINK RECONFIGURATION READY message when sent to the SRNC.]

The DRNS shall use the *TFCS (UL)* IE when reserving resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the Uplink of [TDD – the CCTrCH of] the new configuration.

The DRNS shall use the *TFCS (DL)* IE when reserving resources for the downlink of the new configuration. The DRNS shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Mean Bit Rate (UL)* IE, the DRNS should use this information when reserving resources for the Uplink of the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Mean Bit Rate (DL)* IE, the DRNS should use this information when reserving resources for the Downlink of the new configuration.

[Editor's note: There is presently no clear definition of the *Mean Bit Rate* IEs. The handling of these IEs is thus regarded as FFS.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes on the *UL DPCCCH Structure* IE, group the DRNS shall apply the new Uplink DPCCCH Structure to the new configuration.]

SSDT Activation/Deactivation:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *SSDT Indication* IE set to "SSDT Active in the UE", the DRNS may activate SSDT using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *SSDT Indication* IE set to "SSDT not Active in the UE", the DRNS shall deactivate SSDT in the new configuration.]

If the requested modifications are allowed by the DRNS, and the DRNS has successfully reserved the required resources for the new configuration of the Radio Link(s) it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message.

The DRNS decides the maximum and minimum Eb/No for the uplink of the Radio Link(s) and shall return this in the *Maximum Uplink Eb/No* IE and *Minimum Uplink Eb/No* IE for each Radio Link in the RADIO LINK RECONFIGURATION READY message.

[TDD – The DRNC shall include all the IEs corresponding to the new physical channel parameters for the DL DPCH and/or the UL DPCH to be reconfigured in the RADIO LINK RECONFIGURATION READY message.]

[Editor's note: Which information in the RL RECONFIGURATION PREPARE message triggers the DRNC to include any of the following *Optional TDD* information?:

- a) DL DPCH Group
- b) UL DPCH Group
- c) TDD Physical Channel Offset, *Repetition Length*, and TFCI Presence IEs as part of the DL DPCH Group
- d) TDD Physical Channel Offset, *Repetition Length*, and TFCI Presence IEs as part of the UL DPCH Group.]

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH to be Added* IE group or the *DCH to be Modified* IE group shall be included only for one of the DCHs in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH to be Added* IE group and the *DCH to be Modified* IE group shall be included only for one of the combined Radio Links.

8.3.4.3 Unsuccessful Operation

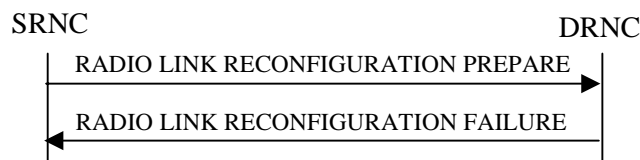


Figure 66: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation

If the DRNS cannot reserve the necessary resources for all the new DCHs of one set of co-ordinated DCHs requested to be added, it shall regard the Synchronised Radio Link Reconfiguration procedure as having failed.

- If the requested Synchronised Radio Link Reconfiguration procedure fails for one or more RLs the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC, indicating the reason for failure.

In which cases to include only the *Cause* IE on message level and in which cases the *Cause* IE also shall be included for a specific RL is FFS.

Typical cause values are:

Radio Network Layer Causes:

- UL Scrambling Code Already in Use
- DL Radio Resources not Available
- UL Radio Resources not Available
- Requested Configuration not Supported

Protocol Causes:

- Transaction not Allowed

Miscellaneous Causes:

- Control Processing Overload
- Not enough User Plane Processing Resources

8.3.4.4 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of co-ordinated DCHs is requested to be deleted, the DRNS shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as having failed and the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC.

8.3.7 Unsynchronised Radio Link Reconfiguration

8.3.7.1 General

The Unsynchronised Radio Link Reconfiguration procedure is used to reconfigure Radio Link(s) related to one UE-UTRAN connection within a DRNS.

The procedure is used when there is no need to synchronise the time of the switching from the old to the new radio link configuration in the cells used by the UE-UTRAN connection within the DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

8.3.7.2 Successful Operation

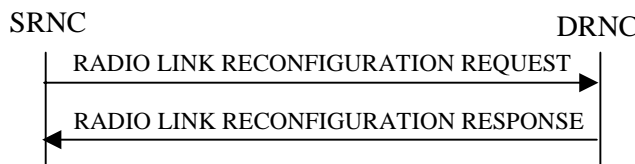


Figure 77: Unsynchronised Radio Link Reconfiguration procedure, Successful Operation

The Unsynchronised Radio Link Reconfiguration procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION REQUEST message to the DRNC.

Upon reception, the DRNS 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.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

DCH Modification:

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this information when reserving resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Frame Handling Priority* IE for a DCH to be modified, the DRNS 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 DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Transport Format Set (UL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Transport Format Set (DL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *UL DCH FP Mode* IE for a DCH to be modified, the DRNS shall apply the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *ToAWS* IE for a DCH to be modified, the DRNS shall apply the new ToAWS in the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *ToAWE* IE for a DCH to be modified, the DRNS shall apply the new ToAWE in the user plane for this DCH in the new configuration.

[FDD - If the *DRAC Control* IE is present and set to "requested" in the RADIO LINK RECONFIGURATION REQUEST message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION RESPONSE message the *Secondary CCPCH Info* IE and the to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, and it shall not provide these IEs in the RADIO LINK RECONFIGURATION RESPONSE message.]

DCH Addition:

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be added to the Radio Link(s), the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *DCH Combination Indicator* IE for a DCH to be added, the DRNS shall.

1. treat all DCHs with the same value of this IE as a set of co-ordinated DCHs and
 2. include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration
- The DRNS should use the *Allocation/Retention Priority* IE received for a DCH to be added when allocating resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

The DRNS 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 DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *RLC Mode* IE, the DRNS may use this information to optimise the power control.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH to be added as the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWS* IE for a DCH to be added as the new Time of Arrival Window Start Point in the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWE* IE for a DCH to be added as the new Time of Arrival Window End Point in the user plane for this DCH in the new configuration.

[FDD - If the *DRAC Control* IE is present set to “requested” in the RADIO LINK RECONFIGURATION REQUEST message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION RESPONSE message the *Secondary CCPCH Info* IE and the *Reference to System Information blocks* IE to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, and it shall not provide these IEs in the RADIO LINK RECONFIGURATION RESPONSE message.

DCH Deletion:

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be deleted from the Radio Link(s), the DRNS shall not include this DCH in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the DRNS shall not include this set of co-ordinated DCHs in the new configuration

Physical Channel Modification:

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS (UL)* IE, the DRNS shall apply the new TFCS in the Uplink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS (DL)* IE, the DRNS shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Mean Bit Rate (UL)* IE, the DRNS should use this information when reserving resources for the Uplink of the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Mean Bit Rate (DL)* IE, the DRNS should use this information when reserving resources for the Downlink of the new configuration.

[Editor's note: There is presently no clear definition of the *Mean Bit Rate* IEs. The handling of these IEs is thus regarded as FFS.]

If the requested modifications are allowed by the DRNS, the DRNS has successfully allocated the required resources, and changed to the new configuration it shall respond to the SRNC with the RADIO LINK RECONFIGURATION RESPONSE message.

The DRNS decides the maximum and minimum Eb/No for the uplink of the Radio Link(s) and shall return this in the IEs *Maximum Uplink Eb/No* and *Minimum Uplink Eb/No* for each Radio Link in the RADIO LINK RECONFIGURATION RESPONSE message.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH to be Added* IE group or the *DCH to be Modified* IE group shall be included only for one of the DCH in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH to be Added* IE group and the *DCH to be Modified* IE group shall be included only for one of the combined Radio Links.

8.3.7.3 Unsuccessful Operation

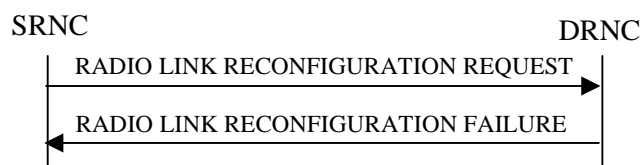


Figure 88: Unsynchronised Radio Link Reconfiguration procedure, Unsuccessful Operation

If the DRNS cannot allocate the necessary resources for all the new DCHs of a set of co-ordinated DCHs requested to be added it shall regard the Synchronised Radio Link Reconfiguration procedure as having failed.

If the requested Unsynchronised Radio Link Reconfiguration procedure fails for one or more Radio Link(s) the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC, indicating the reason for failure.

Typical cause values are:

Radio Network Layer Causes:

- UL Scrambling Code Already in Use
- DL Radio Resources not Available
- UL Radio Resources not Available
- Requested Configuration not Supported

Protocol Causes:

- Transaction not Allowed

Miscellaneous Causes:

- Control Processing Overload
- Not enough User Plane Processing Resources

8.3.7.4 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of co-ordinated DCHs is requested to be deleted, the the DRNS shall regard the Synchronised Radio Link Reconfiguration procedure as having failed and the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC.

9.1.3 RADIO LINK SETUP REQUEST

9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
S-RNTI	M			
D-RNTI	O			
Allowed Queuing time	O			
UL DPCH Information		1		
UL Scrambling Code	M			
Min UL Channelisation Code Length	M			
Max Number of UL DPDCHs	C – CodeLen			
Puncture Limit	M			For the UL.
UL Transport Format Combination Set	M			
UL DPCCH Slot Format	M			
UL Eb/No Target	O			
Diversity mode	M			
D Field Length	C-FB			
SSDT Cell ID Length	O			
S Field Length	O			
Mean Bit Rate	O			For the UL.
DL DPCH Information		1		
Transport Format Combination Set	M			
DL DPCH Slot Format	M			
TFCI Signalling Mode	M			
TFCI Presence	C- SlotFormat			
Multiplexing Position	M			
Power Offset Information		1		
PO1	M		Power Offset	Power offset for the TFCI bits.
PO2	M		Power Offset	Power offset for the TPC bits.
PO3	M		Power Offset	Power offset for the pilot bits.
TPC Downlink Step Size	M			
Mean Bit Rate	O			For the DL.
DCH Information		1..<maxnoofDCHs >		
DCH ID	M			
DCH Combination Ind	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
BLER	M			For the UL.
BLER	M			For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
ToAWS	M			
ToAWE	M			
DRAC control	M			

RL Information		$1 \dots \max\text{noofRLs}$		
RL ID	M			
C-ID	M			
Frame Offset	M			
Chip Offset	M			
Propagation Delay	O			
Diversity Control Field	C – NotFirstRL			
Initial DL TX Power	O		DL Power	
Primary CPICH Ec/Io	O			
SSDT Cell ID	O			

Condition	Explanation
CodeLen	This IE is present only if "Min UL Channelisation Code len" equals to 4
FB	This IE is present only if Feed Back mode diversity is activated.
SlotFormat	This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16.
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information .

Range bound	Explanation
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofRLs	Maximum no. of RLs for one UE.

9.1.4 RADIO LINK SETUP RESPONSE

9.1.4.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
RL Information Response		1..<maxnoofRLs>		
RL ID	M			
SAI	M			
UL Interference Level	M			
Secondary CCPCH Info		0..1		
FDD S-CCPCH Offset	M			Corresponds to: $\tau_{S-CCPCH,k}$, see ref. [Error! Reference source not found.]
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
TFCS	M			For the DL.
Secondary CCPCH Slot Format	M			
TFCI presence	C - SlotFormat			
Multiplexing Position	M			
STTD Indicator	M			
FACH/PCH Information		1..<maxFACHcount+1>		
TFS				For each FACH, and the PCH when multiplexed on the same Secondary CCPCH
Scheduling Information		1		
IB SG REP	M			
Segment Information		1..<maxIBSEG>		
IB SG POS	M			
DL Code Information		1..<maxnoofDLCode s>		
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
Diversity Indication	C-NotFirstRL			
CHOICE <i>diversity Indication Combining</i>				
RL ID	M			Reference RL ID for the combining
<i>Non Combining or IE not present</i>				"IE not present" is equivalent to "First RL".
DCH Information Response		0..<maxnoofDCHs >		Only one DCH per set of co-ordinated DCHs shall be included
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			

SSDT Support Indicator	M			
Maximum Uplink Eb/No	M		Uplink Eb/No	
Minimum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		<i>0..<maxnoofFDDn neighbours></i>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information	O	<i>0..<maxnoofTDDn neighbours></i>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Uplink Eb/No Target	O		Uplink Eb/No	
Downlink Eb/No Target	O			
Criticality Diagnostics	O			

Condition	Explanation
IfComb	This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.
IfNotComb	This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B.
NotFirstRL	The IE is present only if the RL is not the first RL in the RL Information
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.
SlotFormat	This IE is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell.
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell.
MaxFACHCount	Maximum number of FACH's mapped onto secondary CCPCH's
MaxIBSEG	Maximum number of segments for one Information Block

9.1.7 RADIO LINK ADDITION RESPONSE

9.1.7.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
RL Information Response		1..<maxnoofRLs-1>		
RL ID	M			
SAI	M			
UL Interference Level	M			
Secondary CCPCH Info		0..1		
FDD S-CCPCH Offset	M			Corresponds to: $T_{S-CCPCH,k}$, see ref. [Error! Reference source not found.]
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
TFCS	M			For the DL.
Secondary CCPCH Slot Format	M			
TFCI presence	C - SlotFormat			
MultiplexingPosition	M			
STTD Indicator	M			
FACH/PCH Information		1.. <maxFACHcount+1>		
TFS				For each FACH, and the PCH when multiplexed on the same Secondary CCPCH
Scheduling Information		1		
IB_SG REP	M			
Segment Information		1.. <maxIBSEG>		
IB_SG POS	M			
DL Code Information		1.. <maxnoofDLCodes>		
DL Scrambling Code	M			
DL Channelisation Code	M			
Diversity Indication	M			
CHOICE <i>diversity indication</i>				
<i>Combining</i>				
RL ID	M			Reference RL-Id
<i>Non combining</i>				
DCH Information Response		1.. <maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Minimum Uplink Eb/No	M		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		0.. <maxnoofFDD Neighbours>		

UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information		<i>0..<maxnoofTDD Neighbours></i>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.
SlotFormat	This IE is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17.

Range bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
MaxnoofRLs	Maximum number of radio links for one UE
MaxnoofFDDNeighbours	Maximum number of neighbouring FDD cells for one cell
MaxnoofTDDNeighbours	Maximum number of neighbouring TDD cells for one cell
MaxnoofDLCodes	Maximum number of DL code information
MaxFACHCount	Maximum number of FACH's mapped onto secondary CCPCH's
MaxIBSEG	Maximum number of segments for one Information Block

9.1.11 RADIO LINK RECONFIGURATION PREPARE

9.1.11.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
Allowed Queuing Time	O			
UL DPCH Information		0..1		
UL Scrambling code	O			
Min UL Channelisation Code Length	O			
Max Number of UL DPDCHs	C – CodeLen			
Puncture Limit	O			For the UL.
TFCS	O			TFCS for the UL.
UL DPCCCH Slot Format	O			
SSDT Cell Identity Length	O			
S-Field Length	O			
Mean Bit Rate	O			For the UL.
DL DPCH Information		0..1		
TFCS	O			TFCS for the DL.
DL DPCH Slot Format	O			
TFCI Signalling Mode	O			
TFCI Presence	C- SlotFormat			
MultiplexingPosition	O			
Mean Bit Rate	O			For the DL.
DCHs to Modify		0..<maxnoofDCHs >		
DCH ID	M			
Transport Format Set	O			For the UL.
Transport Format Set	O			For the DL.
Allocation/Retention Priority	O			
Frame Handling Priority	O			
UL FP Mode	O			
ToAWS	O			
ToAWE	O			
DRAC Control	<u>O</u>			
DCHs to Add		0..<maxnoofDCHs >		
DCH ID	M			
DCH Combination Indicator	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
BLER	M			For the UL.
BLER	M			For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
ToAWS	M			
ToAWE	M			
DRAC Control	<u>M</u>			
DCHs to Delete		0..<maxnoofDCHs >		
DCH ID	M			

RL Information		<i>0..<maxnoofRLs></i>		
RL ID	M			
SSDT Indication	O			
SSDT Cell Identity	C - SSDTIndON			

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 values 12 to 16.

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofRLs	Maximum number of RLs for a UE.

9.1.12 RADIO LINK RECONFIGURATION READY

9.1.12.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
RL Information Response		0..<maxnoofRLs>		
RL ID	M			
Maximum Uplink Eb/No	O		Uplink Eb/No	
Minimum Uplink Eb/No	O		Uplink Eb/No	
Secondary CCPCH Info		0..1		
FDD S-CCPCH Offset	M			Corresponds to: $T_{S-CCPCH,k}$, see ref. [Error! Reference source not found.6]
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
TFCS	M			For the DL.
Secondary CCPCH Slot Format	M			
TFCI presence	C - SlotFormat			
MultiplexingPosition	M			
STTD Indicator	M			
FACH/PCH Information		1.. <maxFACHcount+1>		
TFS				For each FACH, and the PCH when multiplexed on the same Secondary CCPCH
Scheduling Information		1		
IB_SG_REP	M			
Segment Information		1.. <maxIBSEGS>		
IB_SG_POS	M			
Downlink Code Information		0..<maxnoofDLCodes>		
DL Scrambling Code	M			
DL Channelisation Code	M			
DCH to be Added		0..<maxnoofDCHs>		Only one DCH per set of coordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLs.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
DCH to be Modified		0..<maxnoofDCHs>		Only one DCH per set of coordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLs.

DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Criticality Diagnostics	O			

<u>Condition</u>	<u>Explanation</u>
<u>SlotFormat</u>	This IE is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs.
MaxnoofRLs	Maximum number of RLs for a UE.
MaxnoofDLCodes	Maximum number of Downlink Channelisation Codes.
<u>MaxFACHCount</u>	<u>Maximum number of FACH's mapped onto secondary CCPCH's</u>
<u>MaxIBSEG</u>	<u>Maximum number of segments for one Information Block</u>

9.1.16 RADIO LINK RECONFIGURATION REQUEST

9.1.16.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
Allowed Queuing Time	O			
UL DPCH Information		0..1		
TFCS	O			TFCS for the UL.
Mean Bit Rate	O			
DL DPCH Information		0..1		
TFCS	O			TFCS for the DL.
TFCI Signalling Mode	O			
Mean Bit Rate	O			
DCHs to Modify		0..<maxnoofDCHs >		
DCH ID	M			
Transport Format Set	O			For the UL.
Transport Format Set	O			For the DL.
Allocation/Retention Priority	O			
Frame Handling Priority	O			
UL FP Mode	O			
ToAWS	O			
ToAWE	O			
DRAC Control	<u>O</u>			
DCHs to add		0..<maxnoofDCHs >		
DCH ID	M			
DCH Combination Ind	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP mode	M			
ToAWS	M			
ToAWE	M			
DRAC Control	<u>M</u>			
DCHs to Delete		0..<maxnoofDCHs >		
DCH ID	M			

Range Bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.

9.1.17 RADIO LINK RECONFIGURATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
RL Information Response		0..<maxnoofRLs>		
RL ID	M			
Maximum Uplink Eb/No	O		Uplink Eb/No	
Minimum Uplink Eb/No	O		Uplink Eb/No	
Secondary CCPCH Info		0..1		
<u>FDD S-CCPCH Offset</u>	<u>M</u>			<u>Corresponds to: $\tau_{S-CCPCH,k}$, see ref. [Error! Reference source not found.6]</u>
<u>DL Scrambling Code</u>	<u>M</u>			
<u>FDD DL Channelisation Code Number</u>	<u>M</u>			
<u>TFCS</u>	<u>M</u>			<u>For the DL.</u>
<u>Secondary CCPCH Slot Format</u>	<u>M</u>			
<u>TFCI presence</u>	<u>C - SlotFormat</u>			
<u>MultiplexingPosition</u>	<u>M</u>			
<u>STTD Indicator</u>	<u>M</u>			
<u>FACH/PCH Information</u>		<u>1.. <maxFACHcount+ 1></u>		
<u>TFS</u>				<u>For each FACH, and the PCH when multiplexed on the same Secondary CCPCH</u>
<u>Scheduling Information</u>		<u>1</u>		
<u>IB SG REP</u>	<u>M</u>			
<u>Segment Information</u>		<u>1.. <maxIBSEG></u>		
<u>IB SG POS</u>	<u>M</u>			
DCH to be Added		0..<maxnoofDCHs >		Only one DCH per set of coordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLs.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
DCH to be Modified		0..<maxnoofDCHs >		Only one DCH per set of coordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLs.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Criticality Diagnostics	O			

<u>Condition</u>	<u>Explanation</u>
<u>SlotFormat</u>	This IE is present only if the Secondary CCPCCH Slot Format is equal to any of the value 8 to 17

<u>Range Bound</u>	<u>Explanation</u>
<u>MaxnoofDCHs</u>	Maximum number of DCHs for a UE.
<u>MaxnoofRLs</u>	Maximum number of RLs for a UE.
<u>MaxSysinfoFACHCount</u>	Maximum number of references to system information blocks on the FACH
<u>MaxIBSEG</u>	Maximum number of segments for one Information Block

9.2.2.a DRAC Control

This IE indicates whether the DCH is control by DRAC or not.

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
<u>DRAC Control</u>			Enumerated (Requested, Not-Requested)	Requested means that DCH is controlled by DRAC

9.2.2.b IB SG POS

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

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
<u>IB SG POS</u>			INTEGER (0..2 ¹² -1)	

9.2.2.c IB SG REP

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

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

9.3 Message and Information element abstract syntax (with ASN.1)

This chapter is for the time being only **INFORMATIVE**.

In case of misalignment with the tabular format of the messages in chapter 9.1 the ASN.1 needs to be aligned with the tabular format.

The setting of the criticality field and the level on which criticality is set for the IEs and sequences of IEs is still to be decided upon.

9.3.1 Usage of Protocol Extension Mechanism for non-standard use

The protocol extension 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 multivendor inter-operability.
- by vendors for research purposes, e.g. to implement and evaluate new algorithms/features before such features are proposed for standardisation.

The extension mechanism shall not be used for basic functionality. Such functionality shall be standardised.

9.3.2 Elementary Procedure Definitions

```
-- *****
--
-- Elementary Procedure definitions
--
-- *****

RNSAP-PDU-Descriptions -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    Criticality,
    ProcedureID,
    TransactionID
FROM RNSAP-CommonDataTypes

    CommonTransportChannelResourcesFailure,
    CommonTransportChannelResourcesRequest,
```

CommonTransportChannelResourcesReleaseRequest ,
CommonTransportChannelResourcesResponseFDD ,
CommonTransportChannelResourcesResponseTDD ,
CompressedModeCancel ,
CompressedModeCommit ,
CompressedModeFailure ,
CompressedModePrepare ,
CompressedModeReady ,
DedicatedMeasurementFailureIndication ,
DedicatedMeasurementInitiationFailure ,
DedicatedMeasurementInitiationRequest ,
DedicatedMeasurementInitiationResponse ,
DedicatedMeasurementReport ,
DedicatedMeasurementTerminationRequest ,
DL-PowerControlRequest ,
DownlinkSignallingTransferRequest ,
ErrorIndication ,
PagingRequest ,
PhysicalChannelReconfigurationCommand ,
PhysicalChannelReconfigurationFailure ,
PhysicalChannelReconfigurationRequestFDD ,
PhysicalChannelReconfigurationRequestTDD ,
PrivateMessage ,
RadioLinkAdditionFailureFDD ,
RadioLinkAdditionFailureTDD ,
RadioLinkAdditionRequestFDD ,
RadioLinkAdditionRequestTDD ,
RadioLinkAdditionResponseFDD ,
RadioLinkAdditionResponseTDD ,
RadioLinkDeletionRequest ,
RadioLinkDeletionResponse ,
RadioLinkFailureIndication ,
RadioLinkReconfigurationCancel ,
RadioLinkReconfigurationCommit ,
RadioLinkReconfigurationFailure ,
RadioLinkReconfigurationPrepareFDD ,
RadioLinkReconfigurationPrepareTDD ,
RadioLinkReconfigurationReadyFDD ,
RadioLinkReconfigurationReadyTDD ,
RadioLinkReconfigurationRequestFDD ,
RadioLinkReconfigurationRequestTDD ,
RadioLinkReconfigurationResponseFDD ,
RadioLinkReconfigurationResponseTDD ,
RadioLinkRestoreIndication ,
RadioLinkSetupFailureFDD ,
RadioLinkSetupFailureTDD ,
RadioLinkSetupRequestFDD ,
RadioLinkSetupRequestTDD ,
RadioLinkSetupResponseFDD ,
RadioLinkSetupResponseTDD ,
RelocationCommit ,
UplinkSignallingTransferIndication

FROM RNSAP-PDU-Contents

```
id-commonTransportChannelResourcesInitiationFDD,
id-commonTransportChannelResourcesInitiationTDD,
id-commonTransportChannelResourcesRelease,
id-compressedModeCancellationFDD,
id-compressedModeCommitFDD,
id-compressedModePrepareFDD,
id-downlinkPowerControl,
id-downlinkSignallingTransfer,
id-errorIndication,
id-measurementFailure,
id-measurementInitiation,
id-measurementReporting,
id-measurementTermination,
id-pagingRequest,
id-physicalChannelReconfiguration,
id-privateMessage,
id-radioLinkAddition,
id-radioLinkDeletion,
id-radioLinkFailure,
id-radioLinkRestoration,
id-radioLinkSetup,
id-srnsRelocationCommit,
id-synchronisedRadioLinkReconfigurationCancellation,
id-synchronisedRadioLinkReconfigurationCommit,
id-synchronisedRadioLinkReconfigurationPrepare,
id-unsynchronisedRadioLinkReconfiguration,
id-uplinkSignallingTransfer
FROM RNSAP-Constants;

-- *****
--
-- Interface Elementary Procedure Class
--
-- *****

RNSAP-ELEMENTARY-PROCEDURE ::= CLASS {
    &InitiatingMessage          ,
    &SuccessfulOutcome          OPTIONAL,
    &UnsuccessfulOutcome       OPTIONAL,
    &Outcome                    OPTIONAL,
    &procedureID                ProcedureID    UNIQUE,
    &criticality                Criticality    DEFAULT ignore
}
WITH SYNTAX {
    INITIATING MESSAGE          &InitiatingMessage
    [SUCCESSFUL OUTCOME        &SuccessfulOutcome]
    [UNSUCCESSFUL OUTCOME      &UnsuccessfulOutcome]
    [OUTCOME                   &Outcome]
    PROCEDURE ID               &procedureID
    [CRITICALITY               &criticality]
}
```

```
-- *****
--
-- Interface PDU Definition
--
-- *****

RNSAP-PDU ::= CHOICE {
    initiatingMessage    InitiatingMessage,
    succesfulOutcome     SuccessfulOutcome,
    unsuccessfulOutcome  UnsuccessfulOutcome,
    outcome              Outcome,
    ...
}

InitiatingMessage ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID    ({RNSAP-ELEMENTARY-PROCEDURES}),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality    ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID TransactionID,
    value       RNSAP-ELEMENTARY-PROCEDURE.&InitiatingMessage  ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

SuccessfulOutcome ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID    ({RNSAP-ELEMENTARY-PROCEDURES}),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality    ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID TransactionID,
    value       RNSAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome  ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

UnsuccessfulOutcome ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID    ({RNSAP-ELEMENTARY-PROCEDURES}),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality    ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID TransactionID,
    value       RNSAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome  ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

Outcome ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID    ({RNSAP-ELEMENTARY-PROCEDURES}),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality    ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID TransactionID,
    value       RNSAP-ELEMENTARY-PROCEDURE.&Outcome        ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

-- *****
--
-- Interface Elementary Procedure List
--
-- *****

RNSAP-ELEMENTARY-PROCEDURES RNSAP-ELEMENTARY-PROCEDURE ::= {
    RNSAP-ELEMENTARY-PROCEDURES-CLASS-1    |
    RNSAP-ELEMENTARY-PROCEDURES-CLASS-2    |
    RNSAP-ELEMENTARY-PROCEDURES-CLASS-3    ,
    ...
}
```

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```
}  
  
RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 RNSAP-ELEMENTARY-PROCEDURE ::= {  
    radioLinkSetupFDD |  
    radioLinkSetupTDD |  
    radioLinkAdditionFDD |  
    radioLinkAdditionTDD |  
    radioLinkDeletion |  
    synchronisedRadioLinkReconfigurationPreparationFDD |  
    synchronisedRadioLinkReconfigurationPreparationTDD |  
    unSynchronisedRadioLinkReconfigurationFDD |  
    unSynchronisedRadioLinkReconfigurationTDD |  
    physicalChannelReconfigurationFDD |  
    physicalChannelReconfigurationTDD |  
    measurementInitiation |  
    compressedModePreparationFDD |  
    commonTransportChannelResourcesInitiationFDD |  
    commonTransportChannelResourcesInitiationTDD |  
    ...  
}  
  
RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 RNSAP-ELEMENTARY-PROCEDURE ::= {  
    uplinkSignallingTransfer |  
    downlinkSignallingTransfer |  
    srnsRelocationCommit |  
    paging |  
    synchronisedRadioLinkReconfigurationCommit |  
    synchronisedRadioLinkReconfigurationCancellation |  
    radioLinkFailure |  
    radioLinkRestoration |  
    measurementReporting |  
    measurementTermination |  
    measurementFailure |  
    downlinkPowerControlFDD |  
    compressedModeCommitFDD |  
    compressedModeCancellationFDD |  
    commonTransportChannelResourcesRelease |  
    errorIndication |  
    privateMessage |  
    ...  
}  
  
RNSAP-ELEMENTARY-PROCEDURES-CLASS-3 RNSAP-ELEMENTARY-PROCEDURE ::= {  
    ...  
}  
  
-- *****  
--  
-- Interface Elementary Procedures  
--  
-- *****  
  
radioLinkSetupFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
```

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```
INITIATING MESSAGE RadioLinkSetupRequestFDD
SUCCESSFUL OUTCOME RadioLinkSetupResponseFDD
UNSUCCESSFUL OUTCOME RadioLinkSetupFailureFDD
PROCEDURE ID { procedureCode id-radioLinkSetup, ddMode fdd }
CRITICALITY ignore
}

radioLinkSetupTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
INITIATING MESSAGE RadioLinkSetupRequestTDD
SUCCESSFUL OUTCOME RadioLinkSetupResponseTDD
UNSUCCESSFUL OUTCOME RadioLinkSetupFailureTDD
PROCEDURE ID { procedureCode id-radioLinkSetup, ddMode tdd }
CRITICALITY ignore
}

radioLinkAdditionFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
INITIATING MESSAGE RadioLinkAdditionRequestFDD
SUCCESSFUL OUTCOME RadioLinkAdditionResponseFDD
UNSUCCESSFUL OUTCOME RadioLinkAdditionFailureFDD
PROCEDURE ID { procedureCode id-radioLinkAddition , ddMode fdd }
CRITICALITY ignore
}

radioLinkAdditionTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
INITIATING MESSAGE RadioLinkAdditionRequestTDD
SUCCESSFUL OUTCOME RadioLinkAdditionResponseTDD
UNSUCCESSFUL OUTCOME RadioLinkAdditionFailureTDD
PROCEDURE ID { procedureCode id-radioLinkAddition , ddMode tdd }
CRITICALITY ignore
}

radioLinkDeletion RNSAP-ELEMENTARY-PROCEDURE ::= {
INITIATING MESSAGE RadioLinkDeletionRequest
SUCCESSFUL OUTCOME RadioLinkDeletionResponse
PROCEDURE ID { procedureCode id-radioLinkDeletion, ddMode common }
CRITICALITY ignore
}

synchronisedRadioLinkReconfigurationPreparationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
INITIATING MESSAGE RadioLinkReconfigurationPrepareFDD
SUCCESSFUL OUTCOME RadioLinkReconfigurationReadyFDD
UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
PROCEDURE ID { procedureCode id-synchronisedRadioLinkReconfigurationPrepare, ddMode fdd }
CRITICALITY ignore
}

synchronisedRadioLinkReconfigurationPreparationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
INITIATING MESSAGE RadioLinkReconfigurationPrepareTDD
SUCCESSFUL OUTCOME RadioLinkReconfigurationReadyTDD
UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
PROCEDURE ID { procedureCode id-synchronisedRadioLinkReconfigurationPrepare, ddMode tdd }
CRITICALITY ignore
}
```



```
unSynchronisedRadioLinkReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationRequestFDD
  SUCCESSFUL OUTCOME  RadioLinkReconfigurationResponseFDD
  UNSUCCESSFUL OUTCOME  RadioLinkReconfigurationFailure
  PROCEDURE ID        { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode fdd }
  CRITICALITY         ignore
}
```

```
unSynchronisedRadioLinkReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationRequestTDD
  SUCCESSFUL OUTCOME  RadioLinkReconfigurationResponseTDD
  UNSUCCESSFUL OUTCOME  RadioLinkReconfigurationFailure
  PROCEDURE ID        { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode tdd }
  CRITICALITY         ignore
}
```

```
physicalChannelReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  PhysicalChannelReconfigurationRequestFDD
  SUCCESSFUL OUTCOME  PhysicalChannelReconfigurationCommand
  UNSUCCESSFUL OUTCOME  PhysicalChannelReconfigurationFailure
  PROCEDURE ID        { procedureCode id-physicalChannelReconfiguration, ddMode fdd }
  CRITICALITY         ignore
}
```

```
physicalChannelReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  PhysicalChannelReconfigurationRequestTDD
  SUCCESSFUL OUTCOME  PhysicalChannelReconfigurationCommand
  UNSUCCESSFUL OUTCOME  PhysicalChannelReconfigurationFailure
  PROCEDURE ID        { procedureCode id-physicalChannelReconfiguration, ddMode tdd }
  CRITICALITY         ignore
}
```

```
measurementInitiation RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  DedicatedMeasurementInitiationRequest
  SUCCESSFUL OUTCOME  DedicatedMeasurementInitiationResponse
  UNSUCCESSFUL OUTCOME  DedicatedMeasurementInitiationFailure
  PROCEDURE ID        { procedureCode id-measurementInitiation, ddMode common }
  CRITICALITY         ignore
}
```

```
compressedModePreparationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CompressedModePrepare
  SUCCESSFUL OUTCOME  CompressedModeReady
  UNSUCCESSFUL OUTCOME  CompressedModeFailure
  PROCEDURE ID        { procedureCode id-compressedModePrepareFDD, ddMode fdd }
  CRITICALITY         ignore
}
```

```
commonTransportChannelResourcesInitiationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CommonTransportChannelResourcesRequest
  SUCCESSFUL OUTCOME  CommonTransportChannelResourcesResponseFDD
  UNSUCCESSFUL OUTCOME  CommonTransportChannelResourcesFailure
}
```

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```
PROCEDURE ID      { procedureCode id-commonTransportChannelResourcesInitiationFDD, ddMode common }
CRITICALITY      ignore
}

commonTransportChannelResourcesInitiationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CommonTransportChannelResourcesRequest
  SUCCESSFUL OUTCOME  CommonTransportChannelResourcesResponseTDD
  UNSUCCESSFUL OUTCOME  CommonTransportChannelResourcesFailure
  PROCEDURE ID      { procedureCode id-commonTransportChannelResourcesInitiationTDD, ddMode common }
  CRITICALITY      ignore
}

uplinkSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  UplinkSignallingTransferIndication
  PROCEDURE ID      { procedureCode id-uplinkSignallingTransfer, ddMode common }
  CRITICALITY      ignore
}

downlinkSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  DownlinkSignallingTransferRequest
  PROCEDURE ID      { procedureCode id-downlinkSignallingTransfer, ddMode common }
  CRITICALITY      ignore
}

srnsRelocationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RelocationCommit
  PROCEDURE ID      { procedureCode id-srnsRelocationCommit, ddMode common }
  CRITICALITY      ignore
}

paging RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  PagingRequest
  PROCEDURE ID      { procedureCode id-pagingRequest, ddMode common }
  CRITICALITY      ignore
}

synchronisedRadioLinkReconfigurationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationCommit
  PROCEDURE ID      { procedureCode id-synchronisedRadioLinkReconfigurationCommit, ddMode common }
  CRITICALITY      ignore
}

synchronisedRadioLinkReconfigurationCancellation RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationCancel
  PROCEDURE ID      { procedureCode id-synchronisedRadioLinkReconfigurationCancellation, ddMode common }
  CRITICALITY      ignore
}

radioLinkFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkFailureIndication
  PROCEDURE ID      { procedureCode id-radioLinkFailure, ddMode common }
  CRITICALITY      ignore
}
```

```
radioLinkRestoration RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkRestoreIndication
  PROCEDURE ID        { procedureCode id-radioLinkRestoration, ddMode common }
  CRITICALITY         ignore
}

measurementReporting RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  DedicatedMeasurementReport
  PROCEDURE ID        { procedureCode id-measurementReporting, ddMode common }
  CRITICALITY         ignore
}

measurementTermination RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  DedicatedMeasurementTerminationRequest
  PROCEDURE ID        { procedureCode id-measurementTermination, ddMode common }
  CRITICALITY         ignore
}

measurementFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  DedicatedMeasurementFailureIndication
  PROCEDURE ID        { procedureCode id-measurementFailure, ddMode common }
  CRITICALITY         ignore
}

downlinkPowerControlFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  DL-PowerControlRequest
  PROCEDURE ID        { procedureCode id-downlinkPowerControl, ddMode fdd }
  CRITICALITY         ignore
}

compressedModeCommitFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CompressedModeCommit
  PROCEDURE ID        { procedureCode id-compressedModeCommitFDD, ddMode fdd }
  CRITICALITY         ignore
}

compressedModeCancellationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CompressedModeCancel
  PROCEDURE ID        { procedureCode id-compressedModeCancellationFDD, ddMode fdd }
  CRITICALITY         ignore
}

commonTransportChannelResourcesRelease RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CommonTransportChannelResourcesReleaseRequest
  PROCEDURE ID        { procedureCode id-commonTransportChannelResourcesRelease, ddMode common }
  CRITICALITY         ignore
}

errorIndication RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  ErrorIndication
  PROCEDURE ID        { procedureCode id-errorIndication, ddMode common }
  CRITICALITY         ignore
}
```

```
}  
  
privateMessage RNSAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE PrivateMessage  
    PROCEDURE ID      { procedureCode id-privateMessage, ddMode common }  
    CRITICALITY       ignore  
}  
  
END
```

9.3.3PDU Definitions

```
-- *****  
--  
-- PDU definitions for RNSAP.  
--  
-- *****  
  
RNSAP-PDU-Contents -- { object identifier to be allocated }--  
DEFINITIONS AUTOMATIC TAGS ::=  
  
BEGIN  
  
-- *****  
--  
-- IE parameter types from other modules.  
--  
-- *****  
  
IMPORTS  
    AllocationRetentionPriority,  
    AllowedQueuingTime,  
    BLER,  
    BindingID,  
    BurstType,  
    C-ID,  
    C-RNTI,  
    CCTrCH-ID,  
    CFN,  
    CN-CS-DomainIdentifier,  
    CN-PS-DomainIdentifier,  
    CPICH-EcIo,  
    CPICH-Power,  
    Cause,  
    CellParameterID,  
    ChipOffset,  
    CompressedModeMethod,  
    CriticalityDiagnostics,  
    D-FieldLength,  
    D-RNTI,  
    D-RNTI-ReleaseIndication,  
    DCH-CombinationInd,
```

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DCH-ID,
DL-ChannelisationCode,
DL-DPCCCH-SlotFormat,
DL-DPCH-SlotNumber,
DL-EbNo,
DL-EbNoTarget,
DL-FrameType,
DL-Power,
DL-ScramblingCode,
DPCH-ID,
DRACControl,
DRX-Parameter,
DedicatedMeasurementValue,
DiversityControlField,
DiversityMode,
FACH-DataFrameSize,
FACH-InitialWindowSize,
FACH-PriorityIndicator,
FDD-DL-ChannelisationCodeNumber,
FDD-S-CCPCH-Offset,
FrameHandlingPriority,
FrameOffset,
GapPeriod,
GapPositionMode,
L3-Information,
MAC-c-SDU-Length,
MaxNrOfUL-DPCHs,
MeanBitRate,
MeasurementCharacteristics,
MeasurementID,
MidambleShift,
MinUL-ChannelisationCodeLength,
MultipleURAsIndicator,
MultiplexingPosition,
Offset,
PD,
PSCH-PCCPCH-TimeSlot,
PSCH-TimeSlot,
PayloadCRC-PresenceIndicator,
PilotBitsUsedIndicator,
PowerControlMode,
PowerOffset,
PowerResumeMode,
PrimaryCCPCH-RSCP,
PrimaryCPICH-EcNo,
PrimaryCPICH-Power,
PrimaryScramblingCode,
PropagationDelay,
PunctureLimit,
RANAP-RelocationInformation,
RL-ID,
RLC-Mode,
RNC-ID,

RepetitionLength,
RepetitionPeriod,
ReportCharacteristics,
S-FieldLength,
S-RNTI,
SAI,
IB-SG-Pos,
IB-SG-Rep,
SN,
SRNC-ID,
SSDT-CellID,
SSDT-CellID-Length,
SSDT-Indication,
SSDT-SupportIndicator,
ScaledUL-InterferenceLevel,
ScramblingCode,
ScramblingCodeChange,
SecondaryCCPCH-SlotFormat,
SyncCase,
TDD-ChannelisationCode,
TDD-PhysicalChannelOffset,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TGD,
TGL,
TPC-StepSize,
TimeSlot,
ToAWE,
ToAWS,
TransportBearerID,
TransportBearerRequestIndicator,
TransportFormatCombinationSet,
TransportFormatSet,
TransportLayerAddress,
UARFCN,
UC-ID,
UL-DL-CompressedModeSelection,
UL-DPCCH-SlotFormat,
UL-EbNo,
UL-EbNoTarget,
UL-FP-Mode,
UL-ScramblingCode,
URA-ID_⌊
FROM RNSAP-IEs

PrivateExtensionContainer{},
ProtocolExtensionContainer{},
ProtocolIE-ContainerList{},
ProtocolIE-ContainerPair{},
ProtocolIE-ContainerPairList{},
ProtocolIE-Container{},
RNSAP-PRIVATE-EXTENSION,

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RNSAP-PROTOCOL-EXTENSION,
RNSAP-PROTOCOL-IES,
RNSAP-PROTOCOL-IES-PAIR
FROM RNSAP-Containers

maxNoOfDL-Codes,
maxNrOfCCTrCHs,
maxNrOfDCHs,
maxNrOfDL-Codes,
maxNrOfDPCHs,
maxNrOfFACH-FD-Size,
maxNrOfFDD-Neighbours,
maxNrOfMACcSDU-Length,
maxNrOfTDD-Neighbours,
maxNrOfRLs,
maxNrOfSCCPCHs,
maxRNCinURA,
maxFACHCount,
maxIBSEG,

id-AllowedQueuingTime,
id-BindingID,
id-C-ID,
id-C-RNTI,
id-CCTrCH-ID,
id-CFN,
id-CN-CS-DomainIdentifier,
id-CN-PS-DomainIdentifier,
id-Cause,
id-CompressedModeMethod,
id-CriticalityDiagnostics,
id-D-RNTI,
id-D-RNTI-ReleaseIndication,
id-DCH-AddItem,
id-DCH-AddItem-RL-ReconfPrepFDD,
id-DCH-AddItem-RL-ReconfPrepTDD,
id-DCH-AddItem-RL-ReconfReadyFDD,
id-DCH-AddItem-RL-ReconfRqstFDD,
id-DCH-AddItem-RL-ReconfRqstTDD,
id-DCH-AddItem-RL-ReconfRspFDD,
id-DCH-AddList-RL-ReconfPrepFDD,
id-DCH-AddList-RL-ReconfPrepTDD,
id-DCH-AddList-RL-ReconfRqstFDD,
id-DCH-AddList-RL-ReconfRqstTDD,
id-DCH-DeleteItem-RL-ReconfPrepFDD,
id-DCH-DeleteItem-RL-ReconfPrepTDD,
id-DCH-DeleteItem-RL-ReconfRqstFDD,
id-DCH-DeleteItem-RL-ReconfRqstTDD,
id-DCH-DeleteList-RL-ReconfPrepFDD,
id-DCH-DeleteList-RL-ReconfPrepTDD,
id-DCH-DeleteList-RL-ReconfRqstFDD,
id-DCH-DeleteList-RL-ReconfRqstTDD,
id-DCH-Information-RL-SetupReqFDD,

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id-DCH-InformationItem-RL-SetupReqFDD,
id-DCH-InformationItem-RL-SetupReqTDD,
id-DCH-InformationList-RL-SetupReqTDD,
id-DCH-ModifyItem,
id-DCH-ModifyItem-RL-ReconfPrepFDD,
id-DCH-ModifyItem-RL-ReconfPrepTDD,
id-DCH-ModifyItem-RL-ReconfReadyFDD,
id-DCH-ModifyItem-RL-ReconfRqstFDD,
id-DCH-ModifyItem-RL-ReconfRqstTDD,
id-DCH-ModifyItem-RL-ReconfRspFDD,
id-DCH-ModifyList-RL-ReconfPrepFDD,
id-DCH-ModifyList-RL-ReconfPrepTDD,
id-DCH-ModifyList-RL-ReconfRqstFDD,
id-DCH-ModifyList-RL-ReconfRqstTDD,
id-DL-CCTrCH-Information-RL-ReconfPrepTDD,
id-DL-CCTrCH-Information-RL-ReconfRqstTDD,
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD,
id-DL-CCTrChInformationItem-RL-SetupReqTDD,
id-DL-CCTrChInformationList-RL-SetupReqTDD,
id-DL-CodeInformation-PhyChReconfRqstFDD,
id-DL-DPCH-Information,
id-DL-DPCH-Information-RL-SetupReqFDD,
id-DL-DPCH-InformationList-PhyChReconfRqstTDD,
id-DL-DPCH-InformationList-RL-ReconfReadyTDD,
id-DL-EbNoTarget,
id-DL-FrameType,
id-DL-MeanBitRate,
id-DL-ReferencePowerInformation-DL-PC-Rqst,
id-DRX-Parameter,
id-DedicatedMeasurementObjectType-DM-Rprt,
id-DedicatedMeasurementObjectType-DM-Rqst,
id-DedicatedMeasurementObjectType-DM-Rspns,
id-FACH-InfoForOptionalGroupS-CCPCH,
id-FACH-InfoForOptionals-CCPCH,
id-FACH-InfoForS-CCPCH-CoupledToPRACH,
id-GapPositionMode,
id-L3-Information,
id-MeasurementCharacteristics,
id-MeasurementID,
id-MultipleURAsIndicator,
id-PD,
id-PagingArea-PagingRqst,
id-PowerControlMode,
id-PowerResumeMode,
id-ProcedureScope-DL-PC-Rqst,
id-RANAP-RelocationInformation,
id-RL-Information-PhyChReconfRqstFDD,
id-RL-Information-PhyChReconfRqstTDD,
id-RL-Information-RL-AdditionRqstFDD,
id-RL-Information-RL-AdditionRqstTDD,
id-RL-Information-RL-DeletionRqst,
id-RL-Information-RL-FailureInd,

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id-RL-Information-RL-ReconfPrepFDD,
id-RL-Information-RL-RestoreInd,
id-RL-Information-RL-SetupReqFDD,
id-RL-Information-RL-SetupReqTDD,
id-RL-InformationItem-DM-Rprt,
id-RL-InformationItem-DM-Rqst,
id-RL-InformationItem-DM-Rspns,
id-RL-InformationItem-RL-SetupReqFDD,
id-RL-InformationList-RL-AdditionRqstFDD,
id-RL-InformationList-RL-DeletionRqst,
id-RL-InformationList-RL-FailureInd,
id-RL-InformationList-RL-ReconfPrepFDD,
id-RL-InformationList-RL-RestoreInd,
id-RL-InformationResponse-RL-AdditionRspTDD,
id-RL-InformationResponse-RL-ReconfReadyTDD,
id-RL-InformationResponse-RL-SetupRspTDD,
id-RL-InformationResponseItem-RL-AdditionRspFDD,
id-RL-InformationResponseItem-RL-ReconfReadyFDD,
id-RL-InformationResponseItem-RL-SetupRspFDD,
id-RL-InformationResponseItem-RL-ReconfRspFDD,
id-RL-InformationResponseList-RL-AdditionRspFDD,
id-RL-InformationResponseList-RL-ReconfReadyFDD,
id-RL-InformationResponseList-RL-SetupRspFDD,
id-RL-InformationResponseList-RL-ReconfRspFDD,
id-RL-ReconfigurationFailure-RL-ReconfFail,
id-RL-ReconfigurationFailureList-RL-ReconfFail,
id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind,
id-ReportCharacteristics,
id-S-RNTI,
id-SAI,
id-SN,
id-SRNC-ID,
id-ScramblingCodeChange,
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
id-TGD,
id-TGL,
id-TGP1,
id-TGP2,
id-TransportBearerID,
id-TransportBearerRequestIndicator,
id-TransportLayerAddress,
id-UC-ID,
id-UL-CCTrCH-Information-RL-ReconfPrepTDD,
id-UL-CCTrCH-Information-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD,
id-UL-CCTrChInformationItem-RL-SetupReqTDD,
id-UL-CCTrChInformationList-RL-SetupReqTDD,
id-UL-DL-CompressedModeSelection,
id-UL-DPCH-Information,

```
id-UL-DPCH-Information-RL-SetupReqFDD,
id-UL-DPCH-InformationList-PhyChReconfRqstTDD,
id-UL-DPCH-InformationList-RL-ReconfReadyTDD,
id-UL-DeltaEbNo,
id-UL-DeltaEbNoAfter,
id-UL-EbNoTarget,
id-UL-MeanBitRate,
id-URA-ID,
id-UnsuccessfulRL-InformationResponse,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
FROM RNSAP-Constants;

-- *****
--
-- Common Container List
--
-- *****

DCH-IE-ContainerList      { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfDCHs,      { IEsSetParam } }
RL-IE-ContainerList      { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfRLs,      { IEsSetParam } }
CCTrCH-IE-ContainerList  { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfCCTrCHs, { IEsSetParam } }
DL-Code-IE-ContainerList { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfDL-Codes, { IEsSetParam } }

-- *****
--
-- RADIO LINK SETUP REQUEST FDD
--
-- *****

RadioLinkSetupRequestFDD ::= SEQUENCE {
    protocolIES          ProtocolIE-Container      {{RadioLinkSetupRequestFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupRequestFDD-Extensions}}
    ...
}

RadioLinkSetupRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE mandatory } |
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional   } |
    { ID id-AllowedQueuingTime CRITICALITY ignore TYPE AllowedQueuingTime PRESENCE optional   } |
    { ID id-UL-DPCH-Information-RL-SetupReqFDD CRITICALITY ignore TYPE UL-DPCH-Information-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-DL-DPCH-Information-RL-SetupReqFDD CRITICALITY ignore TYPE DL-DPCH-Information-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-DCH-Information-RL-SetupReqFDD CRITICALITY ignore TYPE DCH-InformationList-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-RL-Information-RL-SetupReqFDD CRITICALITY ignore TYPE RL-InformationList-RL-SetupReqFDD PRESENCE mandatory },
    ...
}

UL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    ul-ScramblingCode          UL-ScramblingCode,
    minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength,
```

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```
maxNrOfUL-DPCHs                MaxNrOfUL-DPCHs                OPTIONAL
-- This IE is present only if minUL-ChannelisationCodeLength equals to 4 -- ,
ul-PunctureLimit                PunctureLimit,
ul-TransportFormatCombinationSet TransportFormatCombinationSet,
ul-DPCCCH-SlotFormat            UL-DPCCCH-SlotFormat,
ul-EbNoTarget                   UL-EbNoTarget                OPTIONAL,
diversityMode                   DiversityMode,
d-FieldLength                   D-FieldLength                OPTIONAL
-- This IE is present only if Feed Back mode diversity is activated -- ,
sSDT-CellIdLength              SSDT-CellID-Length          OPTIONAL,
s-FieldLength                   S-FieldLength                OPTIONAL,
ul-meanBitRate                  MeanBitRate                  OPTIONAL,
iE-Extensions                   ProtocolExtensionContainer { {UL-DPCH-Information-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    transportFormatCombinationSet TransportFormatCombinationSet,
    dl-DPCH-SlotNumber            DL-DPCH-SlotNumber,
    tFCI-SignallingMode           TFCI-SignallingMode,
    tFCI-Presence                 TFCI-Presence                OPTIONAL
    -- This IE is present if Slot Format is from 12 to 16 -- ,
    multiplexingPosition          MultiplexingPosition,
    powerOffsetInformation        SEQUENCE {
        po1-ForTFCI-Bits          PowerOffset,
        po2-ForTPC-Bits           PowerOffset,
        po3-ForPilotBits          PowerOffset,
        ...
    },
    dl-TPC-StepSize               TPC-StepSize,
    meanBitRate                   MeanBitRate                  OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { {DL-DPCH-Information-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationList-RL-SetupReqFDD ::= DCH-IE-ContainerList { {DCH-InformationItemIEs-RL-SetupReqFDD} }

DCH-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationItem-RL-SetupReqFDD CRITICALITY ignore TYPE DCH-InformationItem-RL-SetupReqFDD PRESENCE mandatory },
    ...
}

DCH-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
    dCH-ID                        DCH-ID,
    dCH-CombinationInd            DCH-CombinationInd          OPTIONAL,

```

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```

    rLC-Mode                RLC-Mode,
    ul-transportFormatSet   TransportFormatSet,
    dl-transportFormatSet   TransportFormatSet,
    ul-BLER                 BLER,
    dl-BLER                 BLER,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority   FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode              UL-FP-Mode,
    toAWS                   ToAWS,
    toAWE                   ToAWE,
    dRACControl             DRACControl,
    iE-Extensions           ProtocolExtensionContainer { {DCH-InformationItem-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationItem-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-SetupReqFDD ::= RL-IE-ContainerList { {RL-InformationItemIEs-RL-SetupReqFDD} }

RL-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-SetupReqFDD CRITICALITY ignore TYPE RL-InformationItem-RL-SetupReqFDD PRESENCE mandatory },
    ...
}

RL-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    uC-ID                C-ID,
    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-InformationList-RL-SetupReqFDD --,
    dl-InitialTX-Power   DL-Power OPTIONAL
    -- Initial DL transmission power -- ,
    cPICH-EcIo          CPICH-EcIo OPTIONAL,
    sSDT-CellID         SSdT-CellID OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {RL-InformationItem-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
```

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

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

RadioLinkSetupRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE mandatory } |
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional   } |
    { ID id-AllowedQueuingTime CRITICALITY ignore TYPE AllowedQueuingTime PRESENCE optional   } |
    { ID id-UL-MeanBitRate   CRITICALITY ignore TYPE MeanBitRate   PRESENCE optional   } |
    { ID id-DL-MeanBitRate   CRITICALITY ignore TYPE MeanBitRate   PRESENCE optional   } |
    { ID id-UL-CCTrChInformationList-RL-SetupReqTDD CRITICALITY ignore TYPE UL-CCTrChInformationList-RL-SetupReqTDD PRESENCE mandatory } |
    { ID id-DL-CCTrChInformationList-RL-SetupReqTDD CRITICALITY ignore TYPE DL-CCTrChInformationList-RL-SetupReqTDD PRESENCE mandatory } |
    { ID id-DCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE DCH-InformationList-RL-SetupReqTDD PRESENCE mandatory } |
    { ID id-RL-Information-RL-SetupReqTDD CRITICALITY ignore TYPE RL-Information-RL-SetupReqTDD PRESENCE mandatory },
    ...
}

UL-CCTrChInformationList-RL-SetupReqTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrChInformationItemIEs-RL-SetupReqTDD} }

UL-CCTrChInformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrChInformationItem-RL-SetupReqTDD CRITICALITY ignore TYPE UL-CCTrChInformationItem-RL-SetupReqTDD PRESENCE mandatory },
    ...
}

UL-CCTrChInformationItem-RL-SetupReqTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    ul-TFCS            TransportFormatCombinationSet,
    tFCI-Coding        TFCI-Coding,
    ul-PunctureLimit   PunctureLimit,
    iE-Extensions      ProtocolExtensionContainer { {UL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrChInformationList-RL-SetupReqTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrChInformationItemIEs-RL-SetupReqTDD} }

DL-CCTrChInformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrChInformationItem-RL-SetupReqTDD CRITICALITY ignore TYPE DL-CCTrChInformationItem-RL-SetupReqTDD PRESENCE mandatory },
    ...
}

DL-CCTrChInformationItem-RL-SetupReqTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    dl-TFCS            TransportFormatCombinationSet,
```

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```
tFCI-Coding          TFCI-Coding,
dl-PunctureLimit     PunctureLimit,
iE-Extensions        ProtocolExtensionContainer { {DL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
...
}

DL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-InformationList-RL-SetupReqTDD ::= DCH-IE-ContainerList { {DCH-InformationItemIEs-RL-SetupReqTDD} }

DCH-InformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-InformationItem-RL-SetupReqTDD CRITICALITY ignore TYPE DCH-InformationItem-RL-SetupReqTDD PRESENCE mandatory },
...
}

DCH-InformationItem-RL-SetupReqTDD ::= SEQUENCE {
dCH-ID                DCH-ID,
ul-cCTrCH-ID          CCTrCH-ID, -- UL CCTrCH in which the DCH is mapped
dl-cCTrCH-ID          CCTrCH-ID, -- DL CCTrCH in which the DCH is mapped
dCH-CombinationInd    DCH-CombinationInd OPTIONAL,
rLC-Mode              RLC-Mode,
ul-transportFormatSet TransportFormatSet,
dl-transportFormatSet TransportFormatSet,
ul-BLER               BLER,
dl-BLER               BLER,
allocationRetentionPriority AllocationRetentionPriority,
frameHandlingPriority FrameHandlingPriority,
payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
ul-FP-Mode            UL-FP-Mode,
toAWS                 ToAWS,
toAWE                 ToAWE,
iE-Extensions        ProtocolExtensionContainer { {DCH-InformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
...
}

DCH-InformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RL-Information-RL-SetupReqTDD ::= SEQUENCE {
rL-ID                 RL-ID,
c-ID                  C-ID,
frameOffset           FrameOffset,
primaryCCPCH-RSCP     PrimaryCCPCH-RSCP OPTIONAL,
iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
...
}

RL-Information-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
```

```
RadioLinkSetupRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- *****

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

RadioLinkSetupResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional } |
  { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional } |
  { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional } |
  { ID id-RL-InformationResponseList-RL-SetupRspFDD
    CRITICALITY ignore TYPE RL-InformationResponseList-RL-SetupRspFDD
    PRESENCE mandatory } |
  { ID id-UL-EbNoTarget    CRITICALITY ignore TYPE UL-EbNoTarget    PRESENCE optional } |
  { ID id-DL-EbNoTarget    CRITICALITY ignore TYPE DL-EbNoTarget    PRESENCE optional } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

RL-InformationResponseList-RL-SetupRspFDD ::= RL-IE-ContainerList { {RL-InformationResponseItemIEs-RL-SetupRspFDD} }

RL-InformationResponseItemIEs-RL-SetupRspFDD RNSAP-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,
  sAI            SAI,
  ul-InterferenceLevel ScaledUL-InterferenceLevel,
  sSecondary--CCPCH--Info Secondary--CCPCH--Info-RL-SetupRspFDD,
  dl-CodeInformation DL-CodeInformationList-RL-SetupRspFDD,
  sSDT-SupportIndicator SSdT-SupportIndicator,
  maxUL-EbNo          UL-EbNo,
  minUL-EbNo          UL-EbNo,
  neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
  neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { {RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
  ...
}
```

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```
RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}
```

```
Secondary--CCPCH--Info-RL-SetupRspFDD ::= SEQUENCE {  
    fDD-S-CCPCH-Offset          FDD-S-CCPCH-Offset,  
    dl-ScramblingCode          DL-ScramblingCode,  
    fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,  
    dl-TFCS                    TransportFormatCombinationSet,  
    secondaryCCPCHs            SecondaryCCPCH-List,  
    tFCI-Presence              TFCI-Presence OPTIONAL,  
    multiplexingPosition       MultiplexingPosition,  
    sSDT-Indication            SSDT-Indication,  
    fACH-PCH-InformationList    FACH-PCH-InformationList-RL-SetupRspFDD,  
    schedulingInformation       SchedulingInformation-RL-SetupRspFDD,  
    iE-Extensions              ProtocolExtensionContainer { { FACH-PCH-InformationList-RL-SetupRspFDD-ExtIEs } } OPTIONAL,  
    ...  
},  
    ...  
}
```

```
FACH-PCH-InformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE(1..maxFACHCount)) OF  
    SEQUENCE {  
        transportFormatSet      TransportFormatSet,  
        iE-Extensions           ProtocolExtensionContainer { { FACH-PCH-InformationList-RL-SetupRspFDD-ExtIEs } } OPTIONAL,  
        ...  
    }  
}
```

```
FACH-PCH-InformationList-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}
```

```
SchedulingInformation-RL-SetupRspFDD ::= SEQUENCE {  
    iB-SG-Rep                  IB-SG-Rep,  
    segmentInformationList     SegmentInformationList-RL-SetupRspFDD OPTIONAL,  
    iE-Extensions              ProtocolExtensionContainer { { SchedulingInformation-RL-SetupRspFDD-ExtIEs } } OPTIONAL,  
    ...  
}
```

```
SchedulingInformation-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}
```

```
SegmentInformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE(1..maxIBSEG-1)) OF  
    SEQUENCE {  
        iB-SG-Pos              IB-SG-Pos,  
        iE-Extensions          ProtocolExtensionContainer { { SIB-PosOffsetInformationList-RL-SetupRspFDD SegmentInformationList-RL-  
SetupRspFDD-ExtIEs } } OPTIONAL,  
        ...  
    }  
}
```



```
SegmentInformationList-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-SetupRspFDD

DL-CodeInformationItem-RL-SetupRspFDD ::= SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    fdd-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
    -- ** NOTE: How many alternatives are there, 2 or 3? **
    diversityIndication        CHOICE {
        combining                SEQUENCE {
            rL-ID                 RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dch-InformationResponse-RL-SetupRspFDD  DCH-InformationResponseList-RL-SetupRspFDD  OPTIONAL
        }
    } OPTIONAL
    -- This IE is present only if the RL is not the first on in the RL Information -- ,
    iE-Extensions                ProtocolExtensionContainer { {DL-CodeInformationItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CodeInformationItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupRspFDD

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

DCH-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-SetupRsp

NeighbouringFDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
    uC-ID                        C-ID,
    cN-PS-DomainIdentifier        CN-PS-DomainIdentifier  OPTIONAL,
    cN-CS-DomainIdentifier        CN-CS-DomainIdentifier  OPTIONAL,
    uARFCN                        UARFCN,

```

```
frameOffset          FrameOffset          OPTIONAL,
primaryScramblingCode PrimaryScramblingCode,
primaryCPICH-Power   PrimaryCPICH-Power   OPTIONAL,
iE-Extensions        ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
...
}

NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringTDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
NeighbouringTDD-CellInformationItem-RL-SetupRsp

NeighbouringTDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
c-ID                C-ID,
cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
uARFCN              UARFCN,
frameOffset          FrameOffset          OPTIONAL,
cellParameterID      CellParameterID,
syncCase             SyncCase,
timeSlot             TimeSlot             OPTIONAL
-- This IE is present only if SyncCase is Case1 -- ,
pSCH-TimeSlot        PSCH-TimeSlot        OPTIONAL
-- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
ul-EbNo              UL-EbNo              OPTIONAL,
dl-EbNo              DL-EbNo              OPTIONAL,
iE-Extensions        ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
...
}

NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkSetupResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****

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

RadioLinkSetupResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
```

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```
{ ID id-D-RNTI CRITICALITY ignore TYPE D-RNTI PRESENCE optional } |
{ ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional } |
{ ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional } |
{ ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore TYPE RL-InformationResponse-RL-SetupRspTDD PRESENCE mandatory } |
{ ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
...
}

RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
    rL-ID RL-ID,
    sAI SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    maxUL-EbNo UL-EbNo,
    minUL-EbNo UL-EbNo,
    ul-EbNoTarget UL-EbNo OPTIONAL,
    dl-EbNoTarget DL-EbNo OPTIONAL,
    ul-CCTrCHInformation UL-CCTrCHInformationList-RL-SetupRspTDD,
    dl-CCTrCHInformation DL-CCTrCHInformationList-RL-SetupRspTDD,
    dCH-InformationResponse DCH-InformationResponseList-RL-SetupRspTDD,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {RL-InformationResponse-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponse-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-SetupRspTDD

UL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID CCTrCH-ID,
    ul-DPCH-Information UL-DPCH-InformationList-RL-SetupRspTDD,
    iE-Extensions ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationItem-RL-SetupRspTDD

-- **NOTE: UL-DPCH-InformationItem-RL-SetupRspTDD and DL-DPCH-InformationItem-RL-SetupRspTDD
-- are currently similar. Combine them? **
UL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dPCH-ID DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    burstType BurstType,
    midambleShift MidambleShift,
}
```

```
timeSlot          TimeSlot,
tDD-PhysicalChannelOffset  TDD-PhysicalChannelOffset,
repetitionPeriod      RepetitionPeriod,
repetitionLength      RepetitionLength,
tFCI-Presence         TFCI-Presence,
iE-Extensions         ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-SetupRspTDD

DL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  dl-DPCH-Information      DL-DPCH-InformationList-RL-SetupRspTDD,
  iE-Extensions         ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationItem-RL-SetupRspTDD

DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
  dPCH-ID          DPCH-ID,
  tDD-ChannelisationCode      TDD-ChannelisationCode,
  burstType          BurstType,
  midambleShift      MidambleShift,
  timeSlot          TimeSlot,
  tDD-PhysicalChannelOffset  TDD-PhysicalChannelOffset,
  repetitionPeriod      RepetitionPeriod,
  repetitionLength      RepetitionLength,
  tFCI-Presence         TFCI-Presence,
  iE-Extensions         ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-InformationResponseList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupRspTDD

DCH-InformationResponseItem-RL-SetupRspTDD ::= SEQUENCE {
  dCH-ID          DCH-ID,
  bindingID      BindingID,
```

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```
transportLayerAddress      TransportLayerAddress,
iE-Extensions              ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

DCH-InformationResponseItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkSetupResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK SETUP FAILURE FDD
--
-- *****

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

RadioLinkSetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE mandatory } |
  { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE mandatory } |
  { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE mandatory } |
  { ID id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
    PRESENCE mandatory } |
  { ID id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD
    CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-SetupFailureFDD
    PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList { {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
    PRESENCE mandatory },
  ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  cause          Cause,
  iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
  ...
}
```

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```
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs} }

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD
      CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-SetupFailureFDD
      PRESENCE mandatory },
    ...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sAI                  SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation   DL-CodeInformationList-RL-SetupFailureFDD,
    sSDT-SupportIndicator SSDT-SupportIndicator,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupFailureFDD OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupFailureFDD OPTIONAL,
    ul-EbNoTarget        UL-EbNo,
    maxUL-EbNo           UL-EbNo,
    minUL-EbNo           UL-EbNo,
    dl-EbNoTarget        DL-EbNo,
    iE-Extensions        ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}
-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-SetupFailureFDD

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CodeInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    dl-ScramblingCode     DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    -- ** NOTE: How many alternatives are there, 2 or 3? **
    diversityIndication   CHOICE {
        combining          SEQUENCE {
            rL-ID          RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dCH-InformationResponse-RL-SetupFailureFDD DCH-InformationResponseList-RL-SetupFailureFDD OPTIONAL
        }
    } OPTIONAL
    -- This IE is present only if the RL is not the first on in the RL Information -- ,
    iE-Extensions        ProtocolExtensionContainer { {DL-CodeInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
DL-CodeInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupFailureFDD

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

DCH-InformationResponseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringFDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN              UARFCN,
    frameOffset         FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power  PrimaryCPICH-Power OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN              UARFCN,
    frameOffset         FrameOffset OPTIONAL,
    cellParameterID     CellParameterID,
    syncCase            SyncCase,
    timeSlot            TimeSlot,
    pSCH-TimeSlot       PSCH-TimeSlot OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
}
```

```

    iE-Extensions          ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
  }
}

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkSetupFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK SETUP FAILURE TDD
--
-- *****

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

RadioLinkSetupFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD
    PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
  ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD ::= SEQUENCE {
  rL-ID          RL-ID,
  cause          Cause,
  iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD-ExtIEs} } OPTIONAL,
  ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkSetupFailureTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK ADDITION REQUEST FDD
--
-- *****
```


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```
RadioLinkAdditionRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container      {{RadioLinkAdditionRequestFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkAdditionRequestFDD-Extensions}}
    ...
}

RadioLinkAdditionRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-EbNoTarget          CRITICALITY ignore TYPE UL-EbNo          PRESENCE mandatory } |
    { ID id-RL-InformationList-RL-AdditionRqstFDD CRITICALITY ignore TYPE RL-InformationList-RL-AdditionRqstFDD PRESENCE mandatory },
    ...
}

RL-InformationList-RL-AdditionRqstFDD ::= RL-IE-ContainerList { {RL-Information-RL-AdditionRqstFDD-IEs} }

RL-Information-RL-AdditionRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-AdditionRqstFDD CRITICALITY ignore TYPE RL-Information-RL-AdditionRqstFDD PRESENCE mandatory },
    ...
}

RL-Information-RL-AdditionRqstFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    c-ID           C-ID,
    frameOffset    FrameOffset,
    chipOffset     ChipOffset,
    diversityControlField DiversityControlField,
    primaryCPICH-EcNo PrimaryCPICH-EcNo OPTIONAL,
    sSDT-CellID    SSDT-CellID OPTIONAL,
    iE-Extensions  ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-AdditionRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

RadioLinkAdditionRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-AdditionRqstTDD CRITICALITY ignore TYPE RL-Information-RL-AdditionRqstTDD PRESENCE mandatory },
    ...
}
```

```
    ...
}

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    c-ID                 C-ID,
    frameOffset          FrameOffset,
    chipOffset           ChipOffset,
    diversityControlField DiversityControlField,
    primaryCCPCH-RSCP    PrimaryCCPCH-RSCP,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-AdditionRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

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

RadioLinkAdditionResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional } |
    { ID id-RL-InformationResponseList-RL-AdditionRspFDD
      CRITICALITY ignore TYPE RL-InformationResponseList-RL-AdditionRspFDD
      PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-AdditionRspFDD ::= RL-IE-ContainerList { {RL-InformationResponseItemIEs-RL-AdditionRspFDD} }

RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-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,
```

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```
SAI, SAI,
ul-InterferenceLevel ScaledUL-InterferenceLevel,
Secondary--CCPCH--Info Secondary--CCPCH--Info-RL-AdditionRspFDD,
dl-CodeInformation DL-CodeInformationList-RL-AdditionRspFDD,
sSDT-SupportIndicator SSdT-SupportIndicator,
maxUL-EbNo UL-EbNo,
minUL-EbNo UL-EbNo,
neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
...
}

RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Secondary--CCPCH--Info-RL-AdditionRspFDD ::= SEQUENCE {
fDD-S-CCPCH-Offset FDD-S-CCPCH-Offset,
dl-ScramblingCode DL-ScramblingCode,
fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
dl-TFCS TransportFormatCombinationSet,
secondaryCCPCHs SecondaryCCPCH-List,
tFCI-Presence TFCI-Presence OPTIONAL,
multiplexingPosition MultiplexingPosition,
sSDT-Indication SSdT-Indication,
fACH-PCH-InformationList FACH-PCH-InformationList-RL-AdditionRspFDD,
schedulingInformation SchedulingInformation-RL-AdditionRspFDD,
iE-Extensions ProtocolExtensionContainer { { Secondary-CCPCH-Info-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
...
},
...
}

Secondary-CCPCH-Info-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

FACH-PCH-InformationList-RL-AdditionRspFDD ::= SEQUENCE (SIZE(1..maxFACHCount)) OF
SEQUENCE {
transportFormatSet TransportFormatSet,
iE-Extensions ProtocolExtensionContainer { { FACH-PCH-InformationList-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
...
}

FACH-PCH-InformationList-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
```

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```
SchedulingInformation-RL-AdditionRspFDD ::= SEQUENCE {
    iB-SG-Rep          IB-SG-Rep,
    segmentInformationList SegmentInformationList-RL-AdditionRspFDD OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { { SchedulingInformation-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    ...
}

SchedulingInformation-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SegmentInformationList-RL-AdditionRspFDD ::= SEQUENCE (SIZE(1..maxIBSEG-1)) OF
    SEQUENCE {
        iB-SG-Pos          IB-SG-Pos,
        iE-Extensions      ProtocolExtensionContainer { { SIB-PosOffsetInformationList-RL-AdditionRspFDD SegmentInformationList-RL-
AdditionRspFDD-ExtIEs } } OPTIONAL,
        ...
    }

SegmentInformationList-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

-- ** NOTE: Shall this be made as an IE container? **

```
DL-CodeInformationList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-AdditionRspFDD
```

```
DL-CodeInformationItem-RL-AdditionRspFDD ::= SEQUENCE {
    dl-ScramblingCode      DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    -- ** NOTE: How many alternatives are there, 2 or 3? **
    diversityIndication    CHOICE {
        combining          SEQUENCE {
            rL-ID          RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dCH-InformationResponse-RL-AdditionRspFDD DCH-InformationResponseList-RL-AdditionRspFDD OPTIONAL
        }
    } OPTIONAL
    -- This IE is present only if the RL is not the first on in the RL Information -- ,
    iE-Extensions          ProtocolExtensionContainer { {DL-CodeInformationItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
DL-CodeInformationItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

-- ** NOTE: Shall this be made as an IE container? **

```
DCH-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-AdditionRspFDD
```

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

DCH-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-AdditionRsp

NeighbouringFDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN               UARFCN,
    frameOffset          FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power   PrimaryCPICH-Power OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-AdditionRsp

NeighbouringTDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN               UARFCN,
    frameOffset          FrameOffset OPTIONAL,
    cellParameterID      CellParameterID,
    syncCase             SyncCase,
    timeSlot             TimeSlot,
    pSCH-TimeSlot        PSCH-TimeSlot OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
    iE-Extensions        ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
RadioLinkAdditionResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****

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

RadioLinkAdditionResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional } |
  { ID id-RL-InformationResponse-RL-AdditionRspTDD
    CRITICALITY ignore TYPE RL-InformationResponse-RL-AdditionRspTDD PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics
    CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
  rL-ID          RL-ID,
  SAI            SAI,
  ul-InterferenceLevel      ScaledUL-InterferenceLevel,
  ul-CCTrCHInformation      UL-CCTrCHInformationList-RL-AdditionRspTDD,
  dl-CCTrCHInformation      DL-CCTrCHInformationList-RL-AdditionRspTDD,
  diversityIndication       CHOICE {
    combining              SEQUENCE {
      rL-ID                RL-ID
    },
    nonCombiningOrIENotPresent SEQUENCE {
      dCH-InformationResponse-RL-AdditionRspFDD
      DCH-InformationResponseList-RL-AdditionRspFDD OPTIONAL
    }
  },
  maxUL-EbNo          UL-EbNo,
  minUL-EbNo          UL-EbNo,
  neighbouringFDD-CellInformation      NeighbouringFDD-CellInformationList-RL-AdditionRspTDD OPTIONAL,
  neighbouringTDD-CellInformation      NeighbouringTDD-CellInformationList-RL-AdditionRspTDD OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { {RL-InformationResponse-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-AdditionRspTDD
```

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```
UL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    ul-DPCH-Information      UL-DPCH-InformationList-RL-AdditionRspTDD,
    IE-Extensions            ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

-- ** NOTE: Shall this be made as an IE container? **

```
UL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationItem-RL-AdditionRspTDD
```

```
UL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    burstType              BurstType,
    midambleShift         MidambleShift,
    timeSlot              TimeSlot,
    offset                Offset,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod      RepetitionPeriod,
    repetitionLength      RepetitionLength,
    tFCI-Presence         TFCI-Presence,
    IE-Extensions         ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

-- ** NOTE: Shall this be made as an IE container? **

```
DL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-AdditionRspTDD
```

```
DL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    dl-DPCH-Information      DL-DPCH-InformationList-RL-AdditionRspTDD,
    IE-Extensions            ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

-- ** NOTE: Shall this be made as an IE container? **

```
DL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationItem-RL-AdditionRspTDD
```

```
DL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
```

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```
tDD-ChannelisationCode      TDD-ChannelisationCode,
burstType                    BurstType,
midambleShift                MidambleShift,
timeSlot                     TimeSlot,
tDD-PhysicalChannelOffset    TDD-PhysicalChannelOffset,
repetitionPeriod             RepetitionPeriod,
repetitionLength             RepetitionLength,
tFCI-Presence                TFCI-Presence,
iE-Extensions                ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringFDD-CellInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD

NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
uC-ID                        C-ID,
cN-PS-DomainIdentifier       CN-PS-DomainIdentifier OPTIONAL,
cN-CS-DomainIdentifier       CN-CS-DomainIdentifier OPTIONAL,
uARFCN                       UARFCN,
frameOffset                  FrameOffset OPTIONAL,
primaryScramblingCode        PrimaryScramblingCode,
primaryCPICH-Power           PrimaryCPICH-Power OPTIONAL,
iE-Extensions                ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringTDD-CellInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD

NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
uC-ID                        C-ID,
cN-PS-DomainIdentifier       CN-PS-DomainIdentifier OPTIONAL,
cN-CS-DomainIdentifier       CN-CS-DomainIdentifier OPTIONAL,
uARFCN                       UARFCN,
frameOffset                  FrameOffset OPTIONAL,
cellParameterID              CellParameterID,
syncCase                      SyncCase,
timeSlot                     TimeSlot,
pSCH-TimeSlot                PSCH-TimeSlot OPTIONAL
-- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
iE-Extensions                ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}
}
```


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```
NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- *****

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

RadioLinkAdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
      CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
      PRESENCE mandatory } |
    { ID id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
      CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
      PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
      CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
      PRESENCE mandatory },
    ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList { {SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }
```

```
SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    PRESENCE mandatory },
  ...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID RL-ID,
  sAI SAI,
  ul-InterferenceLevel ScaledUL-InterferenceLevel,
  dl-CodeInformation DL-CodeInformationList-RL-AdditionFailureFDD,
  sSDT-SupportIndicator SSDT-SupportIndicator,
  maxUL-EbNo UL-EbNo,
  minUL-EbNo UL-EbNo,
  neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD OPTIONAL,
  neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-AdditionFailureFDD

DL-CodeInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  dl-ScramblingCode DL-ScramblingCode,
  dl-ChannelisationCode DL-ChannelisationCode,
  diversityIndication CHOICE {
    combining SEQUENCE {
      rL-ID RL-ID
    },
    nonCombiningOrIENotPresent SEQUENCE {
      dCH-InformationResponse-RL-AdditionFailureFDD DCH-InformationResponseList-RL-AdditionFailureFDD OPTIONAL
    }
  } OPTIONAL
  -- This IE is present only if the RL is not the first on in the RL Information -- ,
  iE-Extensions ProtocolExtensionContainer { {DL-CodeInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CodeInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-AdditionFailureFDD

DCH-InformationResponseItem-RL-AdditionFailureFDD ::= SEQUENCE {
```

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```
dCH-ID                DCH-ID,
bindingID             BindingID,
transportLayerAddress TransportLayerAddress,
iE-Extensions        ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
...
}

DCH-InformationResponseItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
  NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  uC-ID                C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN              UARFCN,
  frameOffset         FrameOffset OPTIONAL,
  primaryScramblingCode PrimaryScramblingCode,
  cPICH-Power         CPICH-Power OPTIONAL,
  iE-Extensions        ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
  NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD

NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  uC-ID                C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN              UARFCN,
  frameOffset         FrameOffset OPTIONAL,
  cellParameterID     CellParameterID,
  syncCase            SyncCase,
  timeSlot            TimeSlot,
  pSCH-TimeSlot       PSCH-TimeSlot OPTIONAL
  -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
  iE-Extensions        ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkAdditionFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
```

```

}
...
}
-- *****
--
-- RADIO LINK ADDITION FAILURE TDD
--
-- *****

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

RadioLinkAdditionFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics             CRITICALITY ignore TYPE CriticalityDiagnostics             PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponse ::= SEQUENCE {
    rL-ID                RL-ID,
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionFailureTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK DELETION REQUEST
--
-- *****

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

RadioLinkDeletionRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationList-RL-DeletionRqst CRITICALITY ignore TYPE RL-InformationList-RL-DeletionRqst PRESENCE mandatory },
    ...
}

```

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```
RL-InformationList-RL-DeletionRqst ::= RL-IE-ContainerList { {RL-Information-RL-DeletionRqst-IEs} }

RL-Information-RL-DeletionRqst-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-DeletionRqst      CRITICALITY ignore  TYPE RL-Information-RL-DeletionRqst  PRESENCE mandatory  },
  ...
}

RL-Information-RL-DeletionRqst ::= SEQUENCE {
  rL-ID          RL-ID,
  iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-DeletionRqst-ExtIEs} } OPTIONAL,
  ...
}

RL-Information-RL-DeletionRqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkDeletionRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK DELETION RESPONSE
--
-- *****

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

RadioLinkDeletionResponse-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CriticalityDiagnostics      CRITICALITY ignore  TYPE CriticalityDiagnostics      PRESENCE optional },
  ...
}

RadioLinkDeletionResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE FDD
--
-- *****

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

```

RadioLinkReconfigurationPrepareFDD-IES RNSAP-PROTOCOL-IES ::= {
  { ID id-AllowedQueuingTime          CRITICALITY ignore TYPE AllowedQueuingTime          PRESENCE mandatory } |
  { ID id-UL-DPCH-Information          CRITICALITY ignore TYPE UL-DPCH-Information          PRESENCE optional } |
  { ID id-DL-DPCH-Information          CRITICALITY ignore TYPE DL-DPCH-Information          PRESENCE optional } |
  { ID id-DCH-ModifyList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-ModifyList-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-DCH-AddList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-AddList-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-DCH-DeleteList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-DeleteList-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-RL-InformationList-RL-ReconfPrepFDD CRITICALITY ignore TYPE RL-InformationList-RL-ReconfPrepFDD PRESENCE mandatory },
  ...
}

UL-DPCH-Information ::= SEQUENCE {
  ul-ScramblingCode          UL-ScramblingCode          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                      TransportFormatCombinationSet OPTIONAL,
  ul-DPCCH-SlotFormat       UL-DPCCH-SlotFormat       OPTIONAL,
  sSDT-CellIDLength         SSDT-CellID-Length         OPTIONAL,
  s-FieldLength             S-FieldLength             OPTIONAL,
  meanBitRate               MeanBitRate               OPTIONAL,
  iE-Extensions             ProtocolExtensionContainer { {UL-DPCH-Information-ExtIEs} } OPTIONAL,
  ...
}

UL-DPCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-DPCH-Information ::= SEQUENCE {
  tFCS                      TransportFormatCombinationSet OPTIONAL,
  dl-DPCCH-SlotFormat       DL-DPCCH-SlotFormat       OPTIONAL,
  tFCI-SignallingMode       TFCI-SignallingMode       OPTIONAL,
  tFCI-Presence             TFCI-Presence             OPTIONAL
  -- This IE is present if Slot Format is from 12 to 16 --,
  multiplexingPosition      MultiplexingPosition      OPTIONAL,
  meanBitRate               MeanBitRate               OPTIONAL,
  iE-Extensions             ProtocolExtensionContainer { {DL-DPCH-Information-ExtIEs} } OPTIONAL,
  ...
}

DL-DPCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-ModifyList-RL-ReconfPrepFDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfPrepFDD-IEs} }

DCH-Modify-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-ModifyItem-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-ReconfPrepFDD PRESENCE mandatory },
  ...
}

```

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```
DCH-ModifyItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    ul-TransportformatSet TransportFormatSet OPTIONAL,
    dl-TransportformatSet TransportFormatSet OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority  FrameHandlingPriority OPTIONAL,
    ul-FP-Mode             UL-FP-Mode OPTIONAL,
    toAWS                  ToAWS OPTIONAL,
    toAWE                  ToAWE OPTIONAL,
    dRACControl           DRACControl OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfPrepFDD ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfPrepFDD-IEs} }

DCH-Add-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddItem-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-AddItem-RL-ReconfPrepFDD PRESENCE mandatory },
    ...
}

DCH-AddItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    rLC-Mode              RLC-Mode,
    dCH-CombinationInd    DCH-CombinationInd OPTIONAL,
    ul-TransportformatSet TransportFormatSet,
    dl-TransportformatSet TransportFormatSet,
    ul-BLER               BLER,
    dl-BLER               BLER,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority  FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode            UL-FP-Mode,
    toAWS                 ToAWS,
    toAWE                 ToAWE,
    dRACControl           DRACControl,
    iE-Extensions         ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-AddItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfPrepFDD ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfPrepFDD-IEs} }

DCH-Delete-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-DeleteItem-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-DeleteItem-RL-ReconfPrepFDD PRESENCE mandatory },
    ...
}
```

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```

}
...
}
DCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    iE-Extensions         ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}
DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
RL-InformationList-RL-ReconfPrepFDD      ::= RL-IE-ContainerList { {RL-Information-RL-ReconfPrepFDD-IEs} }
RL-Information-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-ReconfPrepFDD    CRITICALITY ignore  TYPE RL-Information-RL-ReconfPrepFDD    PRESENCE mandatory  },
    ...
}
RL-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sSDT-Indication      SSdT-Indication    OPTIONAL,
    sSDT-CellIdentity    SSdT-CellID       OPTIONAL
    -- The IE may be present if the sSDT-Indication is set to 'sSDT-active-in-the-UE' --,
    iE-Extensions         ProtocolExtensionContainer { {RL-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}
RL-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
RadioLinkReconfigurationPrepareFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- *****
RadioLinkReconfigurationPrepareTDD ::= SEQUENCE {
    protocolIEs           ProtocolIE-Container    {{RadioLinkReconfigurationPrepareTDD-IEs}},
    protocolExtensions    ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareTDD-Extensions}}
    ...
}
RadioLinkReconfigurationPrepareTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime    CRITICALITY ignore  TYPE AllowedQueuingTime    PRESENCE optional  } |
    { ID id-UL-MeanBitRate        CRITICALITY ignore  TYPE MeanBitRate          PRESENCE optional  } |
    { ID id-DL-MeanBitRate        CRITICALITY ignore  TYPE MeanBitRate          PRESENCE optional  } |

```


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```
{ ID id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD
    CRITICALITY ignore TYPE UL-CCTrCH-InformationList-RL-ReconfPrepTDD PRESENCE mandatory } |
{ ID id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD
    CRITICALITY ignore TYPE DL-CCTrCH-InformationList-RL-ReconfPrepTDD PRESENCE mandatory } |
{ ID id-DCH-ModifyList-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-ModifyList-RL-ReconfPrepTDD PRESENCE mandatory } |
{ ID id-DCH-AddList-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-AddList-RL-ReconfPrepTDD PRESENCE mandatory } |
{ ID id-DCH-DeleteList-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-DeleteList-RL-ReconfPrepTDD PRESENCE mandatory },
...
}

UL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrCH-Information-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-Information-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-Information-RL-ReconfPrepTDD CRITICALITY ignore TYPE UL-CCTrCH-Information-RL-ReconfPrepTDD PRESENCE mandatory },
    ...
}

UL-CCTrCH-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    cTrCH-ID CCTrCH-ID,
    tFCS TransportFormatCombinationSet OPTIONAL,
    tFCI-Coding TFCI-Coding OPTIONAL,
    punctureLimit PunctureLimit OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {UL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrCH-Information-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-Information-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-Information-RL-ReconfPrepTDD CRITICALITY ignore TYPE DL-CCTrCH-Information-RL-ReconfPrepTDD PRESENCE mandatory },
    ...
}

DL-CCTrCH-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    cTrCH-ID CCTrCH-ID,
    tFCS TransportFormatCombinationSet OPTIONAL,
    tFCI-Coding TFCI-Coding OPTIONAL,
    punctureLimit PunctureLimit OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {DL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfPrepTDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfPrepTDD-IEs} }

DCH-Modify-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
```

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```
{ ID id-DCH-ModifyItem-RL-ReconfPrepTDD      CRITICALITY ignore  TYPE DCH-ModifyItem-RL-ReconfPrepTDD      PRESENCE mandatory  },
...
}

DCH-ModifyItem-RL-ReconfPrepTDD ::= 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,
ul-FP-Mode            UL-FP-Mode          OPTIONAL,
toAWS                 ToAWS              OPTIONAL,
toAWE                 ToAWE              OPTIONAL,
iE-Extensions         ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

DCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-AddList-RL-ReconfPrepTDD          ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfPrepTDD-IEs} }

DCH-Add-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-AddItem-RL-ReconfPrepTDD      CRITICALITY ignore  TYPE DCH-AddItem-RL-ReconfPrepTDD      PRESENCE mandatory  },
...
}

DCH-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
dCH-ID                DCH-ID,
rLC-Mode              RLC-Mode,
ul-CCTrCH-ID          CCTrCH-ID,
dl-CCTrCH-ID          CCTrCH-ID,
dCH-CombinationInd    DCH-CombinationInd OPTIONAL,
ul-TransportformatSet TransportFormatSet,
dl-TransportformatSet TransportFormatSet,
ul-BLER               BLER,
dl-BLER               BLER,
allocationRetentionPriority AllocationRetentionPriority,
frameHandlingPriority FrameHandlingPriority,
payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
ul-FP-Mode            UL-FP-Mode,
toAWS                 ToAWS,
toAWE                 ToAWE,
iE-Extensions         ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

DCH-AddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
}
```

```
DCH-DeleteList-RL-ReconfPrepTDD ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfPrepTDD-IEs} }

DCH-Delete-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-DeleteItem-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-DeleteItem-RL-ReconfPrepTDD PRESENCE mandatory },
  ...
}

DCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
  dCH-ID DCH-ID,
  iE-Extensions ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkReconfigurationPrepareTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION READY FDD
--
-- *****

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

RadioLinkReconfigurationReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseList-RL-ReconfReadyFDD
    CRITICALITY ignore TYPE RL-InformationResponseList-RL-ReconfReadyFDD
    PRESENCE optional } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

RL-InformationResponseList-RL-ReconfReadyFDD ::= RL-IE-ContainerList { {RL-InformationResponse-RL-ReconfReadyFDD-IEs} }

RL-InformationResponse-RL-ReconfReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseItem-RL-ReconfReadyFDD
    CRITICALITY ignore TYPE RL-InformationResponseItem-RL-ReconfReadyFDD
    PRESENCE mandatory },
  ...
}

RL-InformationResponseItem-RL-ReconfReadyFDD ::= SEQUENCE {
  rL-ID RL-ID,
```

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```
max-UL-EbNo          UL-EbNo,
min-UL-EbNo          UL-EbNo,
Secondary--CCPCH--Info          Secondary--CCPCH--Info-RL-ReconfReadyFDD,

dCHsToBeAdded        DCH-AddList-RL-ReconfReadyFDD          OPTIONAL,
dCHsToBeModified     DCH-ModifyList-RL-ReconfReadyFDD       OPTIONAL,

iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
...
}

RL-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Secondary--CCPCH--Info-RL-ReconfReadyFDD ::= SEQUENCE {
  fDD-S-CCPCH-Offset          FDD-S-CCPCH-Offset,
  dl-ScramblingCode           DL-ScramblingCode,
  fDD-DL-ChannelisationCodeNumber          FDD-DL-ChannelisationCodeNumber,
  dl-TFCS                      TransportFormatCombinationSet,
  secondaryCCPCHs              SecondaryCCPCH-List,
  tFCI-Presence                TFCI-Presence OPTIONAL,
  multiplexingPosition         MultiplexingPosition,
  sSDT-Indication              SSDT-Indication,
  fACH-PCH-InformationList     FACH-PCH-InformationList-RL-ReconfReadyFDD,
  schedulingInformation        SchedulingInformation-RL-ReconfReadyFDD,
  iE-Extensions                ProtocolExtensionContainer { { Secondary-CCPCH-Info-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
  ...
}

Secondary-CCPCH-Info-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

FACH-PCH-InformationList-RL-ReconfReadyFDD ::= SEQUENCE (SIZE(1..maxFACHCount)) OF
SEQUENCE {
  transportFormatSet          TransportFormatSet,
  iE-Extensions              ProtocolExtensionContainer { { FACH-PCH-InformationList-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
  ...
}

FACH-PCH-InformationList-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

SchedulingInformation-RL-ReconfReadyFDD ::= SEQUENCE {
  iB-SG-Rep                   IB-SG-Rep,
  segmentInformationList      SegmentInformationList-RL-ReconfReadyFDD          OPTIONAL,
  iE-Extensions              ProtocolExtensionContainer { { SchedulingInformation-RL-ReconfReadyFDD-ExtIEs } } OPTIONAL,
```

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```
    ...
}

SchedulingInformation-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SegmentInformationList-RL-ReconfReadyFDD ::= SEQUENCE (SIZE(1..maxIBSEG-1)) OF
    SEQUENCE {
        iB-SG-Pos                               IB-SG-Pos,
        iE-Extensions                           ProtocolExtensionContainer { { -SIB-PosOffsetInformationList-RL-ReconfReadyFDD SegmentInformationList-RL-
ReconfReadyFDD-ExtIEs } } OPTIONAL,
        ...
    }
}

SegmentInformationList-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
DCH-AddList-RL-ReconfReadyFDD ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfReadyFDD-IEs} }
```

```
DCH-Add-RL-ReconfReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddItem-RL-ReconfReadyFDD      CRITICALITY ignore  TYPE DCH-AddItem-RL-ReconfReadyFDD      PRESENCE mandatory },
    ...
}
```

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

```
DCH-AddItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
DCH-ModifyList-RL-ReconfReadyFDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfReadyFDD-IEs} }
```

```
DCH-Modify-RL-ReconfReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyItem-RL-ReconfReadyFDD  CRITICALITY ignore  TYPE DCH-ModifyItem-RL-ReconfReadyFDD  PRESENCE mandatory },
    ...
}
```

```
DCH-ModifyItem-RL-ReconfReadyFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    bindingID             BindingID,
    transportLayerAddress TransportLayerAddress,
```

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```

    iE-Extensions          ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationReadyFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION READY TDD
--
-- *****

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

RadioLinkReconfigurationReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponse-RL-ReconfReadyTDD
      CRITICALITY ignore TYPE RL-InformationResponse-RL-ReconfReadyTDD PRESENCE optional } |
    { ID id-CriticalityDiagnostics
      CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponse-RL-ReconfReadyTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    max-UL-EbNo          UL-EbNo,
    min-UL-EbNo          UL-EbNo,
    ul-CCTrCH-Information UL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
    dl-CCTrCH-Information DL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
    dCHsToBeAdded        DCH-AddList-RL-ReconfReadyTDD OPTIONAL,
    dCHsToBeModified     DCH-ModifyList-RL-ReconfReadyTDD OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponse-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponse-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrCH-InformationList-RL-ReconfReadyTDD-IEs} }

UL-CCTrCH-InformationList-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CCTrCH-ID
      CRITICALITY ignore TYPE CCTrCH-ID PRESENCE mandatory } |
    { ID id-UL-DPCH-InformationList-RL-ReconfReadyTDD
      CRITICALITY ignore TYPE UL-DPCH-InformationList-RL-ReconfReadyTDD
```

```

    PRESENCE mandatory },
}
...
}
UL-DPCH-InformationList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF
SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode OPTIONAL,
    burstType              BurstType OPTIONAL,
    midambleShift          MidambleShift OPTIONAL,
    timeSlot               TimeSlot OPTIONAL,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset OPTIONAL,
    repetitionPeriod       RepetitionPeriod OPTIONAL,
    repetitionLength       RepetitionLength OPTIONAL,
    tFCI-Presence          TFCI-Presence OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {UL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}
UL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrCH-InformationList-RL-ReconfReadyTDD-IEs} }
DL-CCTrCH-InformationList-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CCTrCH-ID          CRITICALITY ignore TYPE CCTrCH-ID          PRESENCE mandatory } |
    { ID id-DL-DPCH-InformationList-RL-ReconfReadyTDD
      CRITICALITY ignore TYPE DL-DPCH-InformationList-RL-ReconfReadyTDD
      PRESENCE mandatory },
    ...
}
DL-DPCH-InformationList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF
SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode OPTIONAL,
    burstType              BurstType OPTIONAL,
    midambleShift          MidambleShift OPTIONAL,
    timeSlot               TimeSlot OPTIONAL,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset OPTIONAL,
    repetitionPeriod       RepetitionPeriod OPTIONAL,
    repetitionLength       RepetitionLength OPTIONAL,
    tFCI-Presence          TFCI-Presence OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {DL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}
DL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
DCH-AddList-RL-ReconfReadyTDD ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfReadyTDD-IEs} }
```

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```
DCH-Add-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-AddItem          CRITICALITY ignore TYPE DCH-AddItem-RL-ReconfReadyTDD PRESENCE mandatory },
  ...
}

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

DCH-AddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-ModifyList-RL-ReconfReadyTDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfReadyTDD-IEs} }

DCH-Modify-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-ModifyItem          CRITICALITY ignore TYPE DCH-ModifyItem-RL-ReconfReadyTDD PRESENCE mandatory },
  ...
}

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

DCH-ModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkReconfigurationReadyTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION COMMIT
--
-- *****

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


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```
RadioLinkReconfigurationCommit-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CFN          CRITICALITY ignore  TYPE CFN          PRESENCE mandatory  },
  ...
}

RadioLinkReconfigurationCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION FAILURE
--
-- *****

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

RadioLinkReconfigurationFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-Cause          CRITICALITY ignore  TYPE Cause          PRESENCE mandatory  } |
  { ID id-RL-ReconfigurationFailureList-RL-ReconfFail
    CRITICALITY ignore  TYPE RL-ReconfigurationFailureList-RL-ReconfFail
    PRESENCE mandatory  } |
  { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics          PRESENCE optional  },
  ...
}

RL-ReconfigurationFailureList-RL-ReconfFail ::= RL-IE-ContainerList { {RL-ReconfigurationFailure-RL-ReconfFail-IEs} }

RL-ReconfigurationFailure-RL-ReconfFail-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-ReconfigurationFailure-RL-ReconfFail CRITICALITY ignore  TYPE RL-ReconfigurationFailure-RL-ReconfFail PRESENCE mandatory  },
  ...
}

RL-ReconfigurationFailure-RL-ReconfFail ::= SEQUENCE {
  rL-ID          RL-ID,
  cause          Cause,
  iE-Extensions ProtocolExtensionContainer { {RL-ReconfigurationFailure-RL-ReconfFail-ExtIEs} } OPTIONAL,
  ...
}

RL-ReconfigurationFailure-RL-ReconfFail-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkReconfigurationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
```

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```
--
-- RADIO LINK RECONFIGURATION CANCEL
--
-- *****

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

RadioLinkReconfigurationCancel-IEs RNSAP-PROTOCOL-IES ::= {
    ...
}

RadioLinkReconfigurationCancel-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST FDD
--
-- *****

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

RadioLinkReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY ignore TYPE AllowedQueuingTime          PRESENCE mandatory } |
    { ID id-UL-DPCH-Information          CRITICALITY ignore TYPE UL-DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } |
    { ID id-DL-DPCH-Information          CRITICALITY ignore TYPE DL-DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } |
    { ID id-DCH-ModifyList-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-ModifyList-RL-ReconfRqstFDD PRESENCE mandatory } |
    { ID id-DCH-AddList-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-AddList-RL-ReconfRqstFDD PRESENCE mandatory } |
    { ID id-DCH-DeleteList-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-DeleteList-RL-ReconfRqstFDD PRESENCE mandatory },
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    tFCS          TransportFormatCombinationSet    OPTIONAL,
    meanBitRate   MeanBitRate                      OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
```

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```
tFCS TransportFormatCombinationSet OPTIONAL,
tFCI-SignallingMode TFCI-SignallingMode OPTIONAL,
meanBitRate MeanBitRate OPTIONAL,
iE-Extensions ProtocolExtensionContainer { {DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-ModifyList-RL-ReconfRqstFDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfRqstFDD-IEs} }

DCH-Modify-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-ModifyItem-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-ReconfRqstFDD PRESENCE mandatory },
...
}

DCH-ModifyItem-RL-ReconfRqstFDD ::= SEQUENCE {
dCH-ID DCH-ID,
ul-TransportformatSet TransportFormatSet OPTIONAL,
dl-TransportformatSet TransportFormatSet OPTIONAL,
allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
frameHandlingPriority FrameHandlingPriority OPTIONAL,
ul-FP-Mode UL-FP-Mode OPTIONAL,
toAWS ToAWS OPTIONAL,
toAWE ToAWE OPTIONAL,
dRACControl DRACControl OPTIONAL,
iE-Extensions ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
...
}

DCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-AddList-RL-ReconfRqstFDD ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfRqstFDD-IEs} }

DCH-Add-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-AddItem-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-AddItem-RL-ReconfRqstFDD PRESENCE mandatory },
...
}

DCH-AddItem-RL-ReconfRqstFDD ::= SEQUENCE {
dCH-ID DCH-ID,
rLC-Mode RLC-Mode,
dCH-CombinationInd DCH-CombinationInd OPTIONAL,
ul-TransportformatSet TransportFormatSet,
dl-TransportformatSet TransportFormatSet,
allocationRetentionPriority AllocationRetentionPriority,
frameHandlingPriority FrameHandlingPriority,
payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
ul-FP-Mode UL-FP-Mode,
```

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```
toAWS                ToAWS,
toAWE                ToAWE,
dRACControl          DRACControl,
iE-Extensions        ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
...
}

DCH-AddItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-DeleteList-RL-ReconfRqstFDD ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfRqstFDD-IEs} }

DCH-Delete-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-DeleteItem-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-DeleteItem-RL-ReconfRqstFDD PRESENCE mandatory },
...
}

DCH-DeleteItem-RL-ReconfRqstFDD ::= SEQUENCE {
dCH-ID                DCH-ID,
iE-Extensions        ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
...
}

DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkReconfigurationRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--
-- *****

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

RadioLinkReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-AllowedQueuingTime CRITICALITY ignore TYPE AllowedQueuingTime PRESENCE optional } |
{ ID id-UL-MeanBitRate CRITICALITY ignore TYPE MeanBitRate PRESENCE optional } |
{ ID id-DL-MeanBitRate CRITICALITY ignore TYPE MeanBitRate PRESENCE optional } |
{ ID id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD
CRITICALITY ignore TYPE UL-CCTrCH-InformationList-RL-ReconfRqstTDD PRESENCE mandatory } |
{ ID id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD
CRITICALITY ignore TYPE DL-CCTrCH-InformationList-RL-ReconfRqstTDD PRESENCE mandatory } |
{ ID id-DCH-ModifyList-RL-ReconfRqstTDD CRITICALITY ignore TYPE DCH-ModifyList-RL-ReconfRqstTDD PRESENCE mandatory } |
```

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```
{ ID id-DCH-AddList-RL-ReconfRqstTDD          CRITICALITY ignore  TYPE DCH-AddList-RL-ReconfRqstTDD          PRESENCE mandatory } |
{ ID id-DCH-DeleteList-RL-ReconfRqstTDD      CRITICALITY ignore  TYPE DCH-DeleteList-RL-ReconfRqstTDD          PRESENCE mandatory },
...
}

UL-CCTrCH-InformationList-RL-ReconfRqstTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrCH-Information-RL-ReconfRqstTDD-IEs} }

UL-CCTrCH-Information-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-Information-RL-ReconfRqstTDD CRITICALITY ignore  TYPE UL-CCTrCH-Information-RL-ReconfRqstTDD PRESENCE mandatory },
  ...
}

UL-CCTrCH-Information-RL-ReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  tFCS              TransportFormatCombinationSet,
  iE-Extensions     ProtocolExtensionContainer { {UL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationList-RL-ReconfRqstTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrCH-Information-RL-ReconfRqstTDD-IEs} }

DL-CCTrCH-Information-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-Information-RL-ReconfRqstTDD CRITICALITY ignore  TYPE DL-CCTrCH-Information-RL-ReconfRqstTDD PRESENCE mandatory },
  ...
}

DL-CCTrCH-Information-RL-ReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  tFCS              TransportFormatCombinationSet,
  iE-Extensions     ProtocolExtensionContainer { {DL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-ModifyList-RL-ReconfRqstTDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfRqstTDD-IEs} }

DCH-Modify-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-ModifyItem-RL-ReconfRqstTDD      CRITICALITY ignore  TYPE DCH-ModifyItem-RL-ReconfRqstTDD          PRESENCE mandatory },
  ...
}

DCH-ModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
  dCH-ID            DCH-ID,
  ul-CCTrCH-ID     CCTrCH-ID          OPTIONAL,
  dl-CCTrCH-ID     CCTrCH-ID          OPTIONAL,
  ul-TransportformatSet TransportFormatSet OPTIONAL,
```

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```
dl-TransportformatSet      TransportFormatSet  OPTIONAL,
allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
frameHandlingPriority      FrameHandlingPriority  OPTIONAL,
ul-FP-Mode                 UL-FP-Mode           OPTIONAL,
toAWS                      ToAWS               OPTIONAL,
toAWE                      ToAWE               OPTIONAL,
iE-Extensions              ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
...
}

DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-AddList-RL-ReconfRqstTDD           ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfRqstTDD-IEs} }

DCH-Add-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-AddItem-RL-ReconfRqstTDD      CRITICALITY ignore  TYPE DCH-AddItem-RL-ReconfRqstTDD      PRESENCE mandatory },
...
}

DCH-AddItem-RL-ReconfRqstTDD ::= SEQUENCE {
dCH-ID                DCH-ID,
rLC-Mode              RLC-Mode,
ul-CCTrCH-ID         CCTrCH-ID,
dl-CCTrCH-ID         CCTrCH-ID,
dCH-CombinationInd   DCH-CombinationInd  OPTIONAL,
ul-TransportformatSet TransportFormatSet,
dl-TransportformatSet TransportFormatSet,
allocationRetentionPriority AllocationRetentionPriority,
frameHandlingPriority FrameHandlingPriority,
ul-FP-Mode           UL-FP-Mode,
toAWS                ToAWS,
toAWE                ToAWE,
iE-Extensions        ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
...
}

DCH-AddItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-DeleteList-RL-ReconfRqstTDD           ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfRqstTDD-IEs} }

DCH-Delete-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-DeleteItem-RL-ReconfRqstTDD      CRITICALITY ignore  TYPE DCH-DeleteItem-RL-ReconfRqstTDD      PRESENCE mandatory },
...
}

DCH-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
dCH-ID                DCH-ID,
iE-Extensions        ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
...
}
```

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```
}

DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE FDD
--
-- *****

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

RadioLinkReconfigurationResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseList-RL-ReconfRspFDD          CRITICALITY ignore          TYPE RL-InformationResponseList-RL-ReconfRspFDD
    PRESENCE optional } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore          TYPE CriticalityDiagnostics          PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-ReconfRspFDD ::= RL-IE-ContainerList { {RL-InformationResponse-RL-ReconfRspFDD-IEs} }

RL-InformationResponse-RL-ReconfRspFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-ReconfRspFDD
    CRITICALITY ignore          TYPE RL-InformationResponseItem-RL-ReconfRspFDD
    PRESENCE mandatory },
    ...
}

RL-InformationResponseItem-RL-ReconfRspFDD ::= SEQUENCE {
    rL-ID                    RL-ID,
    max-UL-EbNo              UL-EbNo,
    min-UL-EbNo              UL-EbNo,
    ssecondary--CCPCH--Info  Secondary--CCPCH--Info-RL-ReconfRspFDD,
    dCHsToBeAdded            DCH-AddList-RL-ReconfRspFDD          OPTIONAL,
    dCHsToBeModified         DCH-ModifyList-RL-ReconfRspFDD      OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfRspFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
}
```

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```
Secondary-CCPCH-Info-RL-ReconfRspFDD ::= SEQUENCE {  
    fdd-S-CCPCH-Offset          FDD-S-CCPCH-Offset,  
    dl-ScramblingCode           DL-ScramblingCode,  
    fdd-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,  
    dl-TFCS                     TransportFormatCombinationSet,  
    secondaryCCPCHs             SecondaryCCPCH-List,  
    tFCI-Presence               TFCI-Presence OPTIONAL,  
    multiplexingPosition        MultiplexingPosition,  
    sSDT-Indication             SSDT-Indication,  
    fach-PCH-InformationList    FACH-PCH-InformationList-RL-ReconfRspFDD,  
    schedulingInformation       SchedulingInformation-RL-ReconfRspFDD,  
    iE-Extensions               ProtocolExtensionContainer { { Secondary-CCPCH-Info-RL-ReconfRspFDD-ExtIEs } } OPTIONAL,  
    ...  
},  
...
```

```
Secondary-CCPCH-Info-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}
```

```
FACH-PCH-InformationList-RL-ReconfRspFDD ::= SEQUENCE (SIZE(1..maxFACHCount)) OF  
SEQUENCE {  
    transportFormatSet          TransportFormatSet,  
    iE-Extensions               ProtocolExtensionContainer { { FACH-PCH-InformationList-RL-ReconfRspFDD-ExtIEs } } OPTIONAL,  
    ...  
}
```

```
FACH-PCH-InformationList-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}
```

```
SchedulingInformation-RL-ReconfRspFDD ::= SEQUENCE {  
    iB-SG-Rep                   IB-SG-Rep,  
    segmentInformationList      SegmentInformationList-RL-ReconfRspFDD OPTIONAL,  
    iE-Extensions               ProtocolExtensionContainer { { SchedulingInformation-RL-ReconfRspFDD-ExtIEs } } OPTIONAL,  
    ...  
}
```

```
SchedulingInformation-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}
```

```
SegmentInformationList-RL-ReconfRspFDD ::= SEQUENCE (SIZE(1..maxIBSEG-1)) OF  
SEQUENCE {  
    iB-SG-Pos                   IB-SG-Pos,  
    iE-Extensions               ProtocolExtensionContainer { { SIB-PosOffsetInformationList-RL-ReconfRspFDD SegmentInformationList-RL-  
ReconfRspFDD-ExtIEs } } OPTIONAL,  
    ...  
}
```

```
SegmentInformationList-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```


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```
    ...
}

DCH-AddList-RL-ReconfRspFDD ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfRspFDD-IEs} }

DCH-Add-RL-ReconfRspFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddItem-RL-ReconfRspFDD CRITICALITY ignore TYPE DCH-AddItem-RL-ReconfRspFDD PRESENCE mandatory },
    ...
}

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

DCH-AddItem-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfRspFDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfRspFDD-IEs} }

DCH-Modify-RL-ReconfRspFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyItem-RL-ReconfRspFDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-ReconfRspFDD PRESENCE mandatory },
    ...
}

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

DCH-ModifyItem-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE TDD
--
-- *****
```

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```
RadioLinkReconfigurationResponseTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container      {{RadioLinkReconfigurationResponseTDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationResponseTDD-Extensions}}
  ...
}
```

```
RadioLinkReconfigurationResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics          PRESENCE optional },
  ...
}
```

```
RadioLinkReconfigurationResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
-- *****
--
-- RADIO LINK FAILURE INDICATION
--
-- *****
```

```
RadioLinkFailureIndication ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container      {{RadioLinkFailureIndication-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkFailureIndication-Extensions}}
  ...
}
```

```
RadioLinkFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationList-RL-FailureInd  CRITICALITY ignore  TYPE RL-InformationList-RL-FailureInd  PRESENCE mandatory },
  ...
}
```

```
RL-InformationList-RL-FailureInd ::= RL-IE-ContainerList { {RL-Information-RL-FailureInd-IEs} }
```

```
RL-Information-RL-FailureInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-FailureInd      CRITICALITY ignore  TYPE RL-Information-RL-FailureInd      PRESENCE mandatory },
  ...
}
```

```
RL-Information-RL-FailureInd ::= SEQUENCE {
  rL-ID                RL-ID,
  cause                Cause,
  iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-FailureInd-ExtIEs} } OPTIONAL,
  ...
}
```

```
RL-Information-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
RadioLinkFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

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```
}

-- *****
--
-- RADIO LINK RESTORE INDICATION
--
-- *****

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

RadioLinkRestoreIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationList-RL-RestoreInd    CRITICALITY ignore    TYPE RL-InformationList-RL-RestoreInd    PRESENCE mandatory    },
    ...
}

RL-InformationList-RL-RestoreInd ::= RL-IE-ContainerList { {RL-Information-RL-RestoreInd-IEs} }

RL-Information-RL-RestoreInd-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-RestoreInd        CRITICALITY ignore    TYPE RL-Information-RL-RestoreInd        PRESENCE mandatory    },
    ...
}

RL-Information-RL-RestoreInd ::= SEQUENCE {
    rL-ID                RL-ID,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-RestoreInd-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkRestoreIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DOWNLINK POWER CONTROL REQUEST
--
-- *****

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

DL-PowerControlRequest-IEs RNSAP-PROTOCOL-IES ::= {
```

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```
{ ID id-ProcedureScope-DL-PC-Rqst          CRITICALITY ignore  TYPE ProcedureScope-DL-PC-Rqst          PRESENCE mandatory  },
...
}

ProcedureScope-DL-PC-Rqst ::= CHOICE {
  allRLs          DL-Power,
  individualRLs   DL-ReferencePowerInformationList-DL-PC-Rqst,
  ...
}

DL-ReferencePowerInformationList-DL-PC-Rqst ::= RL-IE-ContainerList { {DL-ReferencePowerInformation-DL-PC-Rqst-IEs} }

DL-ReferencePowerInformation-DL-PC-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-ReferencePowerInformation-DL-PC-Rqst CRITICALITY ignore  TYPE DL-ReferencePowerInformation-DL-PC-Rqst  PRESENCE mandatory  },
  ...
}

DL-ReferencePowerInformation-DL-PC-Rqst ::= SEQUENCE {
  rL-ID          RL-ID,
  dl-Power       DL-Power,
  iE-Extensions ProtocolExtensionContainer { {DL-ReferencePowerInformation-DL-PC-Rqst-ExtIEs} } OPTIONAL,
  ...
}

DL-ReferencePowerInformation-DL-PC-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-PowerControlRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST FDD
--
-- *****

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

PhysicalChannelReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-PhyChReconfRqstFDD  CRITICALITY ignore  TYPE RL-Information-PhyChReconfRqstFDD  PRESENCE mandatory  },
  ...
}

RL-Information-PhyChReconfRqstFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  dl-CodeInformations DL-CodeInformationList-PhyChReconfRqstFDD,
  iE-Extensions   ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstFDD-ExtIEs} } OPTIONAL,
```

```

}
...
}
RL-Information-PhyChReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
DL-CodeInformationList-PhyChReconfRqstFDD ::= DL-Code-IE-ContainerList { {DL-CodeInformation-PhyChReconfRqstFDD-IEs} }

DL-CodeInformation-PhyChReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DL-CodeInformation-PhyChReconfRqstFDD CRITICALITY ignore TYPE DL-CodeInformation-PhyChReconfRqstFDD PRESENCE mandatory },
...
}

DL-CodeInformation-PhyChReconfRqstFDD ::= SEQUENCE {
dl-scramblingCode DL-ScramblingCode,
fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
iE-Extensions ProtocolExtensionContainer { {DL-CodeInformation-PhyChReconfRqstFDD-ExtIEs} } OPTIONAL,
...
}

DL-CodeInformation-PhyChReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

PhysicalChannelReconfigurationRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST TDD
--
-- *****

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

PhysicalChannelReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-RL-Information-PhyChReconfRqstTDD CRITICALITY ignore TYPE RL-Information-PhyChReconfRqstTDD PRESENCE mandatory },
...
}

RL-Information-PhyChReconfRqstTDD ::= SEQUENCE {
rL-ID RL-ID,
ul-CCTrCH-Information UL-CCTrCH-InformationList-PhyChReconfRqstTDD,
dl-CCTrCH-Information DL-CCTrCH-InformationList-PhyChReconfRqstTDD,
iE-Extensions ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
...
}

```

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```
RL-Information-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationList-PhyChReconfRqstTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs} }

UL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CCTrCH-ID CRITICALITY ignore TYPE CCTrCH-ID PRESENCE mandatory } |
    { ID id-UL-DPCH-InformationList-PhyChReconfRqstTDD
      CRITICALITY ignore TYPE UL-DPCH-InformationList-PhyChReconfRqstTDD
      PRESENCE mandatory },
    ...
}

-- List items have same criticality as parent
UL-DPCH-InformationList-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF
SEQUENCE {
    dPCH-ID DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode OPTIONAL,
    burstType BurstType OPTIONAL,
    midambleShift MidambleShift OPTIONAL,
    timeSlot TimeSlot OPTIONAL,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset OPTIONAL,
    repetitionPeriod RepetitionPeriod OPTIONAL,
    repetitionLength RepetitionLength OPTIONAL,
    tFCI-Presence TFCI-Presence OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {UL-DPCH-InformationList-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationList-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-PhyChReconfRqstTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs} }

DL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CCTrCH-ID CRITICALITY ignore TYPE CCTrCH-ID PRESENCE mandatory } |
    { ID id-DL-DPCH-InformationList-PhyChReconfRqstTDD
      CRITICALITY ignore TYPE DL-DPCH-InformationList-PhyChReconfRqstTDD
      PRESENCE mandatory },
    ...
}

-- List items have same criticality as parent
DL-DPCH-InformationList-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF
SEQUENCE {
    dPCH-ID DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode OPTIONAL,
    burstType BurstType OPTIONAL,
    midambleShift MidambleShift OPTIONAL,
    timeSlot TimeSlot OPTIONAL,
```

```
tDD-PhysicalChannelOffset          TDD-PhysicalChannelOffset          OPTIONAL,
repetitionPeriod                   RepetitionPeriod                   OPTIONAL,
repetitionLength                   RepetitionLength                   OPTIONAL,
tFCI-Presence                      TFCI-Presence                     OPTIONAL,
iE-Extensions                      ProtocolExtensionContainer { {DL-DPCH-InformationList-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-InformationList-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

PhysicalChannelReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION COMMAND
--
-- *****

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

PhysicalChannelReconfigurationCommand-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CFN          CRITICALITY ignore TYPE CFN          PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

PhysicalChannelReconfigurationCommand-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION FAILURE
--
-- *****

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

PhysicalChannelReconfigurationFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}
```

```
    ...
}

PhysicalChannelReconfigurationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- UPLINK SIGNALLING TRANSFER INDICATION
--
-- *****

UplinkSignallingTransferIndication ::= SEQUENCE {
    protocolIEs          ProtocolIEContainer    {{UplinkSignallingTransferIndication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{UplinkSignallingTransferIndication-Extensions}}
    ...
}

UplinkSignallingTransferIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UC-ID          CRITICALITY ignore TYPE UC-ID          PRESENCE mandatory } |
    { ID id-SAI           CRITICALITY ignore TYPE SAI            PRESENCE mandatory } |
    { ID id-C-RNTI        CRITICALITY ignore TYPE C-RNTI        PRESENCE mandatory } |
    { ID id-S-RNTI        CRITICALITY ignore TYPE S-RNTI        PRESENCE mandatory } |
    { ID id-D-RNTI        CRITICALITY ignore TYPE D-RNTI        PRESENCE optional   } |
    { ID id-L3-Information CRITICALITY ignore TYPE L3-Information PRESENCE mandatory } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional } |
    { ID id-URA-ID        CRITICALITY ignore TYPE URA-ID        PRESENCE mandatory } |
    { ID id-MultipleURAsIndicator CRITICALITY ignore TYPE MultipleURAsIndicator PRESENCE mandatory } |
    { ID id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind
      CRITICALITY ignore TYPE RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind
      PRESENCE mandatory },
    ...
}

-- All RNC-IDs share same criticality!
RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind ::= SEQUENCE (SIZE (1..maxRNCinURA)) OF
    SEQUENCE {
        rNC-ID          RNC-ID,
        iE-Extensions   ProtocolExtensionContainer { {RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind-ExtIEs} } OPTIONAL,
        ...
    }

RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UplinkSignallingTransferIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
```


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```
--
-- DOWNLINK SIGNALLING TRANSFER REQUEST
--
-- *****

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

DownlinkSignallingTransferRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-C-ID          CRITICALITY ignore TYPE C-ID          PRESENCE mandatory } |
    { ID id-D-RNTI       CRITICALITY ignore TYPE D-RNTI       PRESENCE mandatory } |
    { ID id-L3-Information CRITICALITY ignore TYPE L3-Information PRESENCE mandatory } |
    { ID id-D-RNTI-ReleaseIndication CRITICALITY ignore TYPE D-RNTI-ReleaseIndication PRESENCE mandatory },
    ...
}

DownlinkSignallingTransferRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RELOCATION COMMIT
--
-- *****

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

RelocationCommit-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI       CRITICALITY ignore TYPE D-RNTI       PRESENCE mandatory } |
    { ID id-RANAP-RelocationInformation CRITICALITY ignore TYPE RANAP-RelocationInformation PRESENCE mandatory },
    ...
}

RelocationCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PAGING REQUEST
--
-- *****

PagingRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{PagingRequest-IEs}},
```

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```
    protocolExtensions          ProtocolExtensionContainer {{PagingRequest-Extensions}}          OPTIONAL,
    ...
}

PagingRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-PagingArea-PagingRqst          CRITICALITY ignore TYPE PagingArea-PagingRqst          PRESENCE mandatory } |
  { ID id-SRNC-ID                        CRITICALITY ignore TYPE SRNC-ID                        PRESENCE mandatory } |
  { ID id-S-RNTI                          CRITICALITY ignore TYPE S-RNTI                          PRESENCE mandatory } |
  { ID id-DRX-Parameter                  CRITICALITY ignore TYPE DRX-Parameter                  PRESENCE mandatory },
  ...
}

PagingArea-PagingRqst ::= CHOICE {
  uRA          URA-ID,
  cell        C-ID,
  ...
}

PagingRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION REQUEST
--
-- *****

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

DedicatedMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
  { ID id-DedicatedMeasurementObjectType-DM-Rqst CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rqst PRESENCE mandatory } |
  { ID id-MeasurementCharacteristics          CRITICALITY ignore TYPE MeasurementCharacteristics          PRESENCE mandatory } |
  { ID id-ReportCharacteristics          CRITICALITY ignore TYPE ReportCharacteristics          PRESENCE mandatory },
  ...
}

DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {
  rLs          RL-InformationList-DM-Rqst,
  ...
}

RL-InformationList-DM-Rqst          ::= RL-IE-ContainerList { {RL-Information-DM-Rqst-IEs} }

RL-Information-DM-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-DM-Rqst          CRITICALITY ignore 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 RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementInitiationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION RESPONSE
--
-- *****

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

DedicatedMeasurementInitiationResponse-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID                CRITICALITY ignore TYPE MeasurementID                PRESENCE mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rspns CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rspns PRESENCE mandatory } |
    { ID id-CFN                            CRITICALITY ignore TYPE CFN                            PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics         CRITICALITY ignore TYPE CriticalityDiagnostics         PRESENCE optional },
    ...
}

DedicatedMeasurementObjectType-DM-Rspns ::= CHOICE {
    rLs                RL-InformationList-DM-Rspns,
    allRL              AllRL-Information-DM-Rspns,
    ...
}

RL-InformationList-DM-Rspns ::= RL-IE-ContainerList { {RL-Information-DM-Rspns-IEs} }

RL-Information-DM-Rspns-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rspns    CRITICALITY ignore TYPE RL-InformationItem-DM-Rspns    PRESENCE mandatory },
    ...
}

RL-InformationItem-DM-Rspns ::= SEQUENCE {
    rL-ID                RL-ID,
    dPCH-ID              DPCH-ID    OPTIONAL,
    dedicatedMeasurementValue DedicatedMeasurementValue,
}
```

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```

    iE-Extensions                ProtocolExtensionContainer { {RL-InformationItem-DM-Rspns-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

AllRL-Information-DM-Rspns ::= SEQUENCE {
    dedicatedMeasurementValue    DedicatedMeasurementValue,
    iE-Extensions                ProtocolExtensionContainer { {AllRL-Information-DM-Rspns-ExtIEs} } OPTIONAL,
    ...
}

AllRL-Information-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementInitiationResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION FAILURE
--
-- *****

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

DedicatedMeasurementInitiationFailure-IEs RNSAP-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 },
    ...
}

DedicatedMeasurementInitiationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT REPORT
--
-- *****

DedicatedMeasurementReport ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{DedicatedMeasurementReport-IEs}},
```

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```
    protocolExtensions          ProtocolExtensionContainer {{DedicatedMeasurementReport-Extensions}}          OPTIONAL,
    ...
}

DedicatedMeasurementReport-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
  { ID id-DedicatedMeasurementObjectType-DM-Rprt CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rprt PRESENCE mandatory } |
  { ID id-CFN                    CRITICALITY ignore TYPE CFN                    PRESENCE optional },
  ...
}

DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
  rLs          RL-InformationList-DM-Rprt,
  allRL        AllRL-Information-DM-Rprt,
  ...
}

RL-InformationList-DM-Rprt          ::= RL-IE-ContainerList { {RL-Information-DM-Rprt-IEs} }

RL-Information-DM-Rprt-IEs RNSAP-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,
  dedicatedMeasurementValue          DedicatedMeasurementValue,
  iE-Extensions          ProtocolExtensionContainer { {RL-InformationItem-DM-Rprt-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

AllRL-Information-DM-Rprt ::= SEQUENCE {
  dedicatedMeasurementValue          DedicatedMeasurementValue,
  iE-Extensions          ProtocolExtensionContainer { {AllRL-Information-DM-Rprt-ExtIEs} } OPTIONAL,
  ...
}

AllRL-Information-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DedicatedMeasurementReport-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DEDICATED MEASUREMENT TERMINATION REQUEST
```

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```
--
-- *****
DedicatedMeasurementTerminationRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DedicatedMeasurementTerminationRequest-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{DedicatedMeasurementTerminationRequest-Extensions}}
    ...
}

DedicatedMeasurementTerminationRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory },
    ...
}

DedicatedMeasurementTerminationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT FAILURE INDICATION
--
-- *****

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

DedicatedMeasurementFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-Cause                  CRITICALITY ignore TYPE Cause                  PRESENCE mandatory },
    ...
}

DedicatedMeasurementFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST
--
-- *****

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

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```
CommonTransportChannelResourcesReleaseRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE mandatory } |
  { ID id-C-RNTI          CRITICALITY ignore TYPE C-RNTI          PRESENCE optional  },
  ...
}

CommonTransportChannelResourcesReleaseRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES REQUEST
--
-- *****

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

CommonTransportChannelResourcesRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE mandatory } |
  { ID id-TransportBearerRequestIndicator CRITICALITY ignore TYPE TransportBearerRequestIndicator PRESENCE mandatory } |
  { ID id-TransportBearerID          CRITICALITY ignore TYPE TransportBearerID          PRESENCE mandatory },
  ...
}

CommonTransportChannelResourcesRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RESPONSE FDD
--
-- *****

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

CommonTransportChannelResourcesResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE mandatory } |
  { ID id-FACH-InfoForS-CCPCH-CoupledToPRACH CRITICALITY ignore TYPE FACH-InfoForS-CCPCH-CoupledToPRACH PRESENCE mandatory } |
  { ID id-FACH-InfoForOptionals-CCPCH        CRITICALITY ignore TYPE FACH-InfoForOptionals-CCPCH        PRESENCE optional } |
  { ID id-TransportLayerAddress              CRITICALITY ignore TYPE TransportLayerAddress              PRESENCE optional } |
  { ID id-BindingID                          CRITICALITY ignore TYPE BindingID                          PRESENCE optional } |
  { ID id-CriticalityDiagnostics              CRITICALITY ignore TYPE CriticalityDiagnostics              PRESENCE optional },
  ...
}
```

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```
}  
  
FACH-InfoForS-CCPCH-CoupledToPRACH ::= SEQUENCE {  
    priorityIndicatorAndInitialWindowSizes      PriorityIndicatorAndInitialWindowSizeList,  
    iE-Extensions                               ProtocolExtensionContainer { {FACH-InfoForS-CCPCH-CoupledToPRACH-ExtIEs} } OPTIONAL,  
    ...  
}  
  
FACH-InfoForS-CCPCH-CoupledToPRACH-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}  
  
PriorityIndicatorAndInitialWindowSizeList ::= SEQUENCE (SIZE (1..16)) OF  
    SEQUENCE {  
        fACH-PriorityIndicator                FACH-PriorityIndicator,  
        mAC-c-SDU-Lengths                     MAC-c-SDU-LengthList,  
        fACH-InitialWindowSize               FACH-InitialWindowSize,  
        iE-Extensions                         ProtocolExtensionContainer { {PriorityIndicatorAndInitialWindowSizeList-ExtIEs} } OPTIONAL,  
        ...  
    }  
  
PriorityIndicatorAndInitialWindowSizeList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}  
  
MAC-c-SDU-LengthList ::= SEQUENCE (SIZE (1..maxNrOfMACcSDU-Length)) OF  
    SEQUENCE {  
        mAC-c-SDU-Length                     MAC-c-SDU-Length,  
        iE-Extensions                         ProtocolExtensionContainer { {MAC-c-SDU-LengthList-ExtIEs} } OPTIONAL,  
        ...  
    }  
  
MAC-c-SDU-LengthList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}  
  
FACH-InfoForOptionals-CCPCH ::= SEQUENCE {  
    fDD-S-CCPCH-Offset                       FDD-S-CCPCH-Offset,  
    dl-ScramblingCode                        DL-ScramblingCode,  
    fDD-DL-ChannelisationCodeNumber         FDD-DL-ChannelisationCodeNumber,  
    dl-TFCS                                  TransportFormatCombinationSet,  
    secondaryCCPCHs                          SecondaryCCPCH-List,  
    tFCI-Presence                             TFCI-Presence OPTIONAL,  
    pilotBitsUsedIndicator                PilotBitsUsedIndicator,  
    multiplexingPosition                     MultiplexingPosition,  
    sSDT-Indication                          SSDT-Indication,  
    priorityIndicatorAndInitialWindowSizeList PriorityIndicatorAndInitialWindowSizeList,  
    fACH-DataFrameSize                       FACH-DataFrameSize,  
    fACH-InitialWindowSize                   FACH-InitialWindowSize,  
    iE-Extensions                           ProtocolExtensionContainer { {FACH-InfoForOptionals-CCPCH-ExtIEs} } OPTIONAL,  
    ...  
}
```



```
FACH-InfoForOptionalS-CCPCH-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCCPCH-List ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF
    SEQUENCE {
        tDD-ChannelisationCode          TDD-ChannelisationCode,
        timeSlot                        TimeSlot,
        burstType                       BurstType,
        midambleShift                   MidambleShift,
        offset                          Offset,
        repetitionPeriod                RepetitionPeriod,
        repetitionLength                RepetitionLength,
        iE-Extensions                   ProtocolExtensionContainer { {SecondaryCCPCH-List-ExtIEs} } OPTIONAL,
        ...
    }

SecondaryCCPCH-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonTransportChannelResourcesResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RESPONSE TDD
--
-- *****

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

CommonTransportChannelResourcesResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI                CRITICALITY ignore TYPE S-RNTI                PRESENCE mandatory } |
    { ID id-FACH-InfoForS-CCPCH-CoupledToPRACH CRITICALITY ignore TYPE FACH-InfoForS-CCPCH-CoupledToPRACH PRESENCE optional } |
    { ID id-FACH-InfoForOptionalGroupS-CCPCH CRITICALITY ignore TYPE FACH-InfoForOptionalGroupOfS-CCPCH PRESENCE optional } |
    { ID id-TransportLayerAddress CRITICALITY ignore TYPE TransportLayerAddress PRESENCE optional } |
    { ID id-BindingID              CRITICALITY ignore TYPE BindingID              PRESENCE optional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

FACH-InfoForOptionalGroupOfS-CCPCH ::= SEQUENCE {
    dl-TFCS                TransportFormatCombinationSet,
    secondaryCCPCHs        SecondaryCCPCH-TDD-List,
    iE-Extensions          ProtocolExtensionContainer { {FACH-InfoForOptionalGroupOfS-CCPCH-ExtIEs} } OPTIONAL,
    ...
}
```

```
FACH-InfoForOptionalGroupOfS-CCPCH-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

SecondaryCCPCH-TDD-List ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF
  SEQUENCE {
    tDD-ChannelisationCode          TDD-ChannelisationCode,
    timeSlot                        TimeSlot,
    burstType                       BurstType,
    midambleShift                   MidambleShift,
    tDD-PhysicalChannelOffset       TDD-PhysicalChannelOffset,
    repetitionPeriod                RepetitionPeriod,
    repetitionLength                RepetitionLength,
    sSDT-Indication                 SSDT-Indication,
    priorityIndicatorAndInitialWindowSizeList PriorityIndicatorAndInitialWindowSizeList,
    iE-Extensions                   ProtocolExtensionContainer { {SecondaryCCPCH-TDD-List-ExtIEs} } OPTIONAL,
    ...
  }

SecondaryCCPCH-TDD-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

CommonTransportChannelResourcesResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES FAILURE
--
-- *****

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

CommonTransportChannelResourcesFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE mandatory } |
  { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

CommonTransportChannelResourcesFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
```

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```
-- COMPRESSED MODE PREPARE
--
-- *****

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

CompressedModePrepare-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-TGP1          CRITICALITY ignore TYPE GapPeriod          PRESENCE mandatory } |
    { ID id-TGP2          CRITICALITY ignore TYPE GapPeriod          PRESENCE optional } |
    { ID id-TGL           CRITICALITY ignore TYPE TGL                PRESENCE mandatory } |
    { ID id-TGD           CRITICALITY ignore TYPE TGD                PRESENCE mandatory } |
    { ID id-PD            CRITICALITY ignore TYPE PD                 PRESENCE mandatory } |
    { ID id-UL-DL-CompressedModeSelection CRITICALITY ignore TYPE UL-DL-CompressedModeSelection PRESENCE mandatory } |
    { ID id-CompressedModeMethod CRITICALITY ignore TYPE CompressedModeMethod PRESENCE mandatory } |
    { ID id-GapPositionMode CRITICALITY ignore TYPE GapPositionMode PRESENCE mandatory } |
    { ID id-SN            CRITICALITY ignore TYPE SN                 PRESENCE conditional
-- This IE is present only if "GapPositionMode" equals to "flexible" --
    } |
    { ID id-DL-FrameType CRITICALITY ignore TYPE DL-FrameType       PRESENCE mandatory } |
    { ID id-ScramblingCodeChange CRITICALITY ignore TYPE ScramblingCodeChange PRESENCE conditional
-- This IE is present only if "CompressedModeMethod" equals to "SF/2" --
    } |
    { ID id-PowerControlMode CRITICALITY ignore TYPE PowerControlMode PRESENCE mandatory } |
    { ID id-PowerResumeMode CRITICALITY ignore TYPE PowerResumeMode PRESENCE mandatory } |
    { ID id-UL-DeltaEbNo CRITICALITY ignore TYPE UL-EbNo            PRESENCE mandatory } |
    { ID id-UL-DeltaEbNoAfter CRITICALITY ignore TYPE UL-EbNo      PRESENCE mandatory },
    ...
}

CompressedModePrepare-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMPRESSED MODE READY
--
-- *****

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

CompressedModeReady-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

CompressedModeReady-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
```

```

}
...
}
-- *****
--
-- COMPRESSED MODE FAILURE
--
-- *****

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

CompressedModeFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

CompressedModeFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMPRESSED MODE COMMIT
--
-- *****

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

CompressedModeCommit-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CFN          CRITICALITY ignore TYPE CFN          PRESENCE mandatory },
    ...
}

CompressedModeCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMPRESSED MODE CANCEL
--
-- *****

CompressedModeCancel ::= SEQUENCE {
```

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```
    protocolIEs          ProtocolIE-Container    {{CompressedModeCancel-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CompressedModeCancel-Extensions}}
    ...
}

CompressedModeCancel-IEs RNSAP-PROTOCOL-IES ::= {
    ...
}

CompressedModeCancel-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- ERROR INDICATION
--
-- *****

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

ErrorIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE conditional } |
    -- At least either of Cause IE or Criticality IE shall be present --
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE conditional } |
    -- At least either of Cause IE or Criticality IE shall be present --
    ...
}

ErrorIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PRIVATE MESSAGE
--
-- *****

PrivateMessage ::= SEQUENCE {
    privateExtensions   PrivateExtensionContainer {{PrivateExtensions}},
    ...
}

PrivateExtensions RNSAP-PRIVATE-EXTENSION ::= {
    ...
}

END
```

9.3.4 Information Element Definitions

```
-- *****
--
-- Information Element Definitions
--
-- *****

RNSAP-IEs -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxNrOfErrors,
    maxRateMatching,
    maxNrOfTFCS,
    maxNrOfTFs,
    maxTTI-Count,
    maxIBSEG
FROM RNSAP-Constants

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM RNSAP-CommonDataTypes

    ProtocolExtensionContainer{},
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;

-- A

AllocationRetentionPriority ::= FrameHandlingPriority

AllowedQueuingTime ::= INTEGER (0..60)
-- seconds

-- B

-- ** NOTE: Size in tabular 1..4,... **
BindingID ::= OCTET STRING (SIZE (1..MAX))

BLER ::= INTEGER (-63..0)
-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER

BurstType ::= ENUMERATED {
    type1 (1),
```

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```
    type2 (2)
}
-- C
Cause ::= CHOICE {
    radioNetwork          CauseRadioNetwork,
    transmissionNetwork   CauseTransmissionNetwork,
    protocol              CauseProtocol,
    misc                  CauseMisc,
    ...
}

CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    om-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    ...
}

CauseProtocol ::= ENUMERATED {
    transaction-not-allowed,
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    unspecified,
    ...
}

CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    ul-scrambling-code-already-in-use,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    measurement-not-supported-for-the-object,
    macrodiversity-combining-not-possible,
    reconfiguration-not-allowed,
    Synchronisation-failure,
    unspecified,
    ...
}

CauseTransmissionNetwork ::= ENUMERATED {
    transmission-link-failure,
    transmission-port-not-available,
    unspecified,
    ...
}
```

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```
C-ID ::= INTEGER (0..65535)

CCTrCH-ID ::= INTEGER (0..15)

CellParameterID ::= INTEGER (0..127)

CFN ::= INTEGER (0..255)

ChannelCodingType ::= ENUMERATED {
    no-coding,
    convolutional-coding,
    turbo-coding--,
-- ...
}

-- ** TODO **
ChipOffset ::= INTEGER

CodingRate ::= ENUMERATED {
    half,
    third--,
-- ...
}

CompressedModeMethod ::= ENUMERATED {
    none,
    puncturing,
    sF2,
    gating
}

CPICH-EcIo ::= INTEGER

CRC-Size ::= INTEGER (0| 8| 12| 16| 24)

CriticalityDiagnostics ::= SEQUENCE {
    procedureCode ProcedureCode OPTIONAL,
    triggeringMessage TriggeringMessage OPTIONAL,
    criticalityResponse Criticality OPTIONAL,
    transactionID TransactionID OPTIONAL,
    iEsCriticalityResponses CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

CriticalityDiagnostics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
SEQUENCE {
    criticalityResponse Criticality,
```


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```
        iE-ID          ProtocolIE-ID,  
        iE-Extensions  ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,  
        ...  
    }
```

```
CriticalityDiagnostics-IE-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}
```

```
-- ** TODO **  
CTFC ::= INTEGER  
-- See formula (must be resolved)
```

```
CN-CS-DomainIdentifier ::= SEQUENCE {  
    pLMN-ID          PLMN-ID,  
    iE-Extensions    ProtocolExtensionContainer { {CN-CS-DomainIdentifier-ExtIEs} } OPTIONAL,  
    LAC              LAC  
}
```

```
CN-CS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}
```

```
CN-PS-DomainIdentifier ::= SEQUENCE {  
    pLMN-ID          PLMN-ID,  
    LAC              LAC,  
    iE-Extensions    ProtocolExtensionContainer { {CN-PS-DomainIdentifier-ExtIEs} } OPTIONAL,  
    rAC              RAC  
}
```

```
CN-PS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}
```

```
-- **TODO**  
CPICH-Power ::= INTEGER  
C-RNTI ::= INTEGER (0..65535)
```

```
-- D
```

```
DCH-CombinationInd ::= INTEGER (0..255)
```

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

```
DedicatedMeasurementObjectType ::= ENUMERATED {  
    r1,  
    all-r1,  
    ...  
}
```

```
-- ** OR:  
-- DedicatedMeasurementObjectType ::= INTEGER {  
--    rL(0),
```

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```
-- allRL(1)
-- } (0..255)
-- **

DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rSCP,
    ...
}
-- timeslotTSCP is used by TDD only

-- ** OR:
-- DedicatedMeasurementType ::= INTEGER {
--   sIR(0),
--   sIR-Error(1),
--   transmittedCodePower(2),
--   rSCP(3)
-- } (0..255)
-- **

-- ** NOTE: Extensibility added **
-- **TODO**

DedicatedMeasurementValue ::= SEQUENCE {
    sIR-Value          ScaledSIR-Value          OPTIONAL,
    sIR-ErrorValue     ScaledSIR-ErrorValue     OPTIONAL,
    transmittedCodePowerValue ScaledTransmittedCodePowerValue OPTIONAL, -- Relative to CPICH
    rSCP               TBD                     OPTIONAL, -- TDD only
    iE-Extensions      ProtocolExtensionContainer { {DedicatedMeasurementValue-ExtIEs} } OPTIONAL,
    ...
}

DedicatedMeasurementValue-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
DiversityControlField ::= INTEGER

-- ** TODO **
DiversityMode ::= INTEGER

-- ** TODO **
DL-ChannelisationCode ::= INTEGER

-- ** TODO **
DL-DPCCH-SlotFormat ::= INTEGER

-- ** TODO **
DL-DPCH-SlotNumber ::= INTEGER
```

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```
DL-EbNo                ::= ScaledUL-EbNo

DL-EbNoTarget          ::= ScaledUL-EbNo

-- ** TODO **
DL-Power               ::= INTEGER

D-RNTI                 ::= INTEGER (0..1048576)
-- ** OR:
-- D-RNTI               ::= BIT STRING (SIZE (20))
-- **

D-RNTI-ReleaseIndication ::= ENUMERATED {
    not-release-D-RNTI,
    release-D-RNTI
}

-- ** TODO **
DL-ScramblingCode      ::= INTEGER

DL-FrameType ::= ENUMERATED {
    typeA,
    typeB,
    ...
}

DPCH-ID                ::= INTEGER (0..239)

DRACControl            ::= ENUMERATED {
    requested,
    not-requested
}

-- **TODO**
DRX-Parameter          ::= TBD

-- **TODO**
DSCH-TransportFormatCombinationSet ::= INTEGER

-- **TODO**
DSCH-TFS               ::= INTEGER

-- **TODO**
D-FieldLength          ::= INTEGER

-- E

EventA ::= SEQUENCE {
    measurementTreshold      MeasurementThreshold,
    measurementHysteresisTime ScaledMeasurementHysteresisTime OPTIONAL,
    IE-Extensions            ProtocolExtensionContainer { {EventA-ExtIEs} } OPTIONAL,
    ...
}
```

```
EventA-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

EventC ::= SEQUENCE {
    measurementIncreaseThreshold MeasurementIncreaseThreshold,
    measurementChangeTime       ScaledMeasurementChangeTime,
    ...
}

EventB-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

EventD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

EventE-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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```
}  
  
EventF-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}  
  
-- F  
  
FACH-DataFrameSize ::= INTEGER (1..5000)  
-- Size of data frame in number of bits  
  
FACH-InitialWindowSize ::= INTEGER { unlimited(255) } (0..255)  
-- Number of FACH data frames.  
-- 255 = Unlimited number of FACH data frames  
  
-- ** TODO **  
FACH-InfoForOptionalS-CCPCH ::= INTEGER  
  
-- ** TODO **  
FACH-InfoForS-CCPCH-CoupledToPRACH ::= INTEGER  
  
-- ** TODO **  
FDD-DL-ChannelisationCodeNumber ::= INTEGER  
  
-- ** TODO **  
FDD-FL-ChannelisationCodeNumber ::= INTEGER  
  
-- ** TODO **  
FDD-S-CCPCH-Offset ::= INTEGER  
  
FACH-PriorityIndicator ::= INTEGER { lowest(0), highest(15) } (0..15)  
  
FrameHandlingPriority ::= INTEGER { lowest(0), highest(15) } (0..15)  
  
FrameOffset ::= INTEGER (0..255)  
-- Frames  
  
-- G  
  
GapPositionMode ::= ENUMERATED {  
    fixed,  
    flexible  
}  
  
GapPeriod ::= INTEGER (0..255)  
  
-- H  
-- I  
  
-- **TODO**  
InitialDL-TX-Power ::= INTEGER
```

```
-- J
-- K
-- L

LAC ::= OCTET STRING (SIZE (2)) --(EXCEPT ('0000'H|'FFFF'H))

-- ** TODO **
L3-Information ::= INTEGER

-- M

-- ** TODO **
MaxNrOfUL-DPCHs ::= INTEGER

MAC-c-SDU-Length ::= INTEGER (1..5000)

-- **TODO**
MACd-MACsh-TransportFormatSet ::= INTEGER

-- **NOTE: extensibility**
MeasurementCharacteristics ::= SEQUENCE {
    measurementFrequency TBD,
    averagingDuration TBD,
    IE-Extensions ProtocolExtensionContainer { {MeasurementCharacteristics-ExtIEs} } OPTIONAL,
    ...
}

MeasurementCharacteristics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
MeanBitRate ::= INTEGER

MeasurementID ::= INTEGER (0..1048576)
-- **OR:
-- MeasurementID ::= BIT STRING (SIZE (20))
-- **

MultipleURAsIndicator ::= ENUMERATED {
    single-URA-exists,
    multiple-URAs-exist
}

-- ** TODO **
MCC-Digit ::= OCTET STRING (SIZE (3))
-- FFS
-- Reference: 24.008

-- ** TODO **
MNC-Digit ::= OCTET STRING (SIZE (3))
-- FFS
```

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```
-- Reference: 24.008

ScaledMeasurementChangeTime ::= INTEGER (1..1000)
-- MeasurementChangeTime = ScaledMeasurementChangeTime * 10
-- Unit is ms

-- ** TODO **
MeasurementDecreaseThreshold ::= INTEGER

ScaledMeasurementHysteresisTime ::= INTEGER (1..1000)
-- MeasurementHysteresisTime = ScaledMeasurementHysteresisTime * 10
-- Unit is ms

-- ** TODO **
MeasurementIncreaseThreshold ::= INTEGER

-- ** TODO **
MeasurementThreshold ::= INTEGER

MidambleShift ::= INTEGER (0..15)

MinUL-ChannelisationCodeLength ::= INTEGER

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

-- N

NrOfTransportBlocks ::= INTEGER (0..4095)

-- O

Offset ::= INTEGER (0..63)

-- P

PD ::= INTEGER (0..2047, ...)

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    crc-not-included,
    crc-included--,
    ...
}

PSCH-TimeSlot ::= INTEGER (0..6)

Periodic ::= SEQUENCE {
    reportPeriodicity ReportPeriodicity,
    iE-Extensions ProtocolExtensionContainer { {Periodic-ExtIEs} } OPTIONAL,
    ...
}
```

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```
Periodic-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
PilotBitsUsedIndicator ::= INTEGER

-- ** TODO **
PLMN-ID ::= SEQUENCE {
    mCC-digit MCC-Digit,
    iE-Extensions ProtocolExtensionContainer { {PLMN-ID-ExtIEs} } OPTIONAL,
    mNC-digit MNC-Digit
}
-- FFS

PLMN-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PowerControlMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

PowerOffset ::= INTEGER (0..24)

PowerResumeMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

-- ** TODO **
PrimaryCPICH-Power ::= INTEGER

PrimaryCPICH-EcNo ::= INTEGER (-30..30)

-- ** TODO **
PrimaryCCPCH-RSCP ::= INTEGER

PrimaryScramblingCode ::= ScramblingCode

PropagationDelay ::= INTEGER (0..255)

SyncCase ::= ENUMERATED {
    case1,
    case2,
    case3--,
    ...
}
```


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```
-- ** TODO **
PSCH-CCPCH-TimeSlot ::= TimeSlot

-- ** TODO **
PSCH-PCCPCH-TimeSlot ::= TimeSlot

-- ** TODO **
P-CPICH-Power ::= INTEGER

PunctureLimit ::= INTEGER (0..100)
-- Unit is %

-- Q
-- R

-- ** TODO **
RAC ::= INTEGER

-- ** TODO **
-- OCTET STRING?
RANAP-RelocationInformation ::= BIT STRING

RateMatchingAttribute ::= INTEGER (1..maxRateMatching)

RepetitionLength ::= INTEGER (1..63)

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

-- This is changed from the tabular format because it seems that
-- this is what is wanted.
ReportCharacteristics ::= CHOICE {
    onDemand        NULL,
    periodic        Periodic,
    eventA          EventA,
    eventB          EventB,
    eventC          EventC,
    eventD          EventD,
    eventE          EventE,
    eventF          EventF-- ,
-- ...
}

-- Changed
```

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```
ReportPeriodicity ::= CHOICE {
    msec          INTEGER (1..1000),
    min           INTEGER (1..60)
}

RLC-Mode ::= ENUMERATED {
    acknowledged-mode,
    unacknowledged-mode,
    transparent-mode
}

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

RNC-ID         ::= INTEGER (0..4095)

-- S

-- Changed BIT STRING -> OCTET STRING
SAC            ::= OCTET STRING (SIZE (2))

SAI ::= SEQUENCE {
    pLMN-ID     PLMN-ID,
    LAC         LAC,
    sAC         SAC,
    iE-Extensions ProtocolExtensionContainer { {SAI-ExtIEs} } OPTIONAL
}

SAI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
ScramblingCode          ::= INTEGER

ScramblingCodeChange ::= ENUMERATED {
    no-code-change,
    code-change
}

ScaledSIR-ErrorValue    ::= INTEGER (-100..100)
-- ScaledSIR-ErrorValue = SIR-ErrorValue * 10
-- If SIR-ErrorValue <= -10 ScaledSIR-ErrorValue shall be set to -100
-- If SIR-ErrorValue >= 10 ScaledSIR-ErrorValue shall be set to 100
-- SIR-ErrorValue step 0.1 dB

ScaledSIR-Value         ::= INTEGER (-100..200)
-- ScaledSIR-Value = SIR-Value * 10
-- SIR-Value step 0.1 dB

ScaledTransmittedCodePowerValue ::= INTEGER (-350..150)
-- ScaledTransmittedCodePowerValue = TransmittedCodePowerValue * 10
-- TransmittedCodePowerValue step 0.1 dB
```

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```
-- ** TODO **
SharedChannelType ::= INTEGER

-- ** TODO **
SecondaryCCPCH-SlotFormat ::= INTEGER

IB-SG-Pos ::= INTEGER (0..4095)

IB-SG-Rep ::= INTEGER (16| 32| 64| 128| 256| 512
| 1024| 2480)

SN ::= TimeSlot

SpreadingFactorOfChannelisationCode ::= ENUMERATED {
    v256,
    v128,
    v64,
    v32,
    v16,
    v8,
    v4,
    v2,
    v1
}

-- Changed
S-FieldLength ::= INTEGER (1..2)

S-RNTI ::= INTEGER (0..1048575)
-- From 0 to 2^20-1

-- ** TODO **
SRNC-ID ::= INTEGER

SSDT-CellID ::= 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
}

SSDT-SupportIndicator ::= ENUMERATED {
    sSDT-not-supported,
    sSDT-supported
}

-- T

-- ** TODO **
TBD ::= NULL
-- Remove this type

TDD-ChannelisationCode ::= INTEGER (1..31)

TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TFCCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32
}

TFCCI-Presence ::= ENUMERATED {
    not-present,
    present
}

TFCCI-SignallingMode ::= ENUMERATED {
    normal,
    split
}

-- ** TODO **
TimeReference ::= INTEGER
-- TimeReference ::= INTEGER (0..255)

TimeSlot ::= INTEGER (0..14)

ToAWE ::= INTEGER (0..2559)

ToAWS ::= INTEGER (0..1279)

TPC-StepSize ::= ENUMERATED {
    half,
    one
}
```

```
}

TGD ::= INTEGER (0..255)

TGL ::= INTEGER (3| 4| 7| 10| 14)

TransmissionTimeInterval ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80--,
    -- ...
}

TransportBearerID ::= INTEGER (0..4095)

-- Compare title and IE name in table TransportBearerRequestIndicator vs.
-- FACH-PriorityIndicator
TransportBearerRequestIndicator ::= INTEGER { lowest (0), highest (15) } (0..15)

TransportBlockSize ::= INTEGER (1..5000)
-- Unit is bits

TransportFormatCombinationSet ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
    SEQUENCE {
        cTFC CTFC,
        iE-Extensions ProtocolExtensionContainer { {TransportFormatCombinationSet-ExtIEs} } OPTIONAL,
        ...
    }

TransportFormatCombinationSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet ::= SEQUENCE {
    dynamicParts TransportFormatSet-DynamicPartList,
    semi-staticPart TransportFormatSet-Semi-staticPart,
    iE-Extensions ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
    SEQUENCE {
        nrOfTransportBlocks NrOfTransportBlocks,
        transportBlockSize TransportBlockSize OPTIONAL
        -- This IE is only present if nrOfTransportBlocks is greater than 0 --,
        mode TransportFormatSet-ModeDP,
        iE-Extensions ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-ExtIEs} } OPTIONAL,
        ...
    }
```

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```
    }

TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeDP ::= CHOICE {
    tdd          TransmissionTimeIntervalList,
    -- This IE is mandatory if not defined as semistatic parameter, otherwise it is absent --
    ...
}

TransmissionTimeIntervalList ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
    SEQUENCE {
        transmissionTimeInterval    TransmissionTimeInterval,
        iE-Extensions               ProtocolExtensionContainer { {TransmissionTimeIntervalList-ExtIEs} } OPTIONAL,
        ...
    }

TransmissionTimeIntervalList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-Semi-staticPart ::= SEQUENCE {
    transmissionTime                TransmissionTimeInterval,
    channelCoding                   ChannelCodingType,
    codingRate                       CodingRate OPTIONAL
    -- This IE is only present if channelCoding is 'convolutional' or 'turbo' --,
    rateMatchingAttribute           RateMatchingAttribute,
    cRC-Size                         CRC-Size,
    mode                             TransportFormatSet-ModeSSP OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {TransportFormatSet-Semi-staticPart-ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-Semi-staticPart-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
    tdd          SecondInterleavingMode,
    ...
}

SecondInterleavingMode ::= ENUMERATED {
    frame-related,
    timeslot-related,
    ...
}

-- TransportLayerAddress ::= BIT STRING (1..160, ...)
TransportLayerAddress ::= OCTET STRING (SIZE (1..20, ...))
```

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```
-- U
UARFCN ::= INTEGER (0..698, ...)
UL-DL-CompressedModeSelection ::= ENUMERATED {
    ul-only,
    dl-only,
    both
}
UL-DeltaEbNo ::= INTEGER (-60..100)
UL-DeltaEbNoAfter ::= INTEGER (-60..100)
-- ** TODO **
UL-EbNo ::= INTEGER
-- ** TODO **
UL-EbNoTarget ::= INTEGER
UC-ID ::= SEQUENCE {
    rNC-ID RNC-ID,
    c-ID C-ID,
    iE-Extensions ProtocolExtensionContainer { {UC-ID-ExtIEs} } OPTIONAL,
    ...
}
UC-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
UL-DPCCH-SlotFormat ::= INTEGER (0..5)
ScaledUL-EbNo ::= INTEGER (0..255)
-- Ul-EbNo = ScaledUL-EbNo / 10
UL-FP-Mode ::= ENUMERATED {
    normal,
    silent--,
    ...
}
ScaledUL-InterferenceLevel ::= INTEGER (-1280..-600)
-- UL-InterferenceLevel = UL-InterferenceLevel / 10
-- Relation to the ScramblingCode??
UL-ScramblingCode ::= SEQUENCE {
    ul-ScramblingCodeNumber UL-ScramblingCodeNumber,
    ul-ScramblingCodeLength UL-ScramblingCodeLength,
    iE-Extensions ProtocolExtensionContainer { {UL-ScramblingCode-ExtIEs} } OPTIONAL
}
UL-ScramblingCode-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long
}

UL-ScramblingCodeNumber ::= INTEGER (0..16777215)

URA-ID ::= INTEGER (0..65535)

-- V
-- W
-- X
-- Y
-- Z

END
```

9.3.5 Common Definitions

```
-- *****
--
-- Common definitions
--
-- *****

RNSAP-CommonDataTypes -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

Criticality ::= ENUMERATED { reject, ignore, notify }

Presence ::= ENUMERATED { optional, conditional, mandatory }

PrivateExtensionID ::= CHOICE {
    local          INTEGER (0..65535),
    global         OBJECT IDENTIFIER
}

ProcedureCode ::= INTEGER (0..255)

ProcedureID ::= SEQUENCE {
    procedureCode ProcedureCode,
    ddMode        ENUMERATED { tdd, fdd, common }
}

ProtocolExtensionID ::= INTEGER (0..65535)
```



```
ProtocolIE-ID      ::= INTEGER (0..65535)

TransactionID     ::= INTEGER (0..65535)

TriggeringMessage ::= ENUMERATED { initiating-message, successful-outcome, unsuccessful-outcome, outcome }

END
```

9.3.6 Constant Definitions

```
-- *****
--
-- Constant definitions
--
-- *****

RNSAP-Constants -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- Elementary Procedures
--
-- *****

id-commonTransportChannelResourcesInitiationFDD      INTEGER ::= 0
id-commonTransportChannelResourcesInitiationTDD     INTEGER ::= 1
id-commonTransportChannelResourcesRelease           INTEGER ::= 2
id-compressedModeCancellationFDD                   INTEGER ::= 3
id-compressedModeCommitFDD                         INTEGER ::= 4
id-compressedModePrepareFDD                        INTEGER ::= 5
id-downlinkPowerControl                            INTEGER ::= 6
id-downlinkSignallingTransfer                       INTEGER ::= 7
id-errorIndication                                 INTEGER ::= 8
id-measurementFailure                               INTEGER ::= 9
id-measurementInitiation                           INTEGER ::= 10
id-measurementReporting                             INTEGER ::= 11
id-measurementTermination                           INTEGER ::= 12
id-pagingRequest                                   INTEGER ::= 13
id-physicalChannelReconfiguration                   INTEGER ::= 14
id-privateMessage                                  INTEGER ::= 15
id-radioLinkAddition                               INTEGER ::= 16
id-radioLinkDeletion                               INTEGER ::= 17
id-radioLinkFailure                                INTEGER ::= 18
id-radioLinkRestoration                             INTEGER ::= 19
id-radioLinkSetup                                  INTEGER ::= 20
id-srnsRelocationCommit                             INTEGER ::= 21
id-synchronisedRadioLinkReconfigurationCancellation INTEGER ::= 22
id-synchronisedRadioLinkReconfigurationCommit        INTEGER ::= 23
id-synchronisedRadioLinkReconfigurationPrepare       INTEGER ::= 24
```

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```
id-unSynchronisedRadioLinkReconfiguration          INTEGER ::= 25
id-uplinkSignallingTransfer                       INTEGER ::= 26
id-RL-InformationResponseList-RL-ReconfRspFDD    INTEGER ::= 27
id-RL-InformationResponseItem-RL-ReconfRspFDD    INTEGER ::= 28
id-DCH-AddItem-RL-ReconfRspFDD                  INTEGER ::= 29
id-DCH-ModifyItem-RL-ReconfRspFDD                INTEGER ::= 30

-- *****
--
-- Extension constants
--
-- *****

maxPrivateExtensions                             INTEGER ::= 65535
maxProtocolExtensions                             INTEGER ::= 65535
maxProtocolIEs                                   INTEGER ::= 65535

-- *****
--
-- Lists
--
-- *****

maxRateMatching                                 INTEGER ::= 10
maxNrOfTFCs                                     INTEGER ::= 10
maxNrOfTFS                                       INTEGER ::= 10

maxNoOfDL-Codes                                 INTEGER ::= 10
maxNrOfCCTrCHs                                  INTEGER ::= 10
maxNrOfDCHs                                     INTEGER ::= 10
maxNrOfDL-Codes                                 INTEGER ::= 10
maxNrOfDPCHs                                    INTEGER ::= 10
maxNrOfErrors                                    INTEGER ::= 10
maxNrOfFACH-FD-Size                             INTEGER ::= 10
maxNrOfFDD-Neighbours                            INTEGER ::= 10
maxNrOfMACcSDU-Length                           INTEGER ::= 10
maxNrOfTDD-Neighbours                            INTEGER ::= 10
maxNrOfRLs                                       INTEGER ::= 10
maxNrOfSCCPCHs                                   INTEGER ::= 10
maxRNCinURA                                    INTEGER ::= 10
maxTTI-Count                                     INTEGER ::= 10
maxFACHCount                                     INTEGER ::= 10
maxIBSEG                                         INTEGER ::= 16

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

id-AllowedQueuingTime                            INTEGER ::= 0
id-BindingID                                     INTEGER ::= 1
```

id-C-ID	INTEGER ::= 2
id-C-RNTI	INTEGER ::= 3
id-CCTrCH-ID	INTEGER ::= 4
id-CFN	INTEGER ::= 5
id-CN-CS-DomainIdentifier	INTEGER ::= 6
id-CN-PS-DomainIdentifier	INTEGER ::= 7
id-Cause	INTEGER ::= 8
id-CompressedModeMethod	INTEGER ::= 9
id-D-RNTI	INTEGER ::= 10
id-D-RNTI-ReleaseIndication	INTEGER ::= 11
id-DCH-AddItem	INTEGER ::= 12
id-DCH-AddItem-RL-ReconfPrepFDD	INTEGER ::= 13
id-DCH-AddItem-RL-ReconfPrepTDD	INTEGER ::= 14
id-DCH-AddItem-RL-ReconfReadyFDD	INTEGER ::= 15
id-DCH-AddItem-RL-ReconfRqstFDD	INTEGER ::= 16
id-DCH-AddItem-RL-ReconfRqstTDD	INTEGER ::= 17
id-DCH-AddList-RL-ReconfPrepFDD	INTEGER ::= 18
id-DCH-AddList-RL-ReconfPrepTDD	INTEGER ::= 19
id-DCH-AddList-RL-ReconfRqstFDD	INTEGER ::= 20
id-DCH-AddList-RL-ReconfRqstTDD	INTEGER ::= 21
id-DCH-DeleteItem-RL-ReconfPrepFDD	INTEGER ::= 22
id-DCH-DeleteItem-RL-ReconfPrepTDD	INTEGER ::= 23
id-DCH-DeleteItem-RL-ReconfRqstFDD	INTEGER ::= 24
id-DCH-DeleteItem-RL-ReconfRqstTDD	INTEGER ::= 25
id-DCH-DeleteList-RL-ReconfPrepFDD	INTEGER ::= 26
id-DCH-DeleteList-RL-ReconfPrepTDD	INTEGER ::= 27
id-DCH-DeleteList-RL-ReconfRqstFDD	INTEGER ::= 28
id-DCH-DeleteList-RL-ReconfRqstTDD	INTEGER ::= 29
id-DCH-Information-RL-SetupReqFDD	INTEGER ::= 30
id-DCH-InformationItem-RL-SetupReqFDD	INTEGER ::= 31
id-DCH-InformationItem-RL-SetupReqTDD	INTEGER ::= 32
id-DCH-InformationList-RL-SetupReqTDD	INTEGER ::= 33
id-DCH-ModifyItem	INTEGER ::= 34
id-DCH-ModifyItem-RL-ReconfPrepFDD	INTEGER ::= 35
id-DCH-ModifyItem-RL-ReconfPrepTDD	INTEGER ::= 36
id-DCH-ModifyItem-RL-ReconfReadyFDD	INTEGER ::= 37
id-DCH-ModifyItem-RL-ReconfRqstFDD	INTEGER ::= 38
id-DCH-ModifyItem-RL-ReconfRqstTDD	INTEGER ::= 39
id-DCH-ModifyList-RL-ReconfPrepFDD	INTEGER ::= 40
id-DCH-ModifyList-RL-ReconfPrepTDD	INTEGER ::= 41
id-DCH-ModifyList-RL-ReconfRqstFDD	INTEGER ::= 42
id-DCH-ModifyList-RL-ReconfRqstTDD	INTEGER ::= 43
id-DL-CCTrCH-Information-RL-ReconfPrepTDD	INTEGER ::= 44
id-DL-CCTrCH-Information-RL-ReconfRqstTDD	INTEGER ::= 45
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD	INTEGER ::= 46
id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD	INTEGER ::= 47
id-DL-CCTrChInformationItem-RL-SetupReqTDD	INTEGER ::= 48
id-DL-CCTrChInformationList-RL-SetupReqTDD	INTEGER ::= 49
id-DL-CodeInformation-PhyChReconfRqstFDD	INTEGER ::= 50
id-DL-DPCH-Information	INTEGER ::= 51
id-DL-DPCH-Information-RL-SetupReqFDD	INTEGER ::= 52
id-DL-DPCH-InformationList-PhyChReconfRqstTDD	INTEGER ::= 53
id-DL-DPCH-InformationList-RL-ReconfReadyTDD	INTEGER ::= 54

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id-DL-EbNoTarget	INTEGER ::= 55
id-DL-FrameType	INTEGER ::= 56
id-DL-MeanBitRate	INTEGER ::= 57
id-DL-ReferencePowerInformation-DL-PC-Rqst	INTEGER ::= 58
id-DRX-Parameter	INTEGER ::= 59
id-DedicatedMeasurementObjectType-DM-Rprt	INTEGER ::= 60
id-DedicatedMeasurementObjectType-DM-Rqst	INTEGER ::= 61
id-DedicatedMeasurementObjectType-DM-Rspns	INTEGER ::= 62
id-FACH-InfoForOptionalGroupS-CCPCH	INTEGER ::= 63
id-FACH-InfoForOptionals-CCPCH	INTEGER ::= 64
id-FACH-InfoForS-CCPCH-CoupledToPRACH	INTEGER ::= 65
id-GapPositionMode	INTEGER ::= 66
id-L3-Information	INTEGER ::= 67
id-MeasurementCharacteristics	INTEGER ::= 68
id-MeasurementID	INTEGER ::= 69
id-MultipleURAsIndicator	INTEGER ::= 70
id-PD	INTEGER ::= 71
id-PagingArea-PagingRqst	INTEGER ::= 72
id-PowerControlMode	INTEGER ::= 73
id-PowerResumeMode	INTEGER ::= 74
id-ProcedureScope-DL-PC-Rqst	INTEGER ::= 75
id-RANAP-RelocationInformation	INTEGER ::= 76
id-RL-Information-PhyChReconfRqstFDD	INTEGER ::= 77
id-RL-Information-PhyChReconfRqstTDD	INTEGER ::= 78
id-RL-Information-RL-AdditionRqstFDD	INTEGER ::= 79
id-RL-Information-RL-AdditionRqstTDD	INTEGER ::= 80
id-RL-Information-RL-DeletionRqst	INTEGER ::= 81
id-RL-Information-RL-FailureInd	INTEGER ::= 82
id-RL-Information-RL-ReconfPrepFDD	INTEGER ::= 83
id-RL-Information-RL-RestoreInd	INTEGER ::= 84
id-RL-Information-RL-SetupReqFDD	INTEGER ::= 85
id-RL-Information-RL-SetupReqTDD	INTEGER ::= 86
id-RL-InformationItem-DM-Rprt	INTEGER ::= 87
id-RL-InformationItem-DM-Rqst	INTEGER ::= 88
id-RL-InformationItem-DM-Rspns	INTEGER ::= 89
id-RL-InformationItem-RL-SetupReqFDD	INTEGER ::= 90
id-RL-InformationList-RL-AdditionRqstFDD	INTEGER ::= 91
id-RL-InformationList-RL-DeletionRqst	INTEGER ::= 92
id-RL-InformationList-RL-FailureInd	INTEGER ::= 93
id-RL-InformationList-RL-ReconfPrepFDD	INTEGER ::= 94
id-RL-InformationList-RL-RestoreInd	INTEGER ::= 95
id-RL-InformationResponse-RL-AdditionRspTDD	INTEGER ::= 96
id-RL-InformationResponse-RL-ReconfReadyTDD	INTEGER ::= 97
id-RL-InformationResponse-RL-SetupRspTDD	INTEGER ::= 98
id-RL-InformationResponseItem-RL-AdditionRspFDD	INTEGER ::= 99
id-RL-InformationResponseItem-RL-ReconfReadyFDD	INTEGER ::= 100
id-RL-InformationResponseItem-RL-SetupRspFDD	INTEGER ::= 101
id-RL-InformationResponseList-RL-AdditionRspFDD	INTEGER ::= 102
id-RL-InformationResponseList-RL-ReconfReadyFDD	INTEGER ::= 103
id-RL-InformationResponseList-RL-SetupRspFDD	INTEGER ::= 104
id-RL-ReconfigurationFailure-RL-ReconfFail	INTEGER ::= 105
id-RL-ReconfigurationFailureList-RL-ReconfFail	INTEGER ::= 106
id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind	INTEGER ::= 107

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```
id-ReportCharacteristics          INTEGER ::= 108
id-S-RNTI                         INTEGER ::= 109
id-SAI                            INTEGER ::= 110
id-SN                             INTEGER ::= 111
id-SRNC-ID                        INTEGER ::= 112
id-ScramblingCodeChange           INTEGER ::= 113
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD  INTEGER ::= 114
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD    INTEGER ::= 115
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD  INTEGER ::= 116
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD    INTEGER ::= 117
id-TGD                            INTEGER ::= 118
id-TGL                            INTEGER ::= 119
id-TGP1                           INTEGER ::= 120
id-TGP2                           INTEGER ::= 121
id-TransportBearerID              INTEGER ::= 122
id-TransportBearerRequestIndicator  INTEGER ::= 123
id-TransportLayerAddress          INTEGER ::= 124
id-UC-ID                          INTEGER ::= 125
id-UL-CCTrCH-Information-RL-ReconfPrepTDD                 INTEGER ::= 126
id-UL-CCTrCH-Information-RL-ReconfRqstTDD                 INTEGER ::= 127
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD            INTEGER ::= 128
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD            INTEGER ::= 129
id-UL-CCTrChInformationItem-RL-SetupReqTDD               INTEGER ::= 130
id-UL-CCTrChInformationList-RL-SetupReqTDD               INTEGER ::= 131
id-UL-DL-CompressedModeSelection  INTEGER ::= 132
id-UL-DPCH-Information            INTEGER ::= 133
id-UL-DPCH-Information-RL-SetupReqFDD                     INTEGER ::= 134
id-UL-DPCH-InformationList-PhyChReconfRqstTDD            INTEGER ::= 135
id-UL-DPCH-InformationList-RL-ReconfReadyTDD              INTEGER ::= 136
id-UL-DeltaEbNo                  INTEGER ::= 137
id-UL-DeltaEbNoAfter              INTEGER ::= 138
id-UL-EbNoTarget                  INTEGER ::= 139
id-UL-MeanBitRate                 INTEGER ::= 140
id-URA-ID                        INTEGER ::= 141
id-UnsuccessfulRL-InformationResponse                     INTEGER ::= 142
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD  INTEGER ::= 143
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD    INTEGER ::= 144
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD    INTEGER ::= 145
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD  INTEGER ::= 146
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD  INTEGER ::= 147
id-CriticalityDiagnostics         INTEGER ::= 148
```

END

9.3.7 Container Definitions

```
-- *****
--
-- Container definitions
--
-- *****
```

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```
RNSAP-Containers -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    Criticality,
    Presence,
    PrivateExtensionID,
    ProtocolExtensionID,
    ProtocolIE-ID
FROM RNSAP-CommonDataTypes

    maxPrivateExtensions,
    maxProtocolExtensions,
    maxProtocolIEs
FROM RNSAP-Constants;

-- *****
--
-- Class Definition for Protocol IEs
--
-- *****

RNSAP-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
--
-- *****

RNSAP-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
--
-- *****

RNSAP-PROTOCOL-EXTENSION ::= CLASS {
  &id                    ProtocolExtensionID          UNIQUE,
  &criticality           Criticality,
  &Extension
}
WITH SYNTAX {
  ID                    &id
  CRITICALITY           &criticality
  EXTENSION             &Extension
}

-- *****
--
-- Class Definition for Private Extensions
--
-- *****

RNSAP-PRIVATE-EXTENSION ::= CLASS {
  &id                    PrivateExtensionID,
  &criticality           Criticality,
  &Extension
}
WITH SYNTAX {
  ID                    &id
  CRITICALITY           &criticality
  EXTENSION             &Extension
}

-- *****
--
-- Container for Protocol IEs
--
-- *****
```

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```
ProtocolIE-Container {RNSAP-PROTOCOL-IES : IEsSetParam} ::=
  SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Field {RNSAP-PROTOCOL-IES : IEsSetParam} ::= SEQUENCE {
  id          RNSAP-PROTOCOL-IES.&id          ({IEsSetParam}),
  criticality RNSAP-PROTOCOL-IES.&criticality  ({IEsSetParam}@id}),
  value       RNSAP-PROTOCOL-IES.&Value       ({IEsSetParam}@id)}
}

-- *****
--
-- Container for Protocol IE Pairs
--
-- *****

ProtocolIE-ContainerPair {RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
  SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-FieldPair {{IEsSetParam}}

ProtocolIE-FieldPair {RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::= SEQUENCE {
  id          RNSAP-PROTOCOL-IES-PAIR.&id          ({IEsSetParam}),
  firstCriticality RNSAP-PROTOCOL-IES-PAIR.&firstCriticality  ({IEsSetParam}@id}),
  firstValue      RNSAP-PROTOCOL-IES-PAIR.&FirstValue         ({IEsSetParam}@id}),
  secondCriticality RNSAP-PROTOCOL-IES-PAIR.&secondCriticality ({IEsSetParam}@id}),
  secondValue      RNSAP-PROTOCOL-IES-PAIR.&SecondValue       ({IEsSetParam}@id)}
}

-- *****
--
-- Container Lists for Protocol IE Containers
--
-- *****

ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, RNSAP-PROTOCOL-IES : IEsSetParam} ::=
  SEQUENCE (SIZE (lowerBound..upperBound)) OF
    ProtocolIE-Container {{IEsSetParam}}

ProtocolIE-ContainerPairList {INTEGER : lowerBound, INTEGER : upperBound, RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
  SEQUENCE (SIZE (lowerBound..upperBound)) OF
    ProtocolIE-ContainerPair {{IEsSetParam}}

-- *****
--
-- Container for Protocol Extensions
--
-- *****

ProtocolExtensionContainer {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=
  SEQUENCE (SIZE (1..maxProtocolExtensions)) OF
    ProtocolExtensionField {{ExtensionSetParam}}

ProtocolExtensionField {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
```


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```
id RNSAP-PROTOCOL-EXTENSION.&id ({ExtensionSetParam}),
criticality RNSAP-PROTOCOL-EXTENSION.&criticality ({ExtensionSetParam}@id),
extensionValue RNSAP-PROTOCOL-EXTENSION.&Extension ({ExtensionSetParam}@id)
}

-- *****
--
-- Container for Private Extensions
--
-- *****

PrivateExtensionContainer {RNSAP-PRIVATE-EXTENSION : ExtensionSetParam} ::=
SEQUENCE (SIZE (1..maxPrivateExtensions)) OF
PrivateExtensionField {{ExtensionSetParam}}

PrivateExtensionField {RNSAP-PRIVATE-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
id RNSAP-PRIVATE-EXTENSION.&id ({ExtensionSetParam}),
criticality RNSAP-PRIVATE-EXTENSION.&criticality ({ExtensionSetParam}@id),
extensionValue RNSAP-PRIVATE-EXTENSION.&Extension ({ExtensionSetParam}@id)
}

END
```

CHANGE REQUEST				<small>Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.</small>	
25.423		CR 018 R1		Current Version: 3.0.0	
<small>GSM (AA.BB) or 3G (AA.BBB) specification number ↑</small>		<small>↑ CR number as allocated by MCC support team</small>			
For submission to: TSG RAN #7 <small>list expected approval meeting # here ↑</small>		for approval <input checked="" type="checkbox"/> for information <input type="checkbox"/>		strategic <input type="checkbox"/> non-strategic <input type="checkbox"/> <small>(for SMG use only)</small>	

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: RAN-WG3 **Date:** 2000-02-17

Subject: Change of definition of the quality estimate (QE)

Work item:

Category: <small>(only one category shall be marked with an X)</small>	F Correction <input checked="" type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input type="checkbox"/> C Functional modification of feature <input type="checkbox"/> D Editorial modification <input type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input checked="" type="checkbox"/> Release 00 <input type="checkbox"/>
--	--	-----------------	--

Reason for change: In WG1 the definition of Physical channel BER type 1 is proposed to be changed to Transport channel BER. Therefore the handling of the QE has to be updated.

Clauses affected: 8.3.1, 8.3.4, 8.3.7, 9.1.3.1, 9.1.11.1, 9.1.16, 9.2.2.x, 9.3.3, 9.3.4

Other specs	Other 3G core specifications <input checked="" type="checkbox"/>	→ List of CRs: 25.215 3.1.0 CR-XXX, 25.427 3.1.0 CR-005, 25.433 3.0.0 CR-031
affected:	Other GSM core specifications <input type="checkbox"/>	→ List of CRs:
	MS test specifications <input type="checkbox"/>	→ List of CRs:
	BSS test specifications <input type="checkbox"/>	→ List of CRs:
	O&M specifications <input type="checkbox"/>	→ List of CRs:

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

8.3.1 Radio Link Setup

8.3.1.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more radio links.

This procedure shall use the connection-oriented service of the signalling bearer.

8.3.1.2 Successful Operation

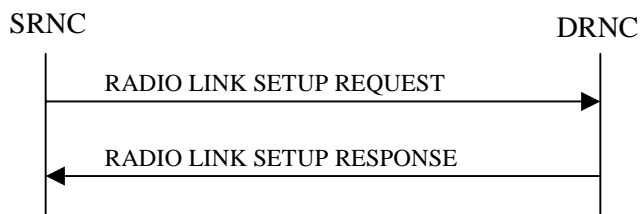


Figure 14: Radio Link Setup procedure: Successful Operation

When the SRNC makes an algorithmic decision to add the first cell or set of cells from a DRNS to the active set of a specific RRC connection, the RADIO LINK SETUP REQUEST message is sent to the corresponding DRNC to request setup of the radio link(s).

The message is also used to establish the connection-oriented service of the signalling bearer in the DRNC. The message includes the S-RNTI associated to the UE, and, if the UE context is already present in the DRNC, the corresponding D-RNTI.

[FDD - The Diversity Control Field indicates for each RL except for the first RL whether the DRNS shall combine the RL with any of the other RLs or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS shall decide for any of the alternatives. When an RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

If the RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

If the *Initial DL TX Power* IE and *UL Eb/No Target* IE [FDD] are present in the message, the DRNS shall use the indicated DL TX Power and UL Eb/No Target [FDD] as initial value.

If the *Primary CPICH Eb/No* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] is present, the DRNC should use them when deciding the Initial DL TX Power.

If the RADIO LINK SETUP REQUEST message includes the *DCH Combination Indicator* IE for a DCH, the DRNS shall treat all DCHs with the same value of this IE as a set of co-ordinated DCHs. The included *RLC Mode* IE of the DCH may be used by the DRNS to optimise the power control.

[FDD - For DCHs with a unique or no "DCH Combination Ind" and the *QE-Selector* IE set to "selected DCH", 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. [25.427]. If the *QE-Selector* is set to "non-selected DCH", the Physical channel BER shall be used for the QE in the UL data frames, ref. [25.427]].

[FDD - For DCHs with the same "DCH Combination Ind" the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected DCH" shall be used for the QE in the UL data frames, ref. [25.427]. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [25.427]. If all DCHs have *QE-Selector* IE set to "non-selected DCH" the Physical channel BER shall be used for the QE, ref. [25.427]].

The *Allocation/Retention Priority* IE defines the priority level that should be used by the DRNS to prioritise the allocation and the retention of the resources used by the DCH. The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise the discard/delay of the data frames of the DCH.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH as the new DCH FP Mode in the Uplink of the user plane for this DCH.

The DRNS shall use the included *ToAWS* IE for a DCH as the new Time of Arrival Window Start Point in the user plane for this DCH.

The DRNS shall use the included *ToAWE* IE for a DCH as the new Time of Arrival Window End Point in the user plane for this DCH.

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

At the reception of the RADIO LINK SETUP REQUEST message, DRNS allocates requested type of channelisation codes and other physical channel resources for each RL and assigns a binding identifier and a transport layer address for each DCH or set of co-ordinated DCHs. This information shall be sent to the SRNS in the message RADIO LINK SETUP RESPONSE when all the RLs have been successfully setup.

If the *Initial DL TX Power* and the *UL Eb/No Target* IEs are not present in the RADIO LINK SETUP REQUEST message, then DRNC shall include the suggested initial UL Eb/No Target and the DL Eb/No Target in the RADIO LINK SETUP RESPONSE message.

In the case of combining one or more RLs the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that the RL is combined with another RL. In this case the Reference RL ID shall be included to indicate with which RL the combination is performed. The Reference RL ID shall be included for all but one of the combined RLs, for which the *Transport Layer Address* IE and the *Binding ID* IE shall be included.

In the case of not combining an RL with another RL, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH of the RL in the RADIO LINK SETUP RESPONSE message.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *Binding Identifier* IE and the *Transport Layer Address* IE shall be included only for one of the DCH in the set of co-ordinated DCHs.

[FDD - Irrespective of SSDT activation, the DRNS 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 DRNS.]

The DRNS shall also provide the SRNC with the UTRAN Cell Identifier (UC-Id) and information of the neighbouring cells to the cell(s) where the radio link(s) are added.

If a neighbouring cell is controlled by another RNC, the DRNC shall report also the node identifications (i.e. RNC, CN domain nodes) of the RNC controlling the neighbouring cell.

If there was no UE context for this UE in the DRNS before the RADIO LINK SETUP REQUEST message was received the DRNC shall include the node identifications of the CN Domain nodes that the RNC is connected to (using LAC and RAC of the current cell), and the D-RNTI in the RADIO LINK SETUP RESPONSE message.

8.3.1.3 Unsuccessful Operation

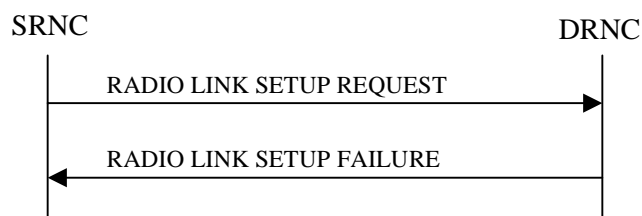


Figure 22: Radio Link Setup procedure: Unsuccessful Operation

In unsuccessful case (i.e. one or more RLs can not be setup) the RADIO LINK SETUP FAILURE message shall be sent to the SRNC, indicating the reason for failure. If some radio links were established successfully, the DRNC shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message.

[FDD - If more than one DCH of a set of co-ordinated DCHs has the *OE-Selector* IE set to “selected DCH” the DRNS shall regard the Radio Link Setup procedure as failed and shall respond with a RADIO LINK SETUP FAILURE message].

Typical cause values are:

Radio Network Layer Causes:

- UL Scrambling Code Already in Use
- DL Radio Resources not Available
- UL Radio Resources not Available
- Unknown C-ID
- Macrodiversity Combining not Possible
- Requested Configuration not Supported
- Cell not Available
- Power Level not Supported

Transport Layer Causes:

- Transport Link Failure

Protocol Causes:

- Transaction not Allowed

Miscellaneous Causes:

- Control Processing Overload
- HW Failure
- Not enough User Plane Processing Resources

8.3.1.4 Abnormal Conditions

If the DRNC receives either an S-RNTI or a D-RNTI which already has RL(s) established the DRNC shall send the RADIO LINK SETUP FAILURE message to the SRNC, indicating the reason for failure.

8.3.4 Synchronised Radio Link Reconfiguration Preparation

8.3.4.1 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 DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

8.3.4.2 Successful Operation

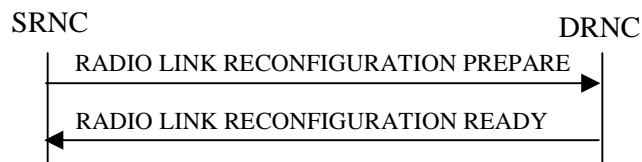


Figure 33: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

The Synchronised Radio Link Reconfiguration Preparation procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION PREPARE message to the DRNC.

Upon reception, the DRNS 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.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

DCH Modification :

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this information when reserving resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Frame Handling Priority* IE for a DCH to be modified, the DRNS 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 DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (UL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (DL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *UL DCH FP Mode* IE for a DCH to be modified, the DRNS shall apply the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes on the *ToAWS* IE for a DCH to be modified, the DRNS shall apply the new ToAWS in the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes on the *ToAWE* IE for a DCH to be modified, the DRNS shall apply the new ToAWE in the user plane for this DCH in the new configuration.

DCH Addition:

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be added to the Radio Link(s), the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *DCH Combination Indicator* IE for a DCH to be added, the DRNS shall

1. treat all DCHs with the same value of this IE as a set of co-ordinated DCHs and
2. include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration

[FDD - For DCHs with a unique or no "DCH Combination Ind" and the *QE-Selector* IE set to "selected DCH", 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. [25.427]. If the *QE-Selector* is set to "non-selected DCH", the Physical channel BER shall be used for the QE in the UL data frames, ref. [25.427]].

[FDD - For DCHs with the same "DCH Combination Ind" the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected DCH" shall be used for the QE in the UL data frames, ref. [25.427]. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [25.427]. If all DCHs have *QE-Selector* IE set to "non-selected DCH" the Physical channel BER shall be used for the QE, ref. [25.427]].

The DRNS should use the *Allocation/Retention Priority* IE received for a DCH to be added when reserving resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

The DRNS 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 DRNS once the new configuration has been activated.

The DRNS may use the included *RLC Mode* IE to optimise the power control.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH to be added as the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWS* IE for a DCH to be added as the new Time of Arrival Window Start Point in the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWE* IE for a DCH to be added as the new Time of Arrival Window End Point in the user plane for this DCH in the new configuration.

DCH Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be deleted from the Radio Link(s), the DRNS shall not include this DCH in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the DRNS shall not include this set of co-ordinated DCHs in the new configuration

Physical Channel Modification:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Uplink Scrambling Code* IE, the DRNS shall apply this Uplink Scrambling Code to the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Uplink Channelisation Code* IEs, the DRNS shall apply the new Uplink Channelisation Code(s) in the new configuration.

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Spreading Factor of Channelisation Code (DL)* IE, for each *Spreading Factor of Channelisation Code (DL)* IE the DRNS shall allocate one new Downlink Channelisation Code per Radio Link and apply the new Downlink Channelisation Code(s) to the new configuration. Each Downlink Channelisation Code allocated for the new configuration shall be included as a *Channelisation Code (DL)* IE in the RADIO LINK RECONFIGURATION READY message when sent to the SRNC.]

The DRNS shall use the *TFCS (UL)* IE when reserving resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the Uplink of [TDD – the CCTrCH of] the new configuration.

The DRNS shall use the *TFCS (DL)* IE when reserving resources for the downlink of the new configuration. The DRNS shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Mean Bit Rate (UL)* IE, the DRNS should use this information when reserving resources for the Uplink of the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Mean Bit Rate (DL)* IE, the DRNS should use this information when reserving resources for the Downlink of the new configuration.

[Editor's note: There is presently no clear definition of the *Mean Bit Rate* IEs. The handling of these IEs is thus regarded as FFS.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes on the *UL DPCCCH Structure* IE, group the DRNS shall apply the new Uplink DPCCCH Structure to the new configuration.]

SSDT Activation/Deactivation:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *SSDT Indication* IE set to "SSDT Active in the UE", the DRNS may activate SSDT using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *SSDT Indication* IE set to "SSDT not Active in the UE", the DRNS shall deactivate SSDT in the new configuration.]

If the requested modifications are allowed by the DRNS, and the DRNS has successfully reserved the required resources for the new configuration of the Radio Link(s) it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message.

The DRNS decides the maximum and minimum Eb/No for the uplink of the Radio Link(s) and shall return this in the *Maximum Uplink Eb/No* IE and *Minimum Uplink Eb/No* IE for each Radio Link in the RADIO LINK RECONFIGURATION READY message.

[TDD – The DRNC shall include all the IEs corresponding to the new physical channel parameters for the DL DPCH and/or the UL DPCH to be reconfigured in the RADIO LINK RECONFIGURATION READY message.]

[Editor's note: Which information in the RL RECONFIGURATION PREPARE message triggers the DRNC to include any of the following *Optional TDD* information?:

- a) DL DPCH Group
- b) UL DPCH Group
- c) TDD Physical Channel Offset, *Repetition Length*, and TFCI Presence IEs as part of the DL DPCH Group
- d) TDD Physical Channel Offset, *Repetition Length*, and TFCI Presence IEs as part of the UL DPCH Group.]

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH to be Added* IE group or the *DCH to be Modified* IE group shall be included only for one of the DCHs in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH to be Added* IE group and the *DCH to be Modified* IE group shall be included only for one of the combined Radio Links.

8.3.4.3 Unsuccessful Operation

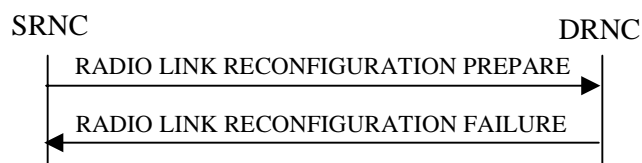


Figure 44: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation

If the DRNS cannot reserve the necessary resources for all the new DCHs of one set of co-ordinated DCHs requested to be added, it shall regard the Synchronised Radio Link Reconfiguration procedure as having failed.

- If the requested Synchronised Radio Link Reconfiguration procedure fails for one or more RLs the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC, indicating the reason for failure.

[FDD - If more than one DCH of a set of co-ordinated DCHs has the *OE-Selector IE* set to “selected DCH” the DRNS shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE message.]

In which cases to include only the *Cause IE* on message level and in which cases the *Cause IE* also shall be included for a specific RL is FFS.

Typical cause values are:

Radio Network Layer Causes:

- UL Scrambling Code Already in Use
- DL Radio Resources not Available
- UL Radio Resources not Available
- Requested Configuration not Supported

Protocol Causes:

- Transaction not Allowed

Miscellaneous Causes:

- Control Processing Overload
- Not enough User Plane Processing Resources

8.3.4.4 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of co-ordinated DCHs is requested to be deleted, the DRNS shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as having failed and the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC.

8.3.7 Unsynchronised Radio Link Reconfiguration

8.3.7.1 General

The Unsynchronised Radio Link Reconfiguration procedure is used to reconfigure Radio Link(s) related to one UE-UTRAN connection within a DRNS.

The procedure is used when there is no need to synchronise the time of the switching from the old to the new radio link configuration in the cells used by the UE-UTRAN connection within the DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

8.3.7.2 Successful Operation

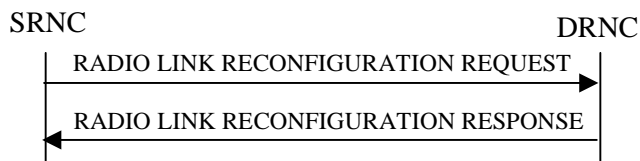


Figure 55: Unsynchronised Radio Link Reconfiguration procedure, Successful Operation

The Unsynchronised Radio Link Reconfiguration procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION REQUEST message to the DRNC.

Upon reception, the DRNS 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.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

DCH Modification:

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this information when reserving resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Frame Handling Priority* IE for a DCH to be modified, the DRNS 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 DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Transport Format Set (UL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Transport Format Set (DL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *UL DCH FP Mode* IE for a DCH to be modified, the DRNS shall apply the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *ToAWS* IE for a DCH to be modified, the DRNS shall apply the new ToAWS in the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *ToAWE* IE for a DCH to be modified, the DRNS shall apply the new ToAWE in the user plane for this DCH in the new configuration.

DCH Addition:

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be added to the Radio Link(s), the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *DCH Combination Indicator* IE for a DCH to be added, the DRNS shall.

1. treat all DCHs with the same value of this IE as a set of co-ordinated DCHs and
 2. include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration
- The DRNS should use the *Allocation/Retention Priority* IE received for a DCH to be added when allocating resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

[FDD - For DCHs with a unique or no "DCH Combination Ind" and the *QE-Selector* IE set to "selected DCH", 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. [25.427]. If the *QE-Selector* is set to "non-selected DCH", the Physical channel BER shall be used for the QE in the UL data frames, ref. [25.427]].

[FDD - For DCHs with the same "DCH Combination Ind" the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected DCH" shall be used for the QE in the UL data frames, ref. [25.427]. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [25.427]. If all DCHs have *QE-Selector* IE set to "non-selected DCH" the Physical channel BER shall be used for the QE, ref. [25.427]].

The DRNS 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 DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *RLC Mode* IE, the DRNS may use this information to optimise the power control.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH to be added as the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWS* IE for a DCH to be added as the new Time of Arrival Window Start Point in the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWE* IE for a DCH to be added as the new Time of Arrival Window End Point in the user plane for 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 DRNS shall not include this DCH in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the DRNS shall not include this set of co-ordinated DCHs in the new configuration

Physical Channel Modification:

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS (UL)* IE, the DRNS shall apply the new TFCS in the Uplink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS (DL)* IE, the DRNS shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Mean Bit Rate (UL)* IE, the DRNS should use this information when reserving resources for the Uplink of the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Mean Bit Rate (DL)* IE, the DRNS should use this information when reserving resources for the Downlink of the new configuration.

[Editor's note: There is presently no clear definition of the *Mean Bit Rate* IEs. The handling of these IEs is thus regarded as FFS.]

If the requested modifications are allowed by the DRNS, the DRNS has successfully allocated the required resources, and changed to the new configuration it shall respond to the SRNC with the RADIO LINK RECONFIGURATION RESPONSE message.

The DRNS decides the maximum and minimum Eb/No for the uplink of the Radio Link(s) and shall return this in the IEs *Maximum Uplink Eb/No* and *Minimum Uplink Eb/No* for each Radio Link in the RADIO LINK RECONFIGURATION RESPONSE message.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH to be Added* IE group or the *DCH to be Modified* IE group shall be included only for one of the DCH in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH to be Added* IE group and the *DCH to be Modified* IE group shall be included only for one of the combined Radio Links.

8.3.7.3 Unsuccessful Operation

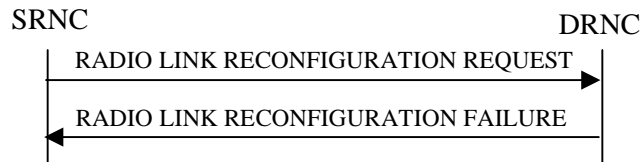


Figure 66: Unsyncronised Radio Link Reconfiguration procedure, Unsuccessful Operation

[FDD - If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected DCH" the DRNS shall regard the Unsyncronised Radio Link Reconfiguration procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE message.]

If the DRNS cannot allocate the necessary resources for all the new DCHs of a set of co-ordinated DCHs requested to be added it shall regard the Synchronised Radio Link Reconfiguration procedure as having failed.

If the requested Unsyncronised Radio Link Reconfiguration procedure fails for one or more Radio Link(s) the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC, indicating the reason for failure.

Typical cause values are:

Radio Network Layer Causes:

- UL Scrambling Code Already in Use
- DL Radio Resources not Available
- UL Radio Resources not Available
- Requested Configuration not Supported

Protocol Causes:

- Transaction not Allowed

Miscellaneous Causes:

- Control Processing Overload
- Not enough User Plane Processing Resources

9.1.3 RADIO LINK SETUP REQUEST

9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
S-RNTI	M			
D-RNTI	O			
Allowed Queuing time	O			
UL DPCH Information		1		
UL Scrambling Code	M			
Min UL Channelisation Code Length	M			
Max Number of UL DPCHs	C – CodeLen			
Puncture Limit	M			For the UL.
UL Transport Format Combination Set	M			
UL DPCCH Slot Format	M			
UL Eb/No Target	O			
Diversity mode	M			
D Field Length	C-FB			
SSDT Cell ID Length	O			
S Field Length	O			
Mean Bit Rate	O			For the UL.
DL DPCH Information		1		
Transport Format Combination Set	M			
DL DPCH Slot Format	M			
TFCI Signalling Mode	M			
TFCI Presence	C- SlotFormat			
Multiplexing Position	M			
Power Offset Information		1		
PO1	M		Power Offset	Power offset for the TFCI bits.
PO2	M		Power Offset	Power offset for the TPC bits.
PO3	M		Power Offset	Power offset for the pilot bits.
TPC Downlink Step Size	M			
Mean Bit Rate	O			For the DL.
DCH Information		1..<maxnoofDCHs >		
DCH ID	M			
DCH Combination Ind	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
BLER	M			For the UL.
BLER	M			For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
QE-Selector	M			
ToAWS	M			
ToAWE	M			
RL Information		1...<maxnoofRLs >		

RL ID	M			
C-ID	M			
Frame Offset	M			
Chip Offset	M			
Propagation Delay	O			
Diversity Control Field	C – NotFirstRL			
Initial DL TX Power	O		DL Power	
Primary CPICH Ec/Io	O			
SSDT Cell ID	O			

Condition	Explanation
CodeLen	This IE is present only if "Min UL Channelisation Code len" equals to 4
FB	This IE is present only if Feed Back mode diversity is activated.
SlotFormat	This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16.
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information .

Range bound	Explanation
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofRLs	Maximum no. of RLs for one UE.

9.1.11 RADIO LINK RECONFIGURATION PREPARE

9.1.11.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
Allowed Queuing Time	O			
UL DPCH Information		0..1		
UL Scrambling code	O			
Min UL Channelisation Code Length	O			
Max Number of UL DPDCHs	C – CodeLen			
Puncture Limit	O			For the UL.
TFCS	O			TFCS for the UL.
UL DPCH Slot Format	O			
SSDT Cell Identity Length	O			
S-Field Length	O			
Mean Bit Rate	O			For the UL.
DL DPCH Information		0..1		
TFCS	O			TFCS for the DL.
DL DPCH Slot Format	O			
TFCI Signalling Mode	O			
TFCI Presence	C- SlotFormat			
MultiplexingPosition	O			
Mean Bit Rate	O			For the DL.
DCHs to Modify		0..<maxnoofDCHs>		
DCH ID	M			
Transport Format Set	O			For the UL.
Transport Format Set	O			For the DL.
Allocation/Retention Priority	O			
Frame Handling Priority	O			
UL FP Mode	O			
ToAWS	O			
ToAWE	O			
DCHs to Add		0..<maxnoofDCHs>		
DCH ID	M			
DCH Combination Indicator	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
BLER	M			For the UL.
BLER	M			For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
<u>QE-Selector</u>	<u>M</u>			
ToAWS	M			
ToAWE	M			
DCHs to Delete		0..<maxnoofDCHs>		
DCH ID	M			
RL Information		0..<maxnoofRLs>		
RL ID	M			
SSDT Indication	O			

SSDT Cell Identity	C - SSDTIndON			
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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 values 12 to 16.

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofRLs	Maximum number of RLs for a UE.

9.1.16 RADIO LINK RECONFIGURATION REQUEST

9.1.16.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
Allowed Queuing Time	O			
UL DPCH Information		<i>0..1</i>		
TFCS	O			TFCS for the UL.
Mean Bit Rate	O			
DL DPCH Information		<i>0..1</i>		
TFCS	O			TFCS for the DL.
TFCI Signalling Mode	O			
Mean Bit Rate	O			
DCHs to Modify		<i>0..<maxnoofDCHs ></i>		
DCH ID	M			
Transport Format Set	O			For the UL.
Transport Format Set	O			For the DL.
Allocation/Retention Priority	O			
Frame Handling Priority	O			
UL FP Mode	O			
ToAWS	O			
ToAWE	O			
DCHs to add		<i>0..<maxnoofDCHs ></i>		
DCH ID	M			
DCH Combination Ind	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP mode	M			
<u>QE-Selector</u>	<u>M</u>			
ToAWS	M			
ToAWE	M			
DCHs to Delete		<i>0..<maxnoofDCHs ></i>		
DCH ID	M			

Range Bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.

9.2.2.x QE-Selector

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

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

9.3.3 PDU Definitions

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-- *****
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-- PDU definitions for RNSAP.
--
-- *****

RNSAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    AllocationRetentionPriority,
    AllowedQueuingTime,
    BLER,
    BindingID,
    BurstType,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CPICH-EcIo,
    CPICH-Power,
    Cause,
    CellParameterID,
    ChipOffset,
    CompressedModeMethod,
    CriticalityDiagnostics,
    D-FieldLength,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-CombinationInd,
    DCH-ID,
    DL-ChannelisationCode,
    DL-DPCCH-SlotFormat,
    DL-DPCH-SlotNumber,
    DL-EbNo,
    DL-EbNoTarget,
    DL-FrameType,
    DL-Power,
    DL-ScramblingCode,
    DPCH-ID,
    DRX-Parameter,

```

DedicatedMeasurementValue,
 DiversityControlField,
 DiversityMode,
 FACH-DataFrameSize,
 FACH-InitialWindowSize,
 FACH-PriorityIndicator,
 FDD-DL-ChannelisationCodeNumber,
 FDD-S-CCPCH-Offset,
 FrameHandlingPriority,
 FrameOffset,
 GapPeriod,
 GapPositionMode,
 L3-Information,
 MAC-c-SDU-Length,
 MaxNrOfUL-DPCHs,
 MeanBitRate,
 MeasurementCharacteristics,
 MeasurementID,
 MidambleShift,
 MinUL-ChannelisationCodeLength,
 MultipleURAsIndicator,
 MultiplexingPosition,
 Offset,
 PD,
 PSCH-PCCPCH-TimeSlot,
 PSCH-TimeSlot,
 PayloadCRC-PresenceIndicator,
 PilotBitsUsedIndicator,
 PowerControlMode,
 PowerOffset,
 PowerResumeMode,
 PrimaryCCPCH-RSCP,
 PrimaryCPICH-EcNo,
 PrimaryCPICH-Power,
 PrimaryScramblingCode,
 PropagationDelay,
 PunctureLimit,
QE-Selector,
 RANAP-RelocationInformation,
 RL-ID,
 RLC-Mode,
 RNC-ID,
 RepetitionLength,
 RepetitionPeriod,
 ReportCharacteristics,
 S-FieldLength,
 S-RNTI,
 SAI,
 SN,
 SRNC-ID,
 SSST-CellID,
 SSST-CellID-Length,
 SSST-Indication,
 SSST-SupportIndicator,
 ScaledUL-InterferenceLevel,

```

ScramblingCode,
ScramblingCodeChange,
SecondaryCCPCH-SlotFormat,
SyncCase,
TDD-ChannelisationCode,
TDD-PhysicalChannelOffset,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TGD,
TGL,
TPC-StepSize,
TimeSlot,
ToAWE,
ToAWS,
TransportBearerID,
TransportBearerRequestIndicator,
TransportFormatCombinationSet,
TransportFormatSet,
TransportLayerAddress,
UARFCN,
UC-ID,
UL-DL-CompressedModeSelection,
UL-DPCCH-SlotFormat,
UL-EbNo,
UL-EbNoTarget,
UL-FP-Mode,
UL-ScramblingCode,
URA-ID
FROM RNSAP-IEs

PrivateExtensionContainer{},
ProtocolExtensionContainer{},
ProtocolIE-ContainerList{},
ProtocolIE-ContainerPair{},
ProtocolIE-ContainerPairList{},
ProtocolIE-Container{},
RNSAP-PRIVATE-EXTENSION,
RNSAP-PROTOCOL-EXTENSION,
RNSAP-PROTOCOL-IES,
RNSAP-PROTOCOL-IES-PAIR
FROM RNSAP-Containers

maxNoOfDL-Codes,
maxNrOfCCTrCHs,
maxNrOfDCHs,
maxNrOfDL-Codes,
maxNrOfDPCHs,
maxNrOfFACH-FD-Size,
maxNrOfFDD-Neighbours,
maxNrOfMACcSDU-Length,
maxNrOfTDD-Neighbours,
maxNrOfRLs,
maxNrOfSCCPCHs,
maxRNCinURA,

```

id-AllowedQueuingTime,
 id-BindingID,
 id-C-ID,
 id-C-RNTI,
 id-CCTrCH-ID,
 id-CFN,
 id-CN-CS-DomainIdentifier,
 id-CN-PS-DomainIdentifier,
 id-Cause,
 id-CompressedModeMethod,
 id-CriticalityDiagnostics,
 id-D-RNTI,
 id-D-RNTI-ReleaseIndication,
 id-DCH-AddItem,
 id-DCH-AddItem-RL-ReconfPrepFDD,
 id-DCH-AddItem-RL-ReconfPrepTDD,
 id-DCH-AddItem-RL-ReconfReadyFDD,
 id-DCH-AddItem-RL-ReconfRqstFDD,
 id-DCH-AddItem-RL-ReconfRqstTDD,
 id-DCH-AddList-RL-ReconfPrepFDD,
 id-DCH-AddList-RL-ReconfPrepTDD,
 id-DCH-AddList-RL-ReconfRqstFDD,
 id-DCH-AddList-RL-ReconfRqstTDD,
 id-DCH-DeleteItem-RL-ReconfPrepFDD,
 id-DCH-DeleteItem-RL-ReconfPrepTDD,
 id-DCH-DeleteItem-RL-ReconfRqstFDD,
 id-DCH-DeleteItem-RL-ReconfRqstTDD,
 id-DCH-DeleteList-RL-ReconfPrepFDD,
 id-DCH-DeleteList-RL-ReconfPrepTDD,
 id-DCH-DeleteList-RL-ReconfRqstFDD,
 id-DCH-DeleteList-RL-ReconfRqstTDD,
 id-DCH-Information-RL-SetupReqFDD,
 id-DCH-InformationItem-RL-SetupReqFDD,
 id-DCH-InformationItem-RL-SetupReqTDD,
 id-DCH-InformationList-RL-SetupReqTDD,
 id-DCH-ModifyItem,
 id-DCH-ModifyItem-RL-ReconfPrepFDD,
 id-DCH-ModifyItem-RL-ReconfPrepTDD,
 id-DCH-ModifyItem-RL-ReconfReadyFDD,
 id-DCH-ModifyItem-RL-ReconfRqstFDD,
 id-DCH-ModifyItem-RL-ReconfRqstTDD,
 id-DCH-ModifyList-RL-ReconfPrepFDD,
 id-DCH-ModifyList-RL-ReconfPrepTDD,
 id-DCH-ModifyList-RL-ReconfRqstFDD,
 id-DCH-ModifyList-RL-ReconfRqstTDD,
 id-DL-CCTrCH-Information-RL-ReconfPrepTDD,
 id-DL-CCTrCH-Information-RL-ReconfRqstTDD,
 id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD,
 id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD,
 id-DL-CCTrChInformationItem-RL-SetupReqTDD,
 id-DL-CCTrChInformationList-RL-SetupReqTDD,
 id-DL-CodeInformation-PhyChReconfRqstFDD,
 id-DL-DPCH-Information,
 id-DL-DPCH-Information-RL-SetupReqFDD,

id-DL-DPCH-InformationList-PhyChReconfRqstTDD,
 id-DL-DPCH-InformationList-RL-ReconfReadyTDD,
 id-DL-EbNoTarget,
 id-DL-FrameType,
 id-DL-MeanBitRate,
 id-DL-ReferencePowerInformation-DL-PC-Rqst,
 id-DRX-Parameter,
 id-DedicatedMeasurementObjectType-DM-Rprt,
 id-DedicatedMeasurementObjectType-DM-Rqst,
 id-DedicatedMeasurementObjectType-DM-Rspns,
 id-FACH-InfoForOptionalGroupS-CCPCH,
 id-FACH-InfoForOptionals-CCPCH,
 id-FACH-InfoForS-CCPCH-CoupledToPRACH,
 id-GapPositionMode,
 id-L3-Information,
 id-MeasurementCharacteristics,
 id-MeasurementID,
 id-MultipleURAsIndicator,
 id-PD,
 id-PagingArea-PagingRqst,
 id-PowerControlMode,
 id-PowerResumeMode,
 id-ProcedureScope-DL-PC-Rqst,
 id-RANAP-RelocationInformation,
 id-RL-Information-PhyChReconfRqstFDD,
 id-RL-Information-PhyChReconfRqstTDD,
 id-RL-Information-RL-AdditionRqstFDD,
 id-RL-Information-RL-AdditionRqstTDD,
 id-RL-Information-RL-DeletionRqst,
 id-RL-Information-RL-FailureInd,
 id-RL-Information-RL-ReconfPrepFDD,
 id-RL-Information-RL-RestoreInd,
 id-RL-Information-RL-SetupReqFDD,
 id-RL-Information-RL-SetupReqTDD,
 id-RL-InformationItem-DM-Rprt,
 id-RL-InformationItem-DM-Rqst,
 id-RL-InformationItem-DM-Rspns,
 id-RL-InformationItem-RL-SetupReqFDD,
 id-RL-InformationList-RL-AdditionRqstFDD,
 id-RL-InformationList-RL-DeletionRqst,
 id-RL-InformationList-RL-FailureInd,
 id-RL-InformationList-RL-ReconfPrepFDD,
 id-RL-InformationList-RL-RestoreInd,
 id-RL-InformationResponse-RL-AdditionRspTDD,
 id-RL-InformationResponse-RL-ReconfReadyTDD,
 id-RL-InformationResponse-RL-SetupRspTDD,
 id-RL-InformationResponseItem-RL-AdditionRspFDD,
 id-RL-InformationResponseItem-RL-ReconfReadyFDD,
 id-RL-InformationResponseItem-RL-SetupRspFDD,
 id-RL-InformationResponseList-RL-AdditionRspFDD,
 id-RL-InformationResponseList-RL-ReconfReadyFDD,
 id-RL-InformationResponseList-RL-SetupRspFDD,
 id-RL-ReconfigurationFailure-RL-ReconfFail,
 id-RL-ReconfigurationFailureList-RL-ReconfFail,
 id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind,

```

id-ReportCharacteristics,
id-S-RNTI,
id-SAI,
id-SN,
id-SRNC-ID,
id-ScramblingCodeChange,
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
id-TGD,
id-TGL,
id-TGP1,
id-TGP2,
id-TransportBearerID,
id-TransportBearerRequestIndicator,
id-TransportLayerAddress,
id-UC-ID,
id-UL-CCTrCH-Information-RL-ReconfPrepTDD,
id-UL-CCTrCH-Information-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD,
id-UL-CCTrChInformationItem-RL-SetupReqTDD,
id-UL-CCTrChInformationList-RL-SetupReqTDD,
id-UL-DL-CompressedModeSelection,
id-UL-DPCH-Information,
id-UL-DPCH-Information-RL-SetupReqFDD,
id-UL-DPCH-InformationList-PhyChReconfRqstTDD,
id-UL-DPCH-InformationList-RL-ReconfReadyTDD,
id-UL-DeltaEbNo,
id-UL-DeltaEbNoAfter,
id-UL-EbNoTarget,
id-UL-MeanBitRate,
id-URA-ID,
id-UnsuccessfulRL-InformationResponse,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
FROM RNSAP-Constants;

-- *****
--
-- Common Container List
--
-- *****

DCH-IE-ContainerList      { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfDCHs,      { IEsSetParam } }
RL-IE-ContainerList      { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfRLs,      { IEsSetParam } }
CCTrCH-IE-ContainerList  { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfCCTrCHs, { IEsSetParam } }
DL-Code-IE-ContainerList { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfDL-Codes, { IEsSetParam } }

-- *****
--

```



```

-- RADIO LINK SETUP REQUEST FDD
--
-- *****

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

RadioLinkSetupRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI                CRITICALITY ignore TYPE S-RNTI                PRESENCE mandatory } |
    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE optional   } |
    { ID id-AllowedQueuingTime    CRITICALITY ignore TYPE AllowedQueuingTime    PRESENCE optional   } |
    { ID id-UL-DPCH-Information-RL-SetupReqFDD CRITICALITY ignore TYPE UL-DPCH-Information-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-DL-DPCH-Information-RL-SetupReqFDD CRITICALITY ignore TYPE DL-DPCH-Information-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-DCH-Information-RL-SetupReqFDD    CRITICALITY ignore TYPE DCH-InformationList-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-RL-Information-RL-SetupReqFDD     CRITICALITY ignore TYPE RL-InformationList-RL-SetupReqFDD PRESENCE mandatory },
    ...
}

UL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    ul-ScramblingCode                UL-ScramblingCode,
    minUL-ChannelisationCodeLength    MinUL-ChannelisationCodeLength,
    maxNrOfUL-DPCHs                  MaxNrOfUL-DPCHs            OPTIONAL
    -- This IE is present only if minUL-ChannelisationCodeLength equals to 4 -- ,
    ul-PunctureLimit                  PunctureLimit,
    ul-TransportFormatCombinationSet  TransportFormatCombinationSet,
    ul-DPCCH-SlotFormat                UL-DPCCH-SlotFormat,
    ul-EbNoTarget                      UL-EbNoTarget            OPTIONAL,
    diversityMode                      DiversityMode,
    d-FieldLength                      D-FieldLength            OPTIONAL
    -- This IE is present only if Feed Back mode diversity is activated -- ,
    sSDT-CellIdLength                 SSDT-CellID-Length      OPTIONAL,
    s-FieldLength                      S-FieldLength            OPTIONAL,
    ul-meanBitRate                      MeanBitRate              OPTIONAL,
    iE-Extensions                      ProtocolExtensionContainer { {UL-DPCH-Information-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    transportFormatCombinationSet      TransportFormatCombinationSet,
    dl-DPCH-SlotNumber                 DL-DPCH-SlotNumber,
    tFCI-SignallingMode                 TFCI-SignallingMode,
    tFCI-Presence                       TFCI-Presence            OPTIONAL
    -- This IE is present if Slot Format is from 12 to 16 -- ,
    multiplexingPosition                MultiplexingPosition,
    powerOffsetInformation               SEQUENCE {
        po1-ForTFCI-Bits                PowerOffset,
        po2-ForTPC-Bits                  PowerOffset,
        po3-ForPilotBits                  PowerOffset,
    }
}

```

```

    },
    dl-TPC-StepSize          TPC-StepSize,
    meanBitRate              MeanBitRate      OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {DL-DPCH-Information-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationList-RL-SetupReqFDD ::= DCH-IE-ContainerList { {DCH-InformationItemIEs-RL-SetupReqFDD} }

DCH-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationItem-RL-SetupReqFDD CRITICALITY ignore TYPE DCH-InformationItem-RL-SetupReqFDD PRESENCE mandatory },
    ...
}

DCH-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
    dCH-ID                  DCH-ID,
    dCH-CombinationInd      DCH-CombinationInd      OPTIONAL,
    rLC-Mode                RLC-Mode,
    ul-transportFormatSet   TransportFormatSet,
    dl-transportFormatSet   TransportFormatSet,
    ul-BLER                 BLER,
    dl-BLER                 BLER,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority   FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode              UL-FP-Mode,
    qE-Selector             QE-Selector,
    toAWS                   ToAWS,
    toAWE                   ToAWE,
    iE-Extensions            ProtocolExtensionContainer { {DCH-InformationItem-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationItem-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-SetupReqFDD ::= RL-IE-ContainerList { {RL-InformationItemIEs-RL-SetupReqFDD} }

RL-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-SetupReqFDD CRITICALITY ignore TYPE RL-InformationItem-RL-SetupReqFDD PRESENCE mandatory },
    ...
}

RL-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
    rL-ID                  RL-ID,
    uC-ID                  C-ID,
    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-InformationList-RL-SetupReqFDD --,
dl-InitialTX-Power            DL-Power                        OPTIONAL
-- Initial DL transmission power --,
cPICH-EcIo                    CPICH-EcIo                OPTIONAL,
sSDT-CellID                   SSDT-CellID            OPTIONAL,
iE-Extensions                 ProtocolExtensionContainer { {RL-InformationItem-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
...
}

RL-InformationItem-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkSetupRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

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

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

RadioLinkSetupRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE mandatory } |
  { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional } |
  { ID id-AllowedQueuingTime CRITICALITY ignore TYPE AllowedQueuingTime PRESENCE optional } |
  { ID id-UL-MeanBitRate   CRITICALITY ignore TYPE MeanBitRate     PRESENCE optional } |
  { ID id-DL-MeanBitRate   CRITICALITY ignore TYPE MeanBitRate     PRESENCE optional } |
  { ID id-UL-CCTrChInformationList-RL-SetupReqTDD CRITICALITY ignore TYPE UL-CCTrChInformationList-RL-SetupReqTDD PRESENCE mandatory } |
  { ID id-DL-CCTrChInformationList-RL-SetupReqTDD CRITICALITY ignore TYPE DL-CCTrChInformationList-RL-SetupReqTDD PRESENCE mandatory } |
  { ID id-DCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE DCH-InformationList-RL-SetupReqTDD PRESENCE mandatory } |
  { ID id-RL-Information-RL-SetupReqTDD CRITICALITY ignore TYPE RL-Information-RL-SetupReqTDD PRESENCE mandatory },
  ...
}

UL-CCTrChInformationList-RL-SetupReqTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrChInformationItemIEs-RL-SetupReqTDD} }

UL-CCTrChInformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrChInformationItem-RL-SetupReqTDD CRITICALITY ignore TYPE UL-CCTrChInformationItem-RL-SetupReqTDD PRESENCE mandatory },
  ...
}

UL-CCTrChInformationItem-RL-SetupReqTDD ::= SEQUENCE {
  cCtRCH-ID          CCTrCH-ID,
  ul-TFCS            TransportFormatCombinationSet,
  tFCI-Coding        TFCI-Coding,
  ul-PunctureLimit   PunctureLimit,

```

```

    iE-Extensions          ProtocolExtensionContainer { {UL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}
UL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-CCTrChInformationList-RL-SetupReqTDD          ::= CCTrCH-IE-ContainerList { {DL-CCTrChInformationItemIEs-RL-SetupReqTDD} }
DL-CCTrChInformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrChInformationItem-RL-SetupReqTDD CRITICALITY ignore TYPE DL-CCTrChInformationItem-RL-SetupReqTDD PRESENCE mandatory },
    ...
}
DL-CCTrChInformationItem-RL-SetupReqTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    dl-TFCS            TransportFormatCombinationSet,
    tFCI-Coding        TFCI-Coding,
    dl-PunctureLimit   PunctureLimit,
    iE-Extensions      ProtocolExtensionContainer { {DL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}
DL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
DCH-InformationList-RL-SetupReqTDD          ::= DCH-IE-ContainerList { {DCH-InformationItemIEs-RL-SetupReqTDD} }
DCH-InformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationItem-RL-SetupReqTDD CRITICALITY ignore TYPE DCH-InformationItem-RL-SetupReqTDD PRESENCE mandatory },
    ...
}
DCH-InformationItem-RL-SetupReqTDD ::= SEQUENCE {
    dCH-ID          DCH-ID,
    ul-cCTrCH-ID    CCTrCH-ID, -- UL CCTrCH in which the DCH is mapped
    dl-cCTrCH-ID    CCTrCH-ID, -- DL CCTrCH in which the DCH is mapped
    dCH-CombinationInd DCH-CombinationInd OPTIONAL,
    rLC-Mode        RLC-Mode,
    ul-transportFormatSet TransportFormatSet,
    dl-transportFormatSet TransportFormatSet,
    ul-BLER          BLER,
    dl-BLER          BLER,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode       UL-FP-Mode,
    qE-Selector      QE-Selector,
    toAWS            ToAWS,
    toAWE            ToAWE,
    iE-Extensions      ProtocolExtensionContainer { {DCH-InformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

DCH-InformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-SetupReqTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    c-ID                 C-ID,
    frameOffset          FrameOffset,
    primaryCCPCH-RSCP    PrimaryCCPCH-RSCP    OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

.
.
.
Several Messages Skipped
.
.
.

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE FDD
--
-- *****

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

RadioLinkReconfigurationPrepareFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY ignore TYPE AllowedQueuingTime          PRESENCE mandatory } |
    { ID id-UL-DPCH-Information          CRITICALITY ignore TYPE UL-DPCH-Information          PRESENCE optional } |
    { ID id-DL-DPCH-Information          CRITICALITY ignore TYPE DL-DPCH-Information          PRESENCE optional } |
    { ID id-DCH-ModifyList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-ModifyList-RL-ReconfPrepFDD PRESENCE optional } |
    { ID id-DCH-AddList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-AddList-RL-ReconfPrepFDD PRESENCE optional } |
    { ID id-DCH-DeleteList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-DeleteList-RL-ReconfPrepFDD PRESENCE optional } |
    { ID id-RL-InformationList-RL-ReconfPrepFDD CRITICALITY ignore TYPE RL-InformationList-RL-ReconfPrepFDD PRESENCE mandatory } },
    ...
}

UL-DPCH-Information ::= SEQUENCE {

```

```

ul-ScramblingCode          UL-ScramblingCode          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                      TransportFormatCombinationSet  OPTIONAL,
ul-DPCCH-SlotFormat        UL-DPCCH-SlotFormat        OPTIONAL,
sSDT-CellIDLength          SSDT-CellID-Length          OPTIONAL,
s-FieldLength              S-FieldLength              OPTIONAL,
meanBitRate                MeanBitRate                OPTIONAL,
iE-Extensions              ProtocolExtensionContainer { {UL-DPCH-Information-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DL-DPCH-Information ::= SEQUENCE {
tFCS                      TransportFormatCombinationSet  OPTIONAL,
dl-DPCCH-SlotFormat        DL-DPCCH-SlotFormat        OPTIONAL,
tFCI-SignallingMode        TFCI-SignallingMode        OPTIONAL,
tFCI-Presence              TFCI-Presence              OPTIONAL
-- This IE is present if Slot Format is from 12 to 16 --,
multiplexingPosition        MultiplexingPosition        OPTIONAL,
meanBitRate                MeanBitRate                OPTIONAL,
iE-Extensions              ProtocolExtensionContainer { {DL-DPCH-Information-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-ModifyList-RL-ReconfPrepFDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfPrepFDD-IEs} }

DCH-Modify-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-ModifyItem-RL-ReconfPrepFDD  CRITICALITY ignore  TYPE DCH-ModifyItem-RL-ReconfPrepFDD  PRESENCE mandatory  },
...
}

DCH-ModifyItem-RL-ReconfPrepFDD ::= SEQUENCE {
dCH-ID                    DCH-ID,
ul-TransportformatSet      TransportFormatSet      OPTIONAL,
dl-TransportformatSet      TransportFormatSet      OPTIONAL,
allocationRetentionPriority AllocationRetentionPriority  OPTIONAL,
frameHandlingPriority       FrameHandlingPriority    OPTIONAL,
ul-FP-Mode                 UL-FP-Mode              OPTIONAL,
toAWS                      ToAWS                  OPTIONAL,
toAWE                      ToAWE                  OPTIONAL,
iE-Extensions              ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
...
}

DCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
DCH-AddList-RL-ReconfPrepFDD ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfPrepFDD-IEs} }

DCH-Add-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-AddItem-RL-ReconfPrepFDD      CRITICALITY ignore  TYPE DCH-AddItem-RL-ReconfPrepFDD      PRESENCE mandatory },
  ...
}

DCH-AddItem-RL-ReconfPrepFDD ::= SEQUENCE {
  dCH-ID          DCH-ID,
  rLC-Mode        RLC-Mode,
  dCH-CombinationInd  DCH-CombinationInd      OPTIONAL,
  ul-TransportformatSet  TransportFormatSet,
  dl-TransportformatSet  TransportFormatSet,
  ul-BLER          BLER,
  dl-BLER          BLER,
  allocationRetentionPriority  AllocationRetentionPriority,
  frameHandlingPriority  FrameHandlingPriority,
  payloadCRC-PresenceIndicator  PayloadCRC-PresenceIndicator,
  ul-FP-Mode        UL-FP-Mode,
  qE-Selector      QE-Selector,
  toAWS            ToAWS,
  toAWE            ToAWE,
  iE-Extensions    ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-AddItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-DeleteList-RL-ReconfPrepFDD ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfPrepFDD-IEs} }

DCH-Delete-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-DeleteItem-RL-ReconfPrepFDD    CRITICALITY ignore  TYPE DCH-DeleteItem-RL-ReconfPrepFDD    PRESENCE mandatory },
  ...
}

DCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
  dCH-ID          DCH-ID,
  iE-Extensions    ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-InformationList-RL-ReconfPrepFDD ::= RL-IE-ContainerList { {RL-Information-RL-ReconfPrepFDD-IEs} }

RL-Information-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-ReconfPrepFDD    CRITICALITY ignore  TYPE RL-Information-RL-ReconfPrepFDD    PRESENCE mandatory },
  ...
}

```

```

}

RL-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    rL-ID                               RL-ID,
    sSDT-Indication                     SSDT-Indication    OPTIONAL,
    sSDT-CellIdentity                   SSDT-CellID      OPTIONAL
    -- The IE may be present if the sSDT-Indication is set to 'sSDT-active-in-the-UE' --,
    iE-Extensions                       ProtocolExtensionContainer { {RL-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationPrepareFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- *****

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

RadioLinkReconfigurationPrepareTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime           CRITICALITY ignore TYPE AllowedQueuingTime           PRESENCE optional } |
    { ID id-UL-MeanBitRate                CRITICALITY ignore TYPE MeanBitRate                PRESENCE optional } |
    { ID id-DL-MeanBitRate                CRITICALITY ignore TYPE MeanBitRate                PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD
      CRITICALITY ignore TYPE UL-CCTrCH-InformationList-RL-ReconfPrepTDD PRESENCE mandatory } |
    { ID id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD
      CRITICALITY ignore TYPE DL-CCTrCH-InformationList-RL-ReconfPrepTDD PRESENCE mandatory } |
    { ID id-DCH-ModifyList-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-ModifyList-RL-ReconfPrepTDD PRESENCE mandatory } |
    { ID id-DCH-AddList-RL-ReconfPrepTDD   CRITICALITY ignore TYPE DCH-AddList-RL-ReconfPrepTDD PRESENCE mandatory } |
    { ID id-DCH-DeleteList-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-DeleteList-RL-ReconfPrepTDD PRESENCE mandatory } ,
    ...
}

UL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrCH-Information-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-Information-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-Information-RL-ReconfPrepTDD CRITICALITY ignore TYPE UL-CCTrCH-Information-RL-ReconfPrepTDDPRESENCE mandatory } ,
    ...
}

UL-CCTrCH-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                           CCTrCH-ID,
    tFCS                                 TransportFormatCombinationSet
    ...
}

```



```

    tFCI-Coding                TFCI-Coding                OPTIONAL,
    punctureLimit              PunctureLimit              OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {UL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrCH-Information-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-Information-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-Information-RL-ReconfPrepTDD CRITICALITY ignore TYPE DL-CCTrCH-Information-RL-ReconfPrepTDDPRESENCE mandatory },
    ...
}

DL-CCTrCH-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    cCCTrCH-ID                CCTrCH-ID,
    tFCS                      TransportFormatCombinationSet OPTIONAL,
    tFCI-Coding                TFCI-Coding                OPTIONAL,
    punctureLimit              PunctureLimit              OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {DL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfPrepTDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfPrepTDD-IEs} }

DCH-Modify-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyItem-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-ReconfPrepTDD PRESENCE mandatory },
    ...
}

DCH-ModifyItem-RL-ReconfPrepTDD ::= 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,
    ul-FP-Mode                UL-FP-Mode                OPTIONAL,
    toAWS                      ToAWS                    OPTIONAL,
    toAWE                      ToAWE                    OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

DCH-AddList-RL-ReconfPrepTDD ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfPrepTDD-IEs} }

DCH-Add-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-AddItem-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-AddItem-RL-ReconfPrepTDD PRESENCE mandatory },
  ...
}

DCH-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
  dCH-ID DCH-ID,
  rLC-Mode RLC-Mode,
  ul-CCH-ID CCH-ID,
  dl-CCH-ID CCH-ID,
  dCH-CombinationInd DCH-CombinationInd OPTIONAL,
  ul-TransportformatSet TransportFormatSet,
  dl-TransportformatSet TransportFormatSet,
  ul-BLER BLER,
  dl-BLER BLER,
  allocationRetentionPriority AllocationRetentionPriority,
  frameHandlingPriority FrameHandlingPriority,
  payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
  ul-FP-Mode UL-FP-Mode,
  qE-Selector QE-Selector,
  toAWS ToAWS,
  toAWE ToAWE,
  iE-Extensions ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-AddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-DeleteList-RL-ReconfPrepTDD ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfPrepTDD-IEs} }

DCH-Delete-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-DeleteItem-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-DeleteItem-RL-ReconfPrepTDD PRESENCE mandatory },
  ...
}

DCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
  dCH-ID DCH-ID,
  iE-Extensions ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkReconfigurationPrepareTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

•
•
•
Several Messages Skipped
•
•
•
-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST FDD
--
-- *****

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

RadioLinkReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY ignore TYPE AllowedQueuingTime          PRESENCE mandatory } |
    { ID id-UL-DPCH-Information          CRITICALITY ignore TYPE UL-DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } |
    { ID id-DL-DPCH-Information          CRITICALITY ignore TYPE DL-DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } |
    { ID id-DCH-ModifyList-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-ModifyList-RL-ReconfRqstFDD PRESENCE mandatory } |
    { ID id-DCH-AddList-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-AddList-RL-ReconfRqstFDD PRESENCE mandatory } |
    { ID id-DCH-DeleteList-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-DeleteList-RL-ReconfRqstFDD PRESENCE mandatory } ,
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    tFCS                TransportFormatCombinationSet OPTIONAL,
    meanBitRate          MeanBitRate OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    tFCS                TransportFormatCombinationSet OPTIONAL,
    tFCI-SignallingMode TFCI-SignallingMode OPTIONAL,
    meanBitRate          MeanBitRate OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfRqstFDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfRqstFDD-IEs} }

```

```

DCH-Modify-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-ModifyItem-RL-ReconfRqstFDD    CRITICALITY ignore  TYPE DCH-ModifyItem-RL-ReconfRqstFDD    PRESENCE mandatory  },
  ...
}

DCH-ModifyItem-RL-ReconfRqstFDD ::= SEQUENCE {
  dCH-ID                DCH-ID,
  ul-TransportformatSet TransportFormatSet OPTIONAL,
  dl-TransportformatSet TransportFormatSet OPTIONAL,
  allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
  frameHandlingPriority  FrameHandlingPriority  OPTIONAL,
  ul-FP-Mode             UL-FP-Mode             OPTIONAL,
  toAWS                  ToAWS                  OPTIONAL,
  toAWE                  ToAWE                  OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-AddList-RL-ReconfRqstFDD          ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfRqstFDD-IEs} }

DCH-Add-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-AddItem-RL-ReconfRqstFDD    CRITICALITY ignore  TYPE DCH-AddItem-RL-ReconfRqstFDD    PRESENCE mandatory  },
  ...
}

DCH-AddItem-RL-ReconfRqstFDD ::= SEQUENCE {
  dCH-ID                DCH-ID,
  rLC-Mode              RLC-Mode,
  dCH-CombinationInd    DCH-CombinationInd OPTIONAL,
  ul-TransportformatSet TransportFormatSet,
  dl-TransportformatSet TransportFormatSet,
  allocationRetentionPriority AllocationRetentionPriority,
  frameHandlingPriority  FrameHandlingPriority,
  payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
  ul-FP-Mode             UL-FP-Mode,
  qE-Selector           QE-Selector,
  toAWS                  ToAWS,
  toAWE                  ToAWE,
  iE-Extensions          ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-AddItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-DeleteList-RL-ReconfRqstFDD          ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfRqstFDD-IEs} }

DCH-Delete-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-DeleteItem-RL-ReconfRqstFDD    CRITICALITY ignore  TYPE DCH-DeleteItem-RL-ReconfRqstFDD    PRESENCE mandatory  },

```

```

}
...
DCH-DeleteItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dCH-ID          DCH-ID,
    iE-Extensions  ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--
-- *****

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

RadioLinkReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY ignore TYPE AllowedQueuingTime          PRESENCE optional } |
    { ID id-UL-MeanBitRate               CRITICALITY ignore TYPE MeanBitRate             PRESENCE optional } |
    { ID id-DL-MeanBitRate               CRITICALITY ignore TYPE MeanBitRate             PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD
      CRITICALITY ignore TYPE UL-CCTrCH-InformationList-RL-ReconfRqstTDD PRESENCE mandatory } |
    { ID id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD
      CRITICALITY ignore TYPE DL-CCTrCH-InformationList-RL-ReconfRqstTDD PRESENCE mandatory } |
    { ID id-DCH-ModifyList-RL-ReconfRqstTDD CRITICALITY ignore TYPE DCH-ModifyList-RL-ReconfRqstTDD PRESENCE mandatory } |
    { ID id-DCH-AddList-RL-ReconfRqstTDD   CRITICALITY ignore TYPE DCH-AddList-RL-ReconfRqstTDD PRESENCE mandatory } |
    { ID id-DCH-DeleteList-RL-ReconfRqstTDD CRITICALITY ignore TYPE DCH-DeleteList-RL-ReconfRqstTDD PRESENCE mandatory },
    ...
}

UL-CCTrCH-InformationList-RL-ReconfRqstTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrCH-Information-RL-ReconfRqstTDD-IEs} }

UL-CCTrCH-Information-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-Information-RL-ReconfRqstTDD CRITICALITY ignore TYPE UL-CCTrCH-Information-RL-ReconfRqstTDDPRESENCE mandatory },
    ...
}

UL-CCTrCH-Information-RL-ReconfRqstTDD ::= SEQUENCE {
    cCCTrCH-ID          CCTrCH-ID,
    tFCS                TransportFormatCombinationSet,
    iE-Extensions      ProtocolExtensionContainer { {UL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

}
UL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-CCTrCH-InformationList-RL-ReconfRqstTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrCH-Information-RL-ReconfRqstTDD-IEs} }
DL-CCTrCH-Information-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-Information-RL-ReconfRqstTDD CRITICALITY ignore TYPE DL-CCTrCH-Information-RL-ReconfRqstTDDPRESENCE mandatory },
    ...
}
DL-CCTrCH-Information-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID CCTrCH-ID,
    tFCS TransportFormatCombinationSet,
    iE-Extensions ProtocolExtensionContainer { {DL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}
DL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
DCH-ModifyList-RL-ReconfRqstTDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfRqstTDD-IEs} }
DCH-Modify-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyItem-RL-ReconfRqstTDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-ReconfRqstTDD PRESENCE mandatory },
    ...
}
DCH-ModifyItem-RL-ReconfRqstTDD ::= 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,
    ul-FP-Mode UL-FP-Mode OPTIONAL,
    toAWS ToAWS OPTIONAL,
    toAWE ToAWE OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}
DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
DCH-AddList-RL-ReconfRqstTDD ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfRqstTDD-IEs} }
DCH-Add-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddItem-RL-ReconfRqstTDD CRITICALITY ignore TYPE DCH-AddItem-RL-ReconfRqstTDD PRESENCE mandatory },
    ...
}

```

```

}
DCH-AddItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    rLC-Mode              RLC-Mode,
    ul-CCTrCH-ID         CCTrCH-ID,
    dl-CCTrCH-ID         CCTrCH-ID,
    dCH-CombinationInd   DCH-CombinationInd OPTIONAL,
    ul-TransportformatSet TransportFormatSet,
    dl-TransportformatSet TransportFormatSet,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority FrameHandlingPriority,
    ul-FP-Mode           UL-FP-Mode,
    qE-Selector          QE-Selector,
    toAWS                ToAWS,
    toAWE                ToAWE,
    iE-Extensions        ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}
DCH-AddItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
DCH-DeleteList-RL-ReconfRqstTDD ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfRqstTDD-IEs} }
DCH-Delete-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-DeleteItem-RL-ReconfRqstTDD    CRITICALITY ignore    TYPE DCH-DeleteItem-RL-ReconfRqstTDD    PRESENCE mandatory    },
    ...
}
DCH-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    iE-Extensions        ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}
DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
RadioLinkReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
.
.
.
Several Messages Skipped
.
.
.

```

9.3.4 Information Element Definitions

```

-- *****
--
-- Information Element Definitions
--
-- *****

RNSAP-IEs -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxNrOfErrors,
    maxRateMatching,
    maxNrOfTFCs,
    maxNrOfTFs,
    maxTTI-Count
FROM RNSAP-Constants

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM RNSAP-CommonDataTypes

    ProtocolExtensionContainer{},
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;

•
•
•
Several IEs Skipped
•
•
•

-- Q
QE-Selector ::= ENUMERATED {
    selected-DCH,
    non-selected-DCH,
}

-- R

```


TSG-RAN Working Group 3 Meeting #11
Sophia Antipolis, France, 28th February– 3rd
March 2000

Document R3-000942

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.423 CR 048r2

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**
list expected approval meeting # here ↑

for approval
for information

strategic
non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: RAN-WG3 **Date:** 28 February 2000

Subject: Additional IEs to Neighbouring Cell Information regarding Tx Diversity

Work item:

Category:	F Correction	<input type="checkbox"/>	Release:	Phase 2	<input type="checkbox"/>
	A Corresponds to a correction in an earlier release	<input type="checkbox"/>		Release 96	<input type="checkbox"/>
	B Addition of feature	<input checked="" type="checkbox"/>		Release 97	<input type="checkbox"/>
	C Functional modification of feature	<input type="checkbox"/>		Release 98	<input type="checkbox"/>
	D Editorial modification	<input type="checkbox"/>		Release 99	<input checked="" type="checkbox"/>
				Release 00	<input type="checkbox"/>

iReason for change:

In multi-vendor environment, it is expected to have different Tx Diversity configuration among various cells. One Cell may support three Tx diversity modes (i.e. STTD, CL mode1, and CL mode2) while other cell may only support one out of those three, and one cell may even support none of them.

Current RNSAP has capability to notify drift RNS of the requested Tx Diversity mode by RADIO LINK SETUP REQUEST message. However, the method for an SRNC to obtain the supporting Tx Diversity modes in the particular cell in advance has not been clear. As a result, there is no mechanism to obtain the Tx Diversity capability of the particular cell in DRNS in advance unless all the RNS themselves store the supporting Tx Diversity modes of all other remaining RNS within the UTRAN. Such way of doing is not practical in the real world.

This CR proposes to introduce a new feature that the SRNC obtain the Tx Diversity capability of the particular cell prior to performing Radio Link Setup/Addition procedure to the cell. Four new IEs for "Neighbouring Cell Information" have been introduced in this CR.

"Tx diversity indicator" indicates if the following three conditions are satisfied:

- P-CPICH is broadcast from two antennas
- STTD is applied to P-CCPCH
- TSTD is applied to P-SCH and S-SCH

"STTD Support Indicator" indicates if STTD can be applied to DL DPCH in the cell

"Closed Loop Mode1 Support Indicator" indicates if the cell supports Closed loop mode1

"Closed Loop Mode2 Support Indicator" indicates if the cell supports Closed loop mode2

Clauses affected: 8.3.1 Radio Link Setup
8.3.2 Radio Link Addition

- 9.1.4 RADIO LINK SETUP RESPONSE
- 9.1.5 RADIO LINK SETUP FAILURE
- 9.1.7 RADIO LINK ADDITION RESPONSE
- 9.1.8 RADIO LINK ADDITION FAILURE
- 9.2.2 FDD Specific Parameters
- 9.3.3 PDU Definitions

- 9.3.4 Information Element Definitions

Other specs affected:

- Other 3G core specifications → List of CRs:
- Other GSM core specifications → List of CRs:
- MS test specifications → List of CRs:
- BSS test specifications → List of CRs:
- O&M specifications → List of CRs:

Other comments:



help.doc

[←←----- double-click here for help and instructions on how to create a CR.](#)

8.3.1 Radio Link Setup

8.3.1.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more radio links.

This procedure shall use the connection-oriented service of the signalling bearer.

8.3.1.2 Successful Operation

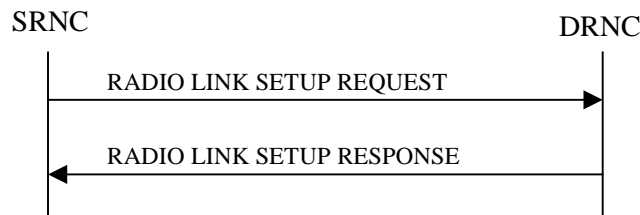


Figure 15: Radio Link Setup procedure: Successful Operation

When the SRNC makes an algorithmic decision to add the first cell or set of cells from a DRNS to the active set of a specific RRC connection, the RADIO LINK SETUP REQUEST message is sent to the corresponding DRNC to request setup of the radio link(s).

The message is also used to establish the connection-oriented service of the signalling bearer in the DRNC. The message includes the S-RNTI associated to the UE, and, if the UE context is already present in the DRNC, the corresponding D-RNTI.

[FDD - The Diversity Control Field indicates for each RL except for the first RL whether the DRNS shall combine the RL with any of the other RLs or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS shall decide for any of the alternatives. When an RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

If the RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

If the *Initial DL TX Power* IE and *UL Eb/No Target* IE [FDD] are present in the message, the DRNS shall use the indicated DL TX Power and UL Eb/No Target [FDD] as initial value.

If the *Primary CPICH Eb/No* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] is present, the DRNC should use them when deciding the Initial DL TX Power.

If the RADIO LINK SETUP REQUEST message includes the *DCH Combination Indicator* IE for a DCH, the DRNS shall treat all DCHs with the same value of this IE as a set of co-ordinated DCHs. The included *RLC Mode* IE of the DCH may be used by the DRNS to optimise the power control.

The *Allocation/Retention Priority* IE defines the priority level that should be used by the DRNS to prioritise the allocation and the retention of the resources used by the DCH. The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise the discard/delay of the data frames of the DCH.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH as the new DCH FP Mode in the Uplink of the user plane for this DCH.

The DRNS shall use the included *ToAWS* IE for a DCH as the new Time of Arrival Window Start Point in the user plane for this DCH.

The DRNS shall use the included *ToAWE* IE for a DCH as the new Time of Arrival Window End Point in the user plane for this DCH.

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

At the reception of the RADIO LINK SETUP REQUEST message, DRNS allocates requested type of channelisation codes and other physical channel resources for each RL and assigns a binding identifier and a transport layer address for each DCH or set of co-ordinated DCHs. This information shall be sent to the SRNS in the message RADIO LINK SETUP RESPONSE when all the RLs have been successfully setup.

If the *Initial DL TX Power* and the *UL Eb/No Target* IEs are not present in the RADIO LINK SETUP REQUEST message, then DRNC shall include the suggested initial UL Eb/No Target and the DL Eb/No Target in the RADIO LINK SETUP RESPONSE message.

In the case of combining one or more RLs the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that the RL is combined with another RL. In this case the Reference RL ID shall be included to indicate with which RL the combination is performed. The Reference RL ID shall be included for all but one of the combined RLs, for which the *Transport Layer Address* IE and the *Binding ID* IE shall be included.

In the case of not combining an RL with another RL, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH of the RL in the RADIO LINK SETUP RESPONSE message.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *Binding Identifier* IE and the *Transport Layer Address* IE shall be included only for one of the DCH in the set of co-ordinated DCHs.

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

The DRNS shall also provide the SRNC with the UTRAN Cell Identifier (UC-Id) and information of the neighbouring cells to the cell(s) where the radio link(s) are added.

If a neighbouring cell is controlled by another RNC, the DRNC shall report also the node identifications (i.e. RNC, CN domain nodes) of the RNC controlling the neighbouring cell. [FDD – If the information is available, the DRNC shall include the *Tx diversity indicator* and *Tx diversity capability* (i.e. *STTD Support Indicator*, *Closed Loop mode1 Support Indicator*, and *Closed Loop mode2 Support Indicator*) in **Neighbouring FDD Cell Information**]

If there was no UE context for this UE in the DRNS before the RADIO LINK SETUP REQUEST message was received the DRNC shall include the node identifications of the CN Domain nodes that the RNC is connected to (using LAC and RAC of the current cell), and the D-RNTI in the RADIO LINK SETUP RESPONSE message.

8.3.1.3 Unsuccessful Operation

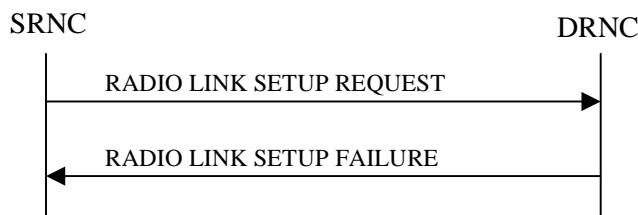


Figure 26: Radio Link Setup procedure: Unsuccessful Operation

In unsuccessful case (i.e. one or more RLs can not be setup) the RADIO LINK SETUP FAILURE message shall be sent to the SRNC, indicating the reason for failure. If some radio links were established successfully, the DRNC shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message.

Typical cause values are:

Radio Network Layer Causes:

- UL Scrambling Code Already in Use
- DL Radio Resources not Available

- UL Radio Resources not Available
- Unknown C-ID
- Macrodiversity Combining not Possible
- Requested Configuration not Supported
- Cell not Available
- Power Level not Supported

Transport Layer Causes:

- Transport Link Failure

Protocol Causes:

- Transaction not Allowed

Miscellaneous Causes:

- Control Processing Overload
- HW Failure
- Not enough User Plane Processing Resources

8.3.1.4 Abnormal Conditions

If the DRNC receives either an S-RNTI or a D-RNTI which already has RL(s) established the DRNC shall send the RADIO LINK SETUP FAILURE message to the SRNC, indicating the reason for failure.

8.3.2 Radio Link Addition

8.3.2.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more additional RLs towards a UE when there is already at least one RL established to the concerning UE via this DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

8.3.2.2 Successful Operation

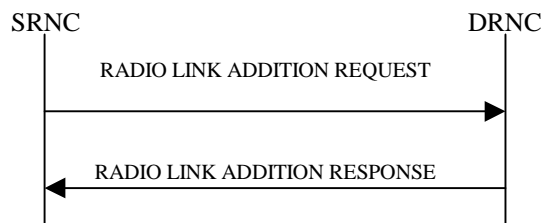


Figure 37: Radio Link Addition procedure: Successful Operation

The procedure is initiated with a RADIO LINK ADDITION REQUEST message sent from the SRNC to the DRNC.

Upon reception, the DRNS 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.

[FDD - The Diversity Control Field indicates for each RL whether the DRNS shall combine the new RL with existing RL(s) or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS

shall decide for any of the alternatives. When a new RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

If the *Primary CCPCH Ec/Io* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] measured by the UE is included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power. If the *Primary CCPCH Ec/Io* IE is not present, the DRNS sets the Initial DL TX Power accordingly to the power used by the existing RLs.

[FDD - The DRNS shall use the provided UL Eb/No Target value as the current target for the inner-loop power control.]

[FDD - If the RADIO LINK ADDITION REQUEST message contains an *SSDT Cell Identity* IE, SSDT may be activated for the concerned new RL, with the indicated SSDT Cell Identity used for that RL.]

The DRNS shall activate any feedback mode diversity according to the received settings.

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

In the case of combining an RL with existing RL(s) the DRNC 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 DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the Transport Layer Address and the binding ID for the transport bearer to be established for each DCH of the RL in the RADIO LINK ADDITION RESPONSE message.

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

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

For any cell neighbouring of a cell in which a RL was added, the DRNC shall provide in the RADIO LINK ADDITION RESPONSE message the UTRAN Cell Identifier (UC-Id), the Frequency Number, the Primary Scrambling Code and the node identification of CN nodes connected to the RNC controlling the neighbouring cell if the neighbouring cell is not controlled by the DRNC. In addition, if the information is available, the DRNC shall also provide the CPICH Power level, ~~and~~ Frame Offset of the neighbouring cell, Tx diversity indicator [FDD], and Tx diversity capability[FDD] (i.e. STTD Support Indicator, Closed Loop mode1 Support Indicator, and Closed Loop mode2 Support Indicator).

The DRNC shall also provide the configured uplink Maximum Eb/No and UL Minimum Eb/No for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. These values are taken into consideration by DRNS admission control and shall be used by the SRNC as limits for the UL inner-loop power control target.

The DRNC shall also provide the selected scrambling- and channelisation codes of the new RLs in order to enable the SRNC to inform the UE about the selected codes.

After sending of the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The DRNS shall start transmission on the new RL after synchronisation is achieved in the Iur user plane as specified in ref. [\[Error! Reference source not found.3\]](#).

8.3.2.3 Unsuccessful Operation

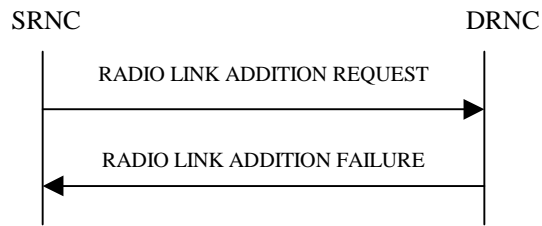


Figure 48: Radio Link Addition procedure: Unsuccessful Operation

If the establishment of at least one RL is unsuccessful, the DRNC shall send a RADIO LINK ADDITION FAILURE as response.

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

Typical cause values are:

Radio Network Layer Causes:

- DL Radio Resources not Available
- UL Radio Resources not Available
- Unknown C-ID
- Macrodiversity Combining not Possible
- Cell not Available
- Power Level not Supported

Transport Layer Causes:

- Transport Link Failure

Miscellaneous Causes:

- Control Processing Overload
- HW Failure
- Not enough User Plane Processing Resources

8.3.2.4 Abnormal Conditions

-

9.1.4 RADIO LINK SETUP RESPONSE

9.1.4.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
RL Information Response		1..<maxnoofRLs>		
RL ID	M			
SAI	M			
UL Interference Level	M			
DL Code Information		1..<maxnoofDLCode s>		
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
Diversity Indication	C-NotFirstRL			
CHOICE <i>diversity Indication Combining</i>				
RL ID	M			Reference RL ID for the combining
<i>Non Combining or IE not present</i>				"IE not present" is equivalent to "First RL".
DCH Information Response		0..<maxnoofDCHs >		Only one DCH per set of co-ordinated DCHs shall be included
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Maximum Uplink Eb/No	M		Uplink Eb/No	
Minimum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		0..<maxnoofFDDn eighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
>>Tx diversity Indicator	<u>O</u>			
>>STTD Support Indicator	<u>O</u>			
>>Closed Loop mode1 Support Indicator	<u>O</u>			
>>Closed Loop mode2 Support Indicator	<u>O</u>			
Neighbouring TDD Cell Information	O	0..<maxnoofTDDn eighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			

Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Uplink Eb/No Target	O		Uplink Eb/No	
Downlink Eb/No Target	O			
Criticality Diagnostics	O			

Condition	Explanation
IfComb	This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.
IfNotComb	This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B.
NotFirstRL	The IE is present only if the RL is not the first RL in the RL Information
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell.
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell.

9.1.4.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
RL Information Response		1		
RL ID	M			
SAI	M			
UL Interference Level	M			
Maximum Uplink Eb/No	M		Uplink Eb/No	
Minimum Uplink Eb/No	M		Uplink Eb/No	
Uplink Eb/No Target	O		Uplink Eb/No	
Downlink Eb/No Target	O			
UL CCTrCH Information		1..<maxnoofCCTrCHs>		
CCTrCH ID	M			
UL DPCH Information		1..<MaxnoofDPC Hs>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DL CCTrCH Information		1..<maxnoofCCTrCHs>		
CCTrCH ID	M			
DL DPCH Information		1..<MaxnoofDPC Hs>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DCH Information Response		1..<maxnoofDCHs >		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Neighbouring FDD Cell Information	O	0..<maxnoofFDDneighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			

Primary Scrambling Code	M			
Primary CPICH Power	O			
>>Tx diversity Indicator	O			
>>STTD Support Indicator	O			
>>Closed Loop mode1 Support Indicator	O			
>>Closed Loop mode2 Support Indicator	O			
Neighbouring TDD Cell Information	O	<i>0..<maxnoofTDDn eighbours></i>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofDPCHs	Maximum no. of DPCHs for one CCTrCH.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell
MaxnoofCCTrCHs	Maximum no. of CCTrCH for one UE.

9.1.5 RADIO LINK SETUP FAILURE

9.1.5.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
Unsuccessful RL Information Response		1...<maxnoofRLs>		
RL ID	M			
Cause	M			
Successful RL Information Response		0..<maxnoofRLs-1>		
RL ID	M			
SAI	M			
UL Interference Level	M			
DL Code Information		1..<maxnoofDL Codes>		
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
Diversity Indication	M			
CHOICE <i>diversity Indication Combining</i>				
RL ID	M			Reference RL ID for the combining
<i>Non Combining or IE not present</i>				"IE not present" is equivalent to "First RL".
DCH Information Response		0..<maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Neighbouring FDD Cell Information	O			
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
>>Tx diversity Indicator	<u>O</u>			
>>STTD Support Indicator	<u>O</u>			
>>Closed Loop mode1 Support Indicator	<u>O</u>			
>>Closed Loop mode2 Support Indicator	<u>O</u>			
Neighbouring TDD Cell Information	O			
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			

Sync Case	M			
Time Slot	C-Case3			
PSCH Time Slot	C-Case2&3			
Uplink Eb/No Target	O		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Minimum Uplink Eb/No	M		Uplink Eb/No	
Downlink Eb/No Target	O			
Criticality Diagnostics	O			

Condition	Explanation
IfComb	This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.
IfNotComb	This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B.
NotFirstRL	The IE is present only if the RL is not the first RL in the RL Information
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.
MaxnoofDCHs	Maximum no. of DCHs for one UE.

9.1.5.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Unsuccessful RL Information Response		1		
RL ID	M			
Cause	M			
Criticality Diagnostics	O			

9.1.7 RADIO LINK ADDITION RESPONSE

9.1.7.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
RL Information Response		1..<maxnoofRLs-1>		
RL ID	M			
SAI	M			
UL Interference Level	M			
DL Code Information		1..<maxnoofDLCodes>		
DL Scrambling Code	M			
DL Channelisation Code	M			
Diversity Indication	M			
CHOICE <i>diversity indication</i>				
<i>Combining</i>				
RL ID	M			Reference RL-Id
<i>Non combining</i>				
DCH Information Response		1..<maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Minimum Uplink Eb/No	M		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		0..<maxnoofFDD Neighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
>>Tx diversity Indicator	O			
>>STTD Support Indicator	O			
>>Closed Loop mode1 Support Indicator	O			
>>Closed Loop mode2 Support Indicator	O			
Neighbouring TDD Cell Information		0..<maxnoofTDD Neighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
MaxnoofRLs	Maximum number of radio links for one UE
MaxnoofFDDNeighbours	Maximum number of neighbouring FDD cells for one cell
MaxnoofTDDNeighbours	Maximum number of neighbouring TDD cells for one cell
MaxnoofDLCodes	Maximum number of DL code information

9.1.7.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
RL Information Response		1		
RL ID	M			
SAI	M			
UL Interference Level	M			
UL CCTrCH Information		1..<maxnoof CCTrCHs>		
CCTrCH ID	M			
UL DPCH Information		1..<maxnoOfDPCHs>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DL CCTrCH Information		1..<maxnoof CCTrCHs>		
CCTrCH ID	M			
DL DPCH information		1..<maxnoOfDPCHs>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
Diversity Indication	M			
CHOICE <i>diversity indication</i>				
<i>Combining</i>				
RL ID	M			Reference RL
<i>Non combining</i>				
DCH Information Response		1..<maxnoofDCHs >		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Minimum Uplink Eb/No	M		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		0..<maxnoofFDD Neighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			

Primary Scrambling Code	M			
Primary CPICH Power	O			
>>Tx diversity Indicator	<u>O</u>			
>>STTD Support Indicator	<u>O</u>			
>>Closed Loop mode1 Support Indicator	<u>O</u>			
>>Closed Loop mode2 Support Indicator	<u>O</u>			
Neighbouring TDD Cell Information		<i>0..<maxnoofTDD Neighbours></i>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range Bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
MaxnoofFDDNeighbours	Maximum number of neighbouring FDD cells for one cell
MaxnoofTDDNeighbours	Maximum number of neighbouring TDD cells for one cell
MaxnoofDLCodes	Maximum number of DL code information
MaxnoOfDPCHs	Maximum number of DPCH in one CCTrCH
MaxnoofCCTrCHs	no. of CCTrCH for one UE.

9.1.8 RADIO LINK ADDITION FAILURE

9.1.8.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Unsuccessful RL Information Response		1..<maxnoofRLs-1>		
RL ID	M			
Cause	M			
Successful RL Information Response		1..<maxnoofRLs-2>		
RL ID	M			
SAI	M			
UL Interference Level	M			
DL Code Information		1..<maxnoofDLCodes>		
DL scrambling code	M			
DL channelisation code	M			
Diversity Indication	M			
<i>CHOICE diversity indication</i>				
<i>Combining</i>				
RL ID	M			Reference RL-Id
<i>Non combining</i>				
DCH Information Response		1..<maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Minimum Uplink Eb/No	M		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		0..<maxnoofFDD Neighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
>>Tx diversity Indicator	O			
>>STTD Support Indicator	O			
>>Closed Loop mode1 Support Indicator	O			
>>Closed Loop mode2 Support Indicator	O			
Neighbouring TDD Cell Information		0..<maxnoofTDD Neighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			

Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
MaxnoofRLs	Maximum number of radio links for one UE
MaxnoofFDDNeighbours	Maximum number of neighbouring FDD cells for one cell
MaxnoofTDDNeighbours	Maximum number of neighbouring TDD cells for one cell
MaxnoofDLCodes	Maximum number of DL code information

9.1.8.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Unsuccessful RL Information Response		1		
RL ID	M			
Cause	M			
Criticality Diagnostics	O			

9.2.2 FDD Specific Parameters

9.2.2.X Tx diversity indicator

The Tx diversity support indicator indicates if the following conditions are satisfied:

- P-CPICH is broadcast from two antennas
- STTD is applied to P-CCPCH
- TSTD is applied to P-SCH and S-SCH

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
<u>Tx diversity indicator</u>			<u>ENUMERATED (true, false).</u>	

9.2.2.X+1 STTD Support Indicator

The STTD Support Indicator indicates whether the STTD can be applied to DL DPCH in the cell or not.

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
<u>STTD Support Indicator</u>			<u>ENUMERATED (STTD Supported, STTD not Supported).</u>	

9.2.2.X+2 Closed loop mode1 Support indicator

The Closed loop mode1 Support Indicator indicates whether the particular cell is capable to support Closed loop mode1 or not

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
<u>Closed loop mode1 Support Indicator</u>			<u>ENUMERATED (Closed loop mode1 Supported, Closed loop mode1 not supported).</u>	

9.2.2.X+3 Closed loop mode2 Support indicator

The Closed loop mode2 Support Indicator indicates whether the particular cell is capable to support Closed loop mode2 or not

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
<u>Closed loop mode2 Support Indicator</u>			<u>ENUMERATED (Closed loop mode2 Supported, Closed loop mode2 not supported).</u>	

9.3.3 PDU Definitions

```

-- *****
--
-- PDU definitions for RNSAP.
--
-- *****

RNSAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    AllocationRetentionPriority,
    AllowedQueuingTime,
    BLER,
    BindingID,
    BurstType,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    Closedloopmode1-SupportIndicator,
    Closedloopmode2-SupportIndicator,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CPICH-EcIo,
    CPICH-Power,
    Cause,
    CellParameterID,
    ChipOffset,
    CompressedModeMethod,
    CriticalityDiagnostics,
    D-FieldLength,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-CombinationInd,
    DCH-ID,
    DL-ChannelisationCode,
    DL-DPCCH-SlotFormat,
    DL-DPCH-SlotNumber,
    DL-EbNo,
    DL-EbNoTarget,
    DL-FrameType,
    DL-Power,
    DL-ScramblingCode,
    DPCH-ID,
    DRX-Parameter,
    DedicatedMeasurementValue,
    DiversityControlField,
    DiversityMode,
    FACH-DataFrameSize,
    FACH-InitialWindowSize,
    FACH-PriorityIndicator,
    FDD-DL-ChannelisationCodeNumber,
    FDD-S-CCPCH-Offset,
    FrameHandlingPriority,
    FrameOffset,
    GapPeriod,
    GapPositionMode,
    L3-Information,
    MAC-c-SDU-Length,
    MaxNrOfUL-DPCHs,
    MeanBitRate,
    MeasurementCharacteristics,
    MeasurementID,
    MidambleShift,
    MinUL-ChannelisationCodeLength,
    MultipleURAsIndicator,
    MultiplexingPosition,
    Offset,
    PD,
    PSCH-PCCPCH-TimeSlot,
    PSCH-TimeSlot,
    PayloadCRC-PresenceIndicator,

```

```

PilotBitsUsedIndicator,
PowerControlMode,
PowerOffset,
PowerResumeMode,
PrimaryCCPCH-RSCP,
PrimaryCPICH-EcNo,
PrimaryCPICH-Power,
PrimaryScramblingCode,
PropagationDelay,
PunctureLimit,
RANAP-RelocationInformation,
RL-ID,
RLC-Mode,
RNC-ID,
RepetitionLength,
RepetitionPeriod,
ReportCharacteristics,
S-FieldLength,
S-RNTI,
SAI,
SN,
SRNC-ID,
SSDT-CellID,
SSDT-CellID-Length,
SSDT-Indication,
SSDT-SupportIndicator,
STTD-Support-Indicator,
TxDiversityIndicator,
ScaledUL-InterferenceLevel,
ScramblingCode,
ScramblingCodeChange,
SecondaryCCPCH-SlotFormat,
SyncCase,
TDD-ChannelisationCode,
TDD-PhysicalChannelOffset,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TGD,
TGL,
TPC-StepSize,
TimeSlot,
ToAWE,
ToAWS,
TransportBearerID,
TransportBearerRequestIndicator,
TransportFormatCombinationSet,

```

..... Omitted

```

-- *****
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- *****

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

RadioLinkSetupResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    optional { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE
    { ID id-CN-PS-DomainIdentifier   CRITICALITY ignore TYPE CN-PS-DomainIdentifier
    PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier   CRITICALITY ignore TYPE CN-CS-DomainIdentifier
    PRESENCE optional } |
    { ID id-RL-InformationResponseList-RL-SetupRspFDD
    CRITICALITY ignore TYPE RL-InformationResponseList-RL-SetupRspFDD
    PRESENCE mandatory } |
    optional { ID id-UL-EbNoTarget    CRITICALITY ignore TYPE UL-EbNoTarget    PRESENCE
    { ID id-DL-EbNoTarget            CRITICALITY ignore TYPE DL-EbNoTarget    PRESENCE
    optional } |

```

```

    { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics
      PRESENCE optional  },
    ...
  }

RL-InformationResponseList-RL-SetupRspFDD ::= RL-IE-ContainerList { {RL-
InformationResponseItemIEs-RL-SetupRspFDD} }

RL-InformationResponseItemIEs-RL-SetupRspFDD RNSAP-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,
  sAI            SAI,
  ul-InterferenceLevel      ScaledUL-InterferenceLevel,
  dl-CodeInformation      DL-CodeInformationList-RL-SetupRspFDD,
  sSDT-SupportIndicator      SSDT-SupportIndicator,
  maxUL-EbNo          UL-EbNo,
  minUL-EbNo          UL-EbNo,
  neighbouringFDD-CellInformation      NeighbouringFDD-CellInformationList-RL-SetupRsp
OPTIONAL,
  neighbouringTDD-CellInformation      NeighbouringTDD-CellInformationList-RL-SetupRsp
OPTIONAL,
  iE-Extensions      ProtocolExtensionContainer { {RL-InformationResponseItem-RL-
SetupRspFDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-
CodeInformationItem-RL-SetupRspFDD

DL-CodeInformationItem-RL-SetupRspFDD ::= SEQUENCE {
  dl-ScramblingCode      DL-ScramblingCode,
  fDD-DL-ChannelisationCodeNumber      FDD-DL-ChannelisationCodeNumber,
  -- ** NOTE: How many alternatives are there, 2 or 3? **
  diversityIndication      CHOICE {
    combining      SEQUENCE {
      rL-ID          RL-ID
    },
    nonCombiningOrIENotPresent      SEQUENCE {
      dCH-InformationResponse-RL-SetupRspFDD      DCH-InformationResponseList-RL-SetupRspFDD
OPTIONAL
    }
  } OPTIONAL
  -- This IE is present only if the RL is not the first on in the RL Information -- ,
  iE-Extensions      ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
SetupRspFDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CodeInformationItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-SetupRspFDD

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

DCH-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
NeighbouringFDD-CellInformationItem-RL-SetupRsp

```

```

NeighbouringFDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier    CN-PS-DomainIdentifier    OPTIONAL,
    cN-CS-DomainIdentifier    CN-CS-DomainIdentifier    OPTIONAL,
    uARFCN                UARFCN,
    frameOffset            FrameOffset    OPTIONAL,
    primaryScramblingCode    PrimaryScramblingCode,
    primaryCPICH-Power        PrimaryCPICH-Power    OPTIONAL,
    txdiversityindicator    Txdiversityindicator    OPTIONAL,
    sTTD-Support-Indicator    STTD-Support-Indicator    OPTIONAL,
    closedloopmodel-SupportIndicator    Closedloopmodel-SupportIndicator    OPTIONAL,
    closedloopmode2-SupportIndicator    Closedloopmode2-SupportIndicator    OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-SetupRsp

NeighbouringTDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
    c-ID                C-ID,
    cN-PS-DomainIdentifier    CN-PS-DomainIdentifier    OPTIONAL,
    cN-CS-DomainIdentifier    CN-CS-DomainIdentifier    OPTIONAL,
    uARFCN                UARFCN,
    frameOffset            FrameOffset    OPTIONAL,
    cellParameterID        CellParameterID,
    syncCase                SyncCase,
    timeSlot                TimeSlot    OPTIONAL
    -- This IE is present only if SyncCase is Case1 -- ,
    pSCH-TimeSlot            PSCH-TimeSlot    OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
    ul-EbNo                UL-EbNo    OPTIONAL,
    dl-EbNo                DL-EbNo    OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****

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

RadioLinkSetupResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE
optional } |
    { ID id-CN-PS-DomainIdentifier    CRITICALITY ignore TYPE CN-PS-DomainIdentifier
PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier    CRITICALITY ignore TYPE CN-CS-DomainIdentifier
PRESENCE optional } |
    { ID id-RL-InformationResponse-RL-SetupRspTDD    CRITICALITY ignore TYPE RL-InformationResponse-
RL-SetupRspTDD PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics    CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sAI                SAI,
    ul-InterferenceLevel    ScaledUL-InterferenceLevel,

```



```

maxUL-EbNo          UL-EbNo,
minUL-EbNo          UL-EbNo,
ul-EbNoTarget       UL-EbNo          OPTIONAL,
dl-EbNoTarget       DL-EbNo          OPTIONAL,
ul-CCTrCHInformation      UL-CCTrCHInformationList-RL-SetupRspTDD,
dl-CCTrCHInformation      DL-CCTrCHInformationList-RL-SetupRspTDD,
dCH-InformationResponse   DCH-InformationResponseList-RL-SetupRspTDD,
neighbouringFDD-CellInformation      NeighbouringFDD-CellInformationList-RL-SetupRsp
OPTIONAL,
neighbouringTDD-CellInformation      NeighbouringTDD-CellInformationList-RL-SetupRsp
OPTIONAL,
iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponse-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

RL-InformationResponse-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-
CCTrCHInformationItem-RL-SetupRspTDD

UL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
cCTrCH-ID          CCTrCH-ID,
ul-DPCH-Information      UL-DPCH-InformationList-RL-SetupRspTDD,
iE-Extensions          ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-
InformationItem-RL-SetupRspTDD

-- **NOTE: UL-DPCH-InformationItem-RL-SetupRspTDD and DL-DPCH-InformationItem-RL-SetupRspTDD
-- are currently similar. Combine them? **
UL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
dPCH-ID          DPCH-ID,
tDD-ChannelisationCode      TDD-ChannelisationCode,
burstType          BurstType,
midambleShift      MidambleShift,
timeSlot           TimeSlot,
tDD-PhysicalChannelOffset      TDD-PhysicalChannelOffset,
repetitionPeriod      RepetitionPeriod,
repetitionLength      RepetitionLength,
tFCI-Presence        TFCI-Presence,
iE-Extensions        ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-
CCTrCHInformationItem-RL-SetupRspTDD

DL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
cCTrCH-ID          CCTrCH-ID,
dl-DPCH-Information      DL-DPCH-InformationList-RL-SetupRspTDD,
iE-Extensions          ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-
InformationItem-RL-SetupRspTDD

DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
dPCH-ID          DPCH-ID,

```

```

tDD-ChannelisationCode          TDD-ChannelisationCode,
burstType                       BurstType,
midambleShift                   MidambleShift,
timeSlot                        TimeSlot,
tDD-PhysicalChannelOffset       TDD-PhysicalChannelOffset,
repetitionPeriod                RepetitionPeriod,
repetitionLength                RepetitionLength,
tFCI-Presence                   TFCI-Presence,
iE-Extensions                    ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-InformationResponseList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-SetupRspTDD

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

DCH-InformationResponseItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkSetupResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK SETUP FAILURE FDD
--
-- *****

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

RadioLinkSetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-D-RNTI                     CRITICALITY ignore   TYPE D-RNTI                     PRESENCE
mandatory } |
{ ID id-CN-PS-DomainIdentifier      CRITICALITY ignore   TYPE CN-PS-DomainIdentifier
PRESENCE mandatory } |
{ ID id-CN-CS-DomainIdentifier      CRITICALITY ignore   TYPE CN-CS-DomainIdentifier
PRESENCE mandatory } |
{ ID id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
CRITICALITY ignore   TYPE UnsuccessfulRL-InformationResponseList-RL-
SetupFailureFDD
PRESENCE mandatory } |
{ ID id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD
CRITICALITY ignore   TYPE SuccessfulRL-InformationResponseList-RL-
SetupFailureFDD
PRESENCE mandatory } |
{ ID id-CriticalityDiagnostics      CRITICALITY ignore   TYPE CriticalityDiagnostics
PRESENCE optional },
...
}

UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList { {UnsuccessfulRL-
InformationResponse-RL-SetupFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
CRITICALITY ignore   TYPE UnsuccessfulRL-InformationResponse-RL-
SetupFailureFDD
PRESENCE mandatory },
...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
rL-ID                               RL-ID,

```

```

    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList { {SuccessfulRL-
InformationResponse-RL-SetupFailureFDD-IEs} }

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD
      CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-
SetupFailureFDD
      PRESENCE mandatory },
    ...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sAI                  SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation   DL-CodeInformationList-RL-SetupFailureFDD,
    sSDT-SupportIndicator SSDT-SupportIndicator,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupFailureFDD
OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupFailureFDD
OPTIONAL,
    ul-EbNoTarget        UL-EbNo,
    maxUL-EbNo           UL-EbNo,
    minUL-EbNo           UL-EbNo,
    dl-EbNoTarget        DL-EbNo,
    iE-Extensions        ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-
RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}
-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-
CodeInformationItem-RL-SetupFailureFDD

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CodeInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    dl-ScramblingCode    DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    -- ** NOTE: How many alternatives are there, 2 or 3? **
    diversityIndication CHOICE {
        combining        SEQUENCE {
            rL-ID        RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dCH-InformationResponse-RL-SetupFailureFDD DCH-InformationResponseList-RL-
SetupFailureFDD OPTIONAL
        }
    } OPTIONAL
    -- This IE is present only if the RL is not the first on in the RL Information -- ,
    iE-Extensions        ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CodeInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-SetupFailureFDD

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

```

```

DCH-InformationResponseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringFDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-
Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    uC-ID                               C-ID,
    cN-PS-DomainIdentifier               CN-PS-DomainIdentifier   OPTIONAL,
    cN-CS-DomainIdentifier               CN-CS-DomainIdentifier   OPTIONAL,
    uARFCN                               UARFCN,
    frameOffset                          FrameOffset             OPTIONAL,
    primaryScramblingCode                 PrimaryScramblingCode,
    primaryCPICH-Power                    PrimaryCPICH-Power      OPTIONAL,
    txdiversityindicator                  Txdiversityindicator   OPTIONAL,
    sTTD-Support-Indicator                STTD-Support-Indicator OPTIONAL,
    closedloopmodel-SupportIndicator      Closedloopmodel-SupportIndicator OPTIONAL,
    closedloopmode2-SupportIndicator      Closedloopmode2-SupportIndicator OPTIONAL,
    iE-Extensions                         ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-
Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    uC-ID                               C-ID,
    cN-PS-DomainIdentifier               CN-PS-DomainIdentifier   OPTIONAL,
    cN-CS-DomainIdentifier               CN-CS-DomainIdentifier   OPTIONAL,
    uARFCN                               UARFCN,
    frameOffset                          FrameOffset             OPTIONAL,
    cellParameterID                      CellParameterID,
    syncCase                              SyncCase,
    timeSlot                              TimeSlot,
    pSCH-TimeSlot                         PSCH-TimeSlot           OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
    iE-Extensions                         ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP FAILURE TDD
--
-- *****

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

RadioLinkSetupFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD
      CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
SetupFailureTDD
      PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics        CRITICALITY ignore TYPE CriticalityDiagnostics
      PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD ::= SEQUENCE {
    rL-ID                                RL-ID,
    cause                                 Cause,

```

```

        iE-Extensions          ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-RL-SetupFailureTDD-ExtIEs} } OPTIONAL,
        ...
    }

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupFailureTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

..... Omitted

```

-- *****
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

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

RadioLinkAdditionResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE
optional } |
    { ID id-RL-InformationResponseList-RL-AdditionRspFDD
          CRITICALITY ignore TYPE RL-InformationResponseList-RL-AdditionRspFDD
          PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-AdditionRspFDD ::= RL-IE-ContainerList { {RL-
InformationResponseItemIEs-RL-AdditionRspFDD} }

RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-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,
    sAI            SAI,
    ul-InterferenceLevel          ScaledUL-InterferenceLevel,
    dl-CodeInformation          DL-CodeInformationList-RL-AdditionRspFDD,
    sSDT-SupportIndicator          SSdT-SupportIndicator,
    maxUL-EbNo          UL-EbNo,
    minUL-EbNo          UL-EbNo,
    neighbouringFDD-CellInformation          NeighbouringFDD-CellInformationList-RL-SetupRsp
OPTIONAL,
    neighbouringTDD-CellInformation          NeighbouringTDD-CellInformationList-RL-SetupRsp
OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {RL-InformationResponseItem-RL-
AdditionRspFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-
CodeInformationItem-RL-AdditionRspFDD

DL-CodeInformationItem-RL-AdditionRspFDD ::= SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber          FDD-DL-ChannelisationCodeNumber,
}

```

```

-- ** NOTE: How many alternatives are there, 2 or 3? **
diversityIndication CHOICE {
  combining SEQUENCE {
    rL-ID RL-ID
  },
  nonCombiningOrIENotPresent SEQUENCE {
    dCH-InformationResponse-RL-AdditionRspFDD DCH-InformationResponseList-RL-
AdditionRspFDD OPTIONAL
  }
} OPTIONAL
-- This IE is present only if the RL is not the first on in the RL Information -- ,
iE-Extensions ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
AdditionRspFDD-ExtIEs} } OPTIONAL,
...
}

DL-CodeInformationItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-AdditionRspFDD

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

DCH-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
  NeighbouringFDD-CellInformationItem-RL-AdditionRsp

NeighbouringFDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
  uC-ID C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN UARFCN,
  frameOffset FrameOffset OPTIONAL,
  primaryScramblingCode PrimaryScramblingCode,
  primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
  txdiversityindicator Txdiversityindicator OPTIONAL,
  sTTD-Support-Indicator STTD-Support-Indicator OPTIONAL,
  closedloopmodel-SupportIndicator Closedloopmodel-SupportIndicator OPTIONAL,
  closedloopmode2-SupportIndicator Closedloopmode2-SupportIndicator OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringTDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
  NeighbouringTDD-CellInformationItem-RL-AdditionRsp

NeighbouringTDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
  uC-ID C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN UARFCN,
  frameOffset FrameOffset OPTIONAL,
  cellParameterID CellParameterID,
  syncCase SyncCase,
  timeSlot TimeSlot,
  pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
  -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
  iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

}

RadioLinkAdditionResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****

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

RadioLinkAdditionResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
  optional { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE
  { ID id-RL-InformationResponse-RL-AdditionRspTDD
                CRITICALITY ignore TYPE RL-InformationResponse-RL-AdditionRspTDD
  PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics         CRITICALITY ignore TYPE CriticalityDiagnostics
  PRESENCE optional },
  ...
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
  rL-ID                RL-ID,
  sAI,
  ul-InterferenceLevel                ScaledUL-InterferenceLevel,
  ul-CCTrCHInformation                UL-CCTrCHInformationList-RL-AdditionRspTDD,
  dl-CCTrCHInformation                DL-CCTrCHInformationList-RL-AdditionRspTDD,
  diversityIndication                CHOICE {
    combining                SEQUENCE {
      rL-ID                RL-ID
    },
    nonCombiningOrIENotPresent                SEQUENCE {
      dCH-InformationResponse-RL-AdditionRspFDD                DCH-InformationResponseList-RL-
AdditionRspFDD OPTIONAL
    }
  } OPTIONAL,
  maxUL-EbNo                UL-EbNo,
  minUL-EbNo                UL-EbNo,
  neighbouringFDD-CellInformation                NeighbouringFDD-CellInformationList-RL-AdditionRspTDD
OPTIONAL,
  neighbouringTDD-CellInformation                NeighbouringTDD-CellInformationList-RL-AdditionRspTDD
OPTIONAL,
  iE-Extensions                ProtocolExtensionContainer { {RL-InformationResponse-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-
CCTrCHInformationItem-RL-AdditionRspTDD

UL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
  cCtRCH-ID                CCTrCH-ID,
  ul-DPCH-Information                UL-DPCH-InformationList-RL-AdditionRspTDD,
  iE-Extensions                ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-
InformationItem-RL-AdditionRspTDD

UL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
  dPCH-ID                DPCH-ID,
  tDD-ChannelisationCode                TDD-ChannelisationCode,

```

```

burstType          BurstType,
midambleShift      MidambleShift,
timeSlot           TimeSlot,
offset             Offset,
tDD-PhysicalChannelOffset  TDD-PhysicalChannelOffset,
repetitionPeriod   RepetitionPeriod,
repetitionLength   RepetitionLength,
tFCI-Presence      TFCI-Presence,
iE-Extensions      ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-
CCTrCHInformationItem-RL-AdditionRspTDD

DL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
cCTrCH-ID          CCTrCH-ID,
dl-DPCH-Information      DL-DPCH-InformationList-RL-AdditionRspTDD,
iE-Extensions          ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-
InformationItem-RL-AdditionRspTDD

DL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
dPCH-ID           DPCH-ID,
tDD-ChannelisationCode  TDD-ChannelisationCode,
burstType         BurstType,
midambleShift     MidambleShift,
timeSlot          TimeSlot,
tDD-PhysicalChannelOffset  TDD-PhysicalChannelOffset,
repetitionPeriod   RepetitionPeriod,
repetitionLength   RepetitionLength,
tFCI-Presence      TFCI-Presence,
iE-Extensions      ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringFDD-CellInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours))
OF
NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD

NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
uC-ID             C-ID,
cN-PS-DomainIdentifier  CN-PS-DomainIdentifier  OPTIONAL,
cN-CS-DomainIdentifier  CN-CS-DomainIdentifier  OPTIONAL,
uARFCN           UARFCN,
frameOffset      FrameOffset  OPTIONAL,
primaryScramblingCode  PrimaryScramblingCode,
primaryCPICH-Power  PrimaryCPICH-Power  OPTIONAL,
txdiversityindicator  Txdiversityindicator  OPTIONAL,
sTTD-Support-Indicator  STTD-Support-Indicator  OPTIONAL,
closedloopmode1-SupportIndicator  Closedloopmode1-SupportIndicator  OPTIONAL,
closedloopmode2-SupportIndicator  Closedloopmode2-SupportIndicator  OPTIONAL,
iE-Extensions      ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringTDD-CellInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours))
OF

```



```

NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD

NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier    CN-PS-DomainIdentifier    OPTIONAL,
    cN-CS-DomainIdentifier    CN-CS-DomainIdentifier    OPTIONAL,
    uARFCN                UARFCN,
    frameOffset            FrameOffset    OPTIONAL,
    cellParameterID        CellParameterID,
    syncCase                SyncCase,
    timeSlot                TimeSlot,
    pSCH-TimeSlot            PSCH-TimeSlot    OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
    iE-Extensions            ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- *****

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

RadioLinkAdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-
AdditionFailureFDD
    PRESENCE mandatory } |
    { ID id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-
AdditionFailureFDD
    PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics
    CRITICALITY ignore TYPE CriticalityDiagnostics
    PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList {
{UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
AdditionFailureFDD
    PRESENCE mandatory },
    ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    cause                Cause,
    iE-Extensions            ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList { {SuccessfulRL-
InformationResponse-RL-AdditionFailureFDD-IEs} }

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-
AdditionFailureFDD
}

```

```

...
PRESENCE mandatory },
}
...
SuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sAI                  SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation   DL-CodeInformationList-RL-AdditionFailureFDD,
    sSDT-SupportIndicator SSDT-SupportIndicator,
    maxUL-EbNo          UL-EbNo,
    minUL-EbNo          UL-EbNo,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-
AdditionFailureFDD OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-
AdditionFailureFDD OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-
RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-
CodeInformationItem-RL-AdditionFailureFDD

DL-CodeInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
    dl-ScramblingCode      DL-ScramblingCode,
    dl-ChannelisationCode  DL-ChannelisationCode,
    diversityIndication    CHOICE {
        combining          SEQUENCE {
            rL-ID          RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dCH-InformationResponse-RL-AdditionFailureFDD DCH-InformationResponseList-RL-
AdditionFailureFDD OPTIONAL
        }
    } OPTIONAL
    -- This IE is present only if the RL is not the first on in the RL Information -- ,
    iE-Extensions         ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CodeInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-AdditionFailureFDD

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

DCH-InformationResponseItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-
Neighbours)) OF
NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN               UARFCN,
    frameOffset          FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    cPICH-Power          CPICH-Power OPTIONAL,
    txdiversityindicator Txdiversityindicator OPTIONAL,
    sTTD-Support-Indicator STTD-Support-Indicator OPTIONAL,
    closedloopmodel-SupportIndicator Closedloopmodel-SupportIndicator OPTIONAL,

```

```

closedloopmode2-SupportIndicator Closedloopmode2-SupportIndicator OPTIONAL,
iE-Extensions ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
...
}

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-
Neighbours)) OF
NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD

NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
uC-ID C-ID,
cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
uARFCN UARFCN,
frameOffset FrameOffset OPTIONAL,
cellParameterID CellParameterID,
syncCase SyncCase,
timeSlot TimeSlot,
pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
-- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
...
}

NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkAdditionFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK ADDITION FAILURE TDD
--
-- *****

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

RadioLinkAdditionFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-UnsuccessfulRL-InformationResponse CRITICALITY ignore TYPE UnsuccessfulRL-
InformationResponse PRESENCE mandatory } |
{ ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional } ,
...
}

UnsuccessfulRL-InformationResponse ::= SEQUENCE {
rL-ID RL-ID,
cause Cause,
iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-ExtIEs} } OPTIONAL,
...
}

UnsuccessfulRL-InformationResponse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkAdditionFailureTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

..... Omitted

9.3.4 Information Element Definitions

```

-- *****
--
-- Information Element Definitions
--
-- *****

RNSAP-IEs -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxNrOfErrors,
    maxRateMatching,
    maxNrOfTFCs,
    maxNrOfTFs,
    maxTTI-Count
FROM RNSAP-Constants

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM RNSAP-CommonDataTypes

    ProtocolExtensionContainer{},
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;

-- A

AllocationRetentionPriority ::= FrameHandlingPriority

AllowedQueuingTime ::= INTEGER (0..60)
-- seconds

-- B

-- ** NOTE: Size in tabular 1..4,... **
BindingID ::= OCTET STRING (SIZE (1..MAX))

BLER ::= INTEGER (-63..0)
-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER

BurstType ::= ENUMERATED {
    type1 (1),
    type2 (2)
}

-- C

Cause ::= CHOICE {
    radioNetwork          CauseRadioNetwork,
    transmissionNetwork   CauseTransmissionNetwork,
    protocol              CauseProtocol,
    misc                  CauseMisc,
    ...
}

CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    om-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    ...
}

CauseProtocol ::= ENUMERATED {
    transaction-not-allowed,
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    unspecified,
    ...
}

CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,

```

```

cell-not-available,
power-level-not-supported,
ul-scrambling-code-already-in-use,
dl-radio-resources-not-available,
ul-radio-resources-not-available,
measurement-not-supported-for-the-object,
macrodiversity-combining-not-possible,
reconfiguration-not-allowed,
Synchronisation-failure,
unspecified,
...
}

CauseTransmissionNetwork ::= ENUMERATED {
    transmission-link-failure,
    transmission-port-not-available,
    unspecified,
    ...
}

C-ID ::= INTEGER (0..65535)

CCTrCH-ID ::= INTEGER (0..15)

CellParameterID ::= INTEGER (0..127)

CFN ::= INTEGER (0..255)

ChannelCodingType ::= ENUMERATED {
    no-coding,
    convolutional-coding,
    turbo-coding--,
    -- ...
}

-- ** TODO **
ChipOffset ::= INTEGER

Closedloopmodel-SupportIndicator ::= ENUMERATED {
    Closedloop-model-Supported,
    Closedloop-model-not-supported
}

Closedloopmode2-SupportIndicator ::= ENUMERATED {
    Closedloop-mode2-Supported,
    Closedloop-mode2-not-supported
}

CodingRate ::= ENUMERATED {
    half,
    third--,
    -- ...
}

CompressedModeMethod ::= ENUMERATED {
    none,
    puncturing,
    sF2,
    gating
}

CPICH-EcIo ::= INTEGER

```

..... Omitted

```

-- S

-- Changed BIT STRING -> OCTET STRING
SAC ::= OCTET STRING (SIZE (2))

SAI ::= SEQUENCE {
    pLMN-ID          PLMN-ID,
    lAC              LAC,
    sAC              SAC,
    iE-Extensions   ProtocolExtensionContainer { {SAI-ExtIEs} } OPTIONAL
}

SAI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...

```

```

}

-- ** TODO **
ScramblingCode ::= INTEGER

ScramblingCodeChange ::= ENUMERATED {
    no-code-change,
    code-change
}

ScaledSIR-ErrorValue ::= INTEGER (-100..100)
-- ScaledSIR-ErrorValue = SIR-ErrorValue * 10
-- If SIR-ErrorValue <= -10 ScaledSIR-ErrorValue shall be set to -100
-- If SIR-ErrorValue >= 10 ScaledSIR-ErrorValue shall be set to 100
-- SIR-ErrorValue step 0.1 dB

ScaledSIR-Value ::= INTEGER (-100..200)
-- ScaledSIR-Value = SIR-Value * 10
-- SIR-Value step 0.1 dB

ScaledTransmittedCodePowerValue ::= INTEGER (-350..150)
-- ScaledTransmittedCodePowerValue = TransmittedCodePowerValue * 10
-- TransmittedCodePowerValue step 0.1 dB

-- ** TODO **
SharedChannelType ::= INTEGER

-- ** TODO **
SecondaryCCPCH-SlotFormat ::= INTEGER

SN ::= TimeSlot

SpreadingFactorOfChannelisationCode ::= ENUMERATED {
    v256,
    v128,
    v64,
    v32,
    v16,
    v8,
    v4,
    v2,
    v1
}

-- Changed
S-FieldLength ::= INTEGER (1..2)

S-RNTI ::= INTEGER (0..1048575)
-- From 0 to 2^20-1

-- ** TODO **
SRNC-ID ::= INTEGER

SSDT-CellID ::= 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
}

SSDT-SupportIndicator ::= ENUMERATED {
    sSDT-not-supported,
    sSDT-supported
}

STTD-Support-Indicator ::= ENUMERATE {
    sTTD-supported,
    sTTD-not-supported

```

```

}
-- T

-- ** TODO **
TBD ::= NULL
-- Remove this type

TDD-ChannelisationCode ::= INTEGER (1..31)

TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TFCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32
}

TFCI-Presence ::= ENUMERATED {
    not-present,
    present
}

TFCI-SignallingMode ::= ENUMERATED {
    normal,
    split
}

-- ** TODO **
TimeReference ::= INTEGER
-- TimeReference ::= INTEGER (0..255)

TimeSlot ::= INTEGER (0..14)

ToAWE ::= INTEGER (0..2559)

ToAWS ::= INTEGER (0..1279)

TPC-StepSize ::= ENUMERATED {
    half,
    one
}

TGD ::= INTEGER (0..255)

TGL ::= INTEGER (3| 4| 7| 10| 14)

TransmissionTimeInterval ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80--,
-- ...
}

TransportBearerID ::= INTEGER (0..4095)

-- Compare title and IE name in table TransportBearerRequestIndicator vs.
-- FACH-PriorityIndicator
TransportBearerRequestIndicator ::= INTEGER { lowest (0), highest (15) } (0..15)

TransportBlockSize ::= INTEGER (1..5000)
-- Unit is bits

TransportFormatCombinationSet ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
    SEQUENCE {
        cTFC CTFC,
        iE-Extensions ProtocolExtensionContainer { {TransportFormatCombinationSet-ExtIEs}
    } OPTIONAL,
    ...
}

TransportFormatCombinationSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet ::= SEQUENCE {
    dynamicParts TransportFormatSet-DynamicPartList,
    semi-staticPart TransportFormatSet-Semi-staticPart,
    iE-Extensions ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
    ...
}

```

```

TransportFormatSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
  SEQUENCE {
    nrOfTransportBlocks      NrOfTransportBlocks,
    transportBlockSize      TransportBlockSize      OPTIONAL
    -- This IE is only present if nrOfTransportBlocks is greater than 0 --,
    mode                    TransportFormatSet-ModeDP,
    iE-Extensions          ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-
ExtIEs} } OPTIONAL,
    ...
  }

TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportFormatSet-ModeDP ::= CHOICE {
  tdd      TransmissionTimeIntervalList,
  -- This IE is mandatory if not defined as semistatic parameter, otherwise it is absent --
  ...
}

TransmissionTimeIntervalList ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
  SEQUENCE {
    transmissionTimeInterval      TransmissionTimeInterval,
    iE-Extensions                ProtocolExtensionContainer { {TransmissionTimeIntervalList-ExtIEs} }
OPTIONAL,
    ...
  }

TransmissionTimeIntervalList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportFormatSet-Semi-staticPart ::= SEQUENCE {
  transmissionTime      TransmissionTimeInterval,
  channelCoding         ChannelCodingType,
  codingRate            CodingRate      OPTIONAL
  -- This IE is only present if channelCoding is 'convolutional' or 'turbo' --,
  rateMatchingAttribute RateMatchingAttribute,
  cRC-Size              CRC-Size,
  mode                  TransportFormatSet-ModeSSP      OPTIONAL,
  iE-Extensions        ProtocolExtensionContainer { {TransportFormatSet-Semi-staticPart-ExtIEs}
} OPTIONAL,
  ...
}

TransportFormatSet-Semi-staticPart-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
  tdd      SecondInterleavingMode,
  ...
}

SecondInterleavingMode ::= ENUMERATED {
  frame-related,
  timeslot-related,
  ...
}

-- TransportLayerAddress      ::= BIT STRING (1..160, ...)
TransportLayerAddress        ::= OCTET STRING (SIZE (1..20, ...))

Txdiversityindicator ::= ENUMERATED {
  true,
  false
}

-- U

UARFCN                      ::= INTEGER (0..698, ...)

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

```



```
UL-DeltaEbNo                ::= INTEGER (-60..100)
UL-DeltaEbNoAfter           ::= INTEGER (-60..100)
-- ** TODO **
UL-EbNo                     ::= INTEGER
-- ** TODO **
UL-EbNoTarget               ::= INTEGER
```

..... Omitted

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.423 CR 047r1

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**
list expected approval meeting # here ↑

for approval
 for information

strategic
 non-strategic *(for SMG use only)*

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <http://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: RAN-WG3 **Date:** 28 February 2000

Subject: A new IE for “RL information” regarding Transmit Diversity

Work item:

Category: F Correction
 A Corresponds to a correction in an earlier release
 B Addition of feature
 C Functional modification of feature
 D Editorial modification
(only one category shall be marked with an X)

Release: Phase 2
 Release 96
 Release 97
 Release 98
 Release 99
 Release 00

Reason for change: Although the applied Transmit Diversity mode shall be identical among the Radio Links in one Active Set for one UE, it is assumed that, in R1, the Transmit Diversity status (whether the Transmit Diversity is active or inactive) is allowed to be different among those Radio Links.

This CR proposes to introduce an IE “Transmit Diversity Indicator (active or inactive)” to “RL information” group in both RADIO LINK SETUP REQUEST and RADIO LINK ADDITION REQUEST messages. As a result, each RL in one Active Set may have unique Transmit Diversity status, either “active” or “inactive”.

Clauses affected: 8.3.1 Radio Link Setup
 8.3.2 Radio Link Addition
 9.1.3 RADIO LINK SETUP REQUEST
 9.1.6 RADIO LINK ADDITION REQUEST
 9.2.2 FDD Specific Parameters
 9.3.3 PDU Definitions
 9.3.4 Information Element Definitions

Other specs affected: Other 3G core specifications → List of CRs:
 Other GSM core specifications → List of CRs:
 MS test specifications → List of CRs:
 BSS test specifications → List of CRs:
 O&M specifications → List of CRs:

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

8.3.1 Radio Link Setup

8.3.1.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more radio links.

This procedure shall use the connection-oriented service of the signalling bearer.

8.3.1.2 Successful Operation

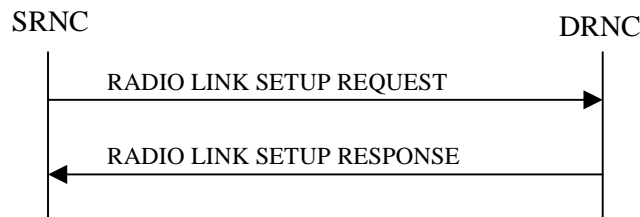


Figure 1: Radio Link Setup procedure: Successful Operation

When the SRNC makes an algorithmic decision to add the first cell or set of cells from a DRNS to the active set of a specific RRC connection, the RADIO LINK SETUP REQUEST message is sent to the corresponding DRNC to request setup of the radio link(s).

The message is also used to establish the connection-oriented service of the signalling bearer in the DRNC. The message includes the S-RNTI associated to the UE, and, if the UE context is already present in the DRNC, the corresponding D-RNTI.

[FDD - The Diversity Control Field indicates for each RL except for the first RL whether the DRNS shall combine the RL with any of the other RLs or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS shall decide for any of the alternatives. When an RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

If the RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

If the *Initial DL TX Power* IE and *UL Eb/No Target* IE [FDD] are present in the message, the DRNS shall use the indicated DL TX Power and UL Eb/No Target [FDD] as initial value.

If the *Primary CPICH Eb/No* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] is present, the DRNC should use them when deciding the Initial DL TX Power.

If the RADIO LINK SETUP REQUEST message includes the *DCH Combination Indicator* IE for a DCH, the DRNS shall treat all DCHs with the same value of this IE as a set of co-ordinated DCHs. The included *RLC Mode* IE of the DCH may be used by the DRNS to optimise the power control.

The *Allocation/Retention Priority* IE defines the priority level that should be used by the DRNS to prioritise the allocation and the retention of the resources used by the DCH. The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise the discard/delay of the data frames of the DCH.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH as the new DCH FP Mode in the Uplink of the user plane for this DCH.

The DRNS shall use the included *ToAWS* IE for a DCH as the new Time of Arrival Window Start Point in the user plane for this DCH.

The DRNS shall use the included *ToAWE* IE for a DCH as the new Time of Arrival Window End Point in the user plane for this DCH.

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

At the reception of the RADIO LINK SETUP REQUEST message, DRNS allocates requested type of channelisation codes and other physical channel resources for each RL and assigns a binding identifier and a transport layer address for each DCH or set of co-ordinated DCHs. This information shall be sent to the SRNS in the message RADIO LINK SETUP RESPONSE when all the RLs have been successfully setup.

If the *Initial DL TX Power* and the *UL Eb/No Target* IEs are not present in the RADIO LINK SETUP REQUEST message, then DRNC shall include the suggested initial UL Eb/No Target and the DL Eb/No Target in the RADIO LINK SETUP RESPONSE message.

In the case of combining one or more RLs the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that the RL is combined with another RL. In this case the Reference RL ID shall be included to indicate with which RL the combination is performed. The Reference RL ID shall be included for all but one of the combined RLs, for which the *Transport Layer Address* IE and the *Binding ID* IE shall be included.

In the case of not combining an RL with another RL, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH of the RL in the RADIO LINK SETUP RESPONSE message.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *Binding Identifier* IE and the *Transport Layer Address* IE shall be included only for one of the DCH in the set of co-ordinated DCHs.

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

The DRNS shall also provide the SRNC with the UTRAN Cell Identifier (UC-Id) and information of the neighbouring cells to the cell(s) where the radio link(s) are added.

If a neighbouring cell is controlled by another RNC, the DRNC shall report also the node identifications (i.e. RNC, CN domain nodes) of the RNC controlling the neighbouring cell.

If there was no UE context for this UE in the DRNS before the RADIO LINK SETUP REQUEST message was received the DRNC shall include the node identifications of the CN Domain nodes that the RNC is connected to (using LAC and RAC of the current cell), and the D-RNTI in the RADIO LINK SETUP RESPONSE message.

[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]

8.3.1.3 Unsuccessful Operation

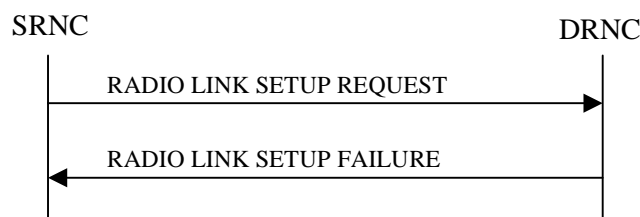


Figure 2: Radio Link Setup procedure: Unsuccessful Operation

In unsuccessful case (i.e. one or more RLs can not be setup) the RADIO LINK SETUP FAILURE message shall be sent to the SRNC, indicating the reason for failure. If some radio links were established successfully, the DRNC shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message.

Typical cause values are:

Radio Network Layer Causes:

- UL Scrambling Code Already in Use

- DL Radio Resources not Available
- UL Radio Resources not Available
- Unknown C-ID
- Macrodiversity Combining not Possible
- Requested Configuration not Supported
- Cell not Available
- Power Level not Supported

Transport Layer Causes:

- Transport Link Failure

Protocol Causes:

- Transaction not Allowed

Miscellaneous Causes:

- Control Processing Overload
- HW Failure
- Not enough User Plane Processing Resources

8.3.1.4 Abnormal Conditions

If the DRNC receives either an S-RNTI or a D-RNTI which already has RL(s) established the DRNC shall send the RADIO LINK SETUP FAILURE message to the SRNC, indicating the reason for failure.

8.3.2 Radio Link Addition

8.3.2.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more additional RLs towards a UE when there is already at least one RL established to the concerning UE via this DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

8.3.2.2 Successful Operation

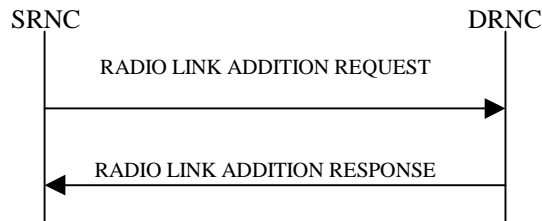


Figure 3: Radio Link Addition procedure: Successful Operation

The procedure is initiated with a RADIO LINK ADDITION REQUEST message sent from the SRNC to the DRNC.

Upon reception, the DRNS 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.

[FDD - The Diversity Control Field indicates for each RL whether the DRNS shall combine the new RL with existing RL(s) or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS shall decide for any of the alternatives. When a new RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

If the *Primary CCPCH Ec/Io* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] measured by the UE is included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power. If the *Primary CCPCH Ec/Io* IE is not present, the DRNS sets the Initial DL TX Power accordingly to the power used by the existing RLs.

[FDD - The DRNS shall use the provided UL Eb/No Target value as the current target for the inner-loop power control.]

[FDD - If the RADIO LINK ADDITION REQUEST message contains an *SSDT Cell Identity* IE, SSDT may be activated for the concerned new RL, with the indicated SSDT Cell Identity used for that RL.]

The DRNS shall activate any feedback mode diversity according to the received settings.

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

In the case of combining an RL with existing RL(s) the DRNC 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 DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the Transport Layer Address and the binding ID for the transport bearer to be established for each DCH of the RL in the RADIO LINK ADDITION RESPONSE message.

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

[FDD - Irrespective of SSDT activation, the DRNS shall include in the RADIO LINK ADDITION RESPONSE message an indication concerning the capability to support SSDT on this RL. Only if the RADIO LINK ADDITION

REQUEST message requested SSTD activation and the RADIO LINK ADDITION RESPONSE message indicates that the SSTD capability is supported for this RL, SSTD is activated in the DRNS.]

For any cell neighbouring of a cell in which a RL was added, the DRNC shall provide in the RADIO LINK ADDITION RESPONSE message the UTRAN Cell Identifier (UC-Id), the Frequency Number, the Primary Scrambling Code and the node identification of CN nodes connected to the RNC controlling the neighbouring cell if the neighbouring cell is not controlled by the DRNC. In addition, if the information is available, the DRNC shall also provide the CPICH Power level and Frame Offset of the neighbouring cell.

The DRNC shall also provide the configured uplink Maximum Eb/No and UL Minimum Eb/No for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. These values are taken into consideration by DRNS admission control and shall be used by the SRNC as limits for the UL inner-loop power control target.

The DRNC shall also provide the selected scrambling- and channelisation codes of the new RLs in order to enable the SRNC to inform the UE about the selected codes.

After sending of the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The DRNS shall start transmission on the new RL after synchronisation is achieved in the Iur user plane as specified in ref. **[Error! Reference source not found.]**.

[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]

8.3.2.3 Unsuccessful Operation

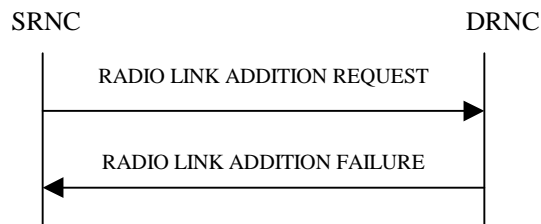


Figure 4: Radio Link Addition procedure: Unsuccessful Operation

If the establishment of at least one RL is unsuccessful, the DRNC shall send a RADIO LINK ADDITION FAILURE as response.

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

Typical cause values are:

Radio Network Layer Causes:

- DL Radio Resources not Available
- UL Radio Resources not Available
- Unknown C-ID
- Macrodiversity Combining not Possible
- Cell not Available
- Power Level not Supported

Transport Layer Causes:

- Transport Link Failure

Miscellaneous Causes:

- Control Processing Overload

- HW Failure
- Not enough User Plane Processing Resources

8.3.2.4 Abnormal Conditions

-

9.3.1 RADIO LINK SETUP REQUEST

9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
S-RNTI	M			
D-RNTI	O			
Allowed Queuing time	O			
UL DPCH Information		1		
UL Scrambling Code	M			
Min UL Channelisation Code Length	M			
Max Number of UL DPCHs	C – CodeLen			
Puncture Limit	M			For the UL.
UL Transport Format Combination Set	M			
UL DPCH Slot Format	M			
UL Eb/No Target	O			
Diversity mode	M			
D Field Length	C-FB			
SSDT Cell ID Length	O			
S Field Length	O			
Mean Bit Rate	O			For the UL.
DL DPCH Information		1		
Transport Format Combination Set	M			
DL DPCH Slot Format	M			
TFCI Signalling Mode	M			
TFCI Presence	C- SlotFormat			
Multiplexing Position	M			
Power Offset Information		1		
PO1	M		Power Offset	Power offset for the TFCI bits.
PO2	M		Power Offset	Power offset for the TPC bits.
PO3	M		Power Offset	Power offset for the pilot bits.
TPC Downlink Step Size	M			
Mean Bit Rate	O			For the DL.
DCH Information		1...<maxnoofDCHs >		
DCH ID	M			
DCH Combination Ind	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
BLER	M			For the UL.
BLER	M			For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
ToAWS	M			
ToAWE	M			
RL Information		1...<maxnoofRLs		

		>		
RL ID	M			
C-ID	M			
Frame Offset	M			
Chip Offset	M			
Propagation Delay	O			
Diversity Control Field	C – NotFirstRL			
Initial DL TX Power	O		DL Power	
Primary CPICH Ec/Io	O			
SSDT Cell ID	O			
<u>>Transmit Diversity Indicator</u>	<u>C – Diversity mode</u>			

Condition	Explanation
CodeLen	This IE is present only "f "Min UL Channelisation Code len"th" equals to 4
FB	This IE is present only if Feed Back mode diversity is activated.
SlotFormat	This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16.
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information .
<u>Diversity mode</u>	<u>This IE is present unless Diversity Mode IE in UL DPCH Information group is "none"</u>

Range bound	Explanation
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofRLs	Maximum no. of RLs for one UE.

9.1.6 RADIO LINK ADDITION REQUEST

9.1.6.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Uplink Eb/No Target	M		Uplink Eb/No	
RL Information		1..<maxnoofRLs-1>		
RL ID	M			
C-Id	M			
Frame Offset	M			
Chip Offset	M			
Diversity Control Field	M			
Primary CPICH Ec/Io	O			
SSDT Cell Identity	O			
>Transmit Diversity Indicator	C = Diversity mode			

Range bound	Explanation
MaxnoofRLs	Maximum number of radio links for one UE
Diversity mode	This IE is present unless Diversity Mode IE in UL DPCCH Information group is "none"

9.2.2.X Transmit Diversity Indicator

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
<u>Transmit Diversity Indicator</u>			<u>ENUMERATED (active, inactive)</u>	

The Transmit Diversity Indicator indicates whether Transmit Diversity shall be active or not.

9.3.3 NBAP PDU Content Definitions

```

-- *****
--
-- PDU definitions for RNSAP.
--
-- *****

RNSAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    AllocationRetentionPriority,
    AllowedQueuingTime,
    BLER,
    BindingID,
    BurstType,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CPICH-EcIo,
    CPICH-Power,
    Cause,
    CellParameterID,
    ChipOffset,
    CompressedModeMethod,
    CriticalityDiagnostics,
    D-FieldLength,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-CombinationInd,
    DCH-ID,
    DL-ChannelisationCode,
    DL-DPCCH-SlotFormat,
    DL-DPCH-SlotNumber,
    DL-EbNo,
    DL-EbNoTarget,
    DL-FrameType,
    DL-Power,
    DL-ScramblingCode,
    DPCH-ID,
    DRX-Parameter,
    DedicatedMeasurementValue,
    DiversityControlField,
    DiversityMode,
    FACH-DataFrameSize,
    FACH-InitialWindowSize,
    FACH-PriorityIndicator,
    FDD-DL-ChannelisationCodeNumber,
    FDD-S-CCPCH-Offset,
    FrameHandlingPriority,
    FrameOffset,
    GapPeriod,
    GapPositionMode,
    L3-Information,
    MAC-c-SDU-Length,
    MaxNrOfUL-DPCHs,
    MeanBitRate,
    MeasurementCharacteristics,
    MeasurementID,
    MidambleShift,
    MinUL-ChannelisationCodeLength,
    MultipleURAsIndicator,
    MultiplexingPosition,
    Offset,
    PD,
    PSCH-PCCPCH-TimeSlot,
    PSCH-TimeSlot,
    PayloadCRC-PresenceIndicator,
    PilotBitsUsedIndicator,
    PowerControlMode,

```

```

PowerOffset,
PowerResumeMode,
PrimaryCCPCH-RSCP,
PrimaryCPICH-EcNo,
PrimaryCPICH-Power,
PrimaryScramblingCode,
PropagationDelay,
PunctureLimit,
RANAP-RelocationInformation,
RL-ID,
RLC-Mode,
RNC-ID,
RepetitionLength,
RepetitionPeriod,
ReportCharacteristics,
S-FieldLength,
S-RNTI,
SAI,
SN,
SRNC-ID,
SSDT-CellID,
SSDT-CellID-Length,
SSDT-Indication,
SSDT-SupportIndicator,
ScaledUL-InterferenceLevel,
ScramblingCode,
ScramblingCodeChange,
SecondaryCCPCH-SlotFormat,
SyncCase,
TDD-ChannelisationCode,
TDD-PhysicalChannelOffset,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TGD,
TGL,
TPC-StepSize,
TimeSlot,
ToAWE,
ToAWS,
TransmitDiversityIndicator,
TransportBearerID,
TransportBearerRequestIndicator,
TransportFormatCombinationSet,
TransportFormatSet,
TransportLayerAddress,
UARFCN,
UC-ID,
UL-DL-CompressedModeSelection,
UL-DPCCH-SlotFormat,
UL-EbNo,
UL-EbNoTarget,
UL-FP-Mode,
UL-ScramblingCode,
URA-ID
FROM RNSAP-IEs

```

```

PrivateExtensionContainer{},
ProtocolExtensionContainer{},
ProtocolIE-ContainerList{},
ProtocolIE-ContainerPair{}

```

--- Partly omitted ---

```

-- *****
--
-- RADIO LINK SETUP REQUEST FDD
--
-- *****

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

RadioLinkSetupRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-S-RNTI                                CRITICALITY ignore TYPE S-RNTI                                PRESENCE
mandatory   } |
    { ID id-D-RNTI                                CRITICALITY ignore TYPE D-RNTI                                PRESENCE
optional   } |
    { ID id-AllowedQueuingTime                    CRITICALITY ignore TYPE AllowedQueuingTime
PRESENCE optional } |
    { ID id-UL-DPCH-Information-RL-SetupReqFDD    CRITICALITY ignore TYPE UL-DPCH-Information-RL-
SetupReqFDD PRESENCE mandatory } |
    { ID id-DL-DPCH-Information-RL-SetupReqFDD    CRITICALITY ignore TYPE DL-DPCH-Information-RL-
SetupReqFDD PRESENCE mandatory } |
    { ID id-DCH-Information-RL-SetupReqFDD        CRITICALITY ignore TYPE DCH-InformationList-RL-
SetupReqFDD PRESENCE mandatory } |
    { ID id-RL-Information-RL-SetupReqFDD         CRITICALITY ignore TYPE RL-InformationList-RL-
SetupReqFDD PRESENCE mandatory },
    ...
}

UL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    ul-ScramblingCode                UL-ScramblingCode,
    minUL-ChannelisationCodeLength    MinUL-ChannelisationCodeLength,
    maxNrOfUL-DPCHs                  MaxNrOfUL-DPCHs OPTIONAL
-- This IE is present only if minUL-ChannelisationCodeLength equals to 4 -- ,
    ul-PunctureLimit                  PunctureLimit,
    ul-TransportFormatCombinationSet  TransportFormatCombinationSet,
    ul-DPCCH-SlotFormat              UL-DPCCH-SlotFormat,
    ul-EbNoTarget                     UL-EbNoTarget OPTIONAL,
    diversityMode                     DiversityMode,
    d-FieldLength                     D-FieldLength OPTIONAL
-- This IE is present only if Feed Back mode diversity is activated -- ,
    sSDT-CellIdLength                 SSdT-CellID-Length OPTIONAL,
    s-FieldLength                     S-FieldLength OPTIONAL,
    ul-meanBitRate                    MeanBitRate OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer { {UL-DPCH-Information-RL-
SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    transportFormatCombinationSet     TransportFormatCombinationSet,
    dl-DPCH-SlotNumber                DL-DPCH-SlotNumber,
    tFCI-SignallingMode               TFCI-SignallingMode,
    tFCI-Presence                     TFCI-Presence OPTIONAL
-- This IE is present if Slot Format is from 12 to 16 -- ,
    multiplexingPosition              MultiplexingPosition,
    powerOffsetInformation             SEQUENCE {
        po1-ForTFCI-Bits              PowerOffset,
        po2-ForTPC-Bits              PowerOffset,
        po3-ForPilotBits              PowerOffset,
        ...
    },
    dl-TPC-StepSize                   TPC-StepSize,
    meanBitRate                        MeanBitRate OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer { {DL-DPCH-Information-RL-
SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationList-RL-SetupReqFDD ::= DCH-IE-ContainerList { {DCH-InformationItemIEs-RL-
SetupReqFDD} }

DCH-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationItem-RL-SetupReqFDD CRITICALITY ignore TYPE DCH-InformationItem-RL-
SetupReqFDD PRESENCE mandatory },
    ...
}

DCH-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
    dCH-ID                            DCH-ID,
    dCH-CombinationInd                 DCH-CombinationInd OPTIONAL,
    rLC-Mode                           RLC-Mode,
    ul-transportFormatSet              TransportFormatSet,
    dl-transportFormatSet              TransportFormatSet,
    ul-BLER                            BLER,
    dl-BLER                            BLER,
    allocationRetentionPriority         AllocationRetentionPriority,

```



```

    frameHandlingPriority          FrameHandlingPriority,
    payloadCRC-PresenceIndicator  PayloadCRC-PresenceIndicator,
    ul-FP-Mode                    UL-FP-Mode,
    toAWS                         ToAWS,
    toAWE                         ToAWE,
    iE-Extensions                 ProtocolExtensionContainer { {DCH-InformationItem-RL-
SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationItem-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-SetupReqFDD ::= RL-IE-ContainerList { {RL-InformationItemIEs-RL-
SetupReqFDD} }

RL-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-SetupReqFDD CRITICALITY ignore TYPE RL-InformationItem-RL-
SetupReqFDD PRESENCE mandatory },
    ...
}

RL-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    uC-ID          C-ID,
    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-InformationList-RL-
SetupReqFDD --,
    dl-InitialTX-Power DL-Power OPTIONAL
    -- Initial DL transmission power -- ,
    cPICH-EcIo CPICH-EcIo OPTIONAL,
    sSDT-CellID SSdT-CellID OPTIONAL,
    transmitDiversityIndicator TransmitDiversityIndicator OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {RL-InformationItem-RL-SetupReqFDD-
ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

--- Partly Omitted ---

```

-- *****
--
-- RADIO LINK ADDITION REQUEST FDD
--
-- *****

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

RadioLinkAdditionRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-EbNoTarget CRITICALITY ignore TYPE UL-EbNo PRESENCE
mandatory } |
    { ID id-RL-InformationList-RL-AdditionRqstFDD CRITICALITY ignore TYPE RL-InformationList-RL-
AdditionRqstFDD PRESENCE mandatory },
    ...
}

RL-InformationList-RL-AdditionRqstFDD ::= RL-IE-ContainerList { {RL-Information-RL-
AdditionRqstFDD-IEs} }

RL-Information-RL-AdditionRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-RL-Information-RL-AdditionRqstFDD CRITICALITY ignore TYPE RL-Information-RL-
AdditionRqstFDD PRESENCE mandatory },
    ...
}

RL-Information-RL-AdditionRqstFDD ::= SEQUENCE {
    rL-ID RL-ID,
    c-ID C-ID,
    frameOffset FrameOffset,
    chipOffset ChipOffset,
    diversityControlField DiversityControlField,
    primaryCPICH-EcNo PrimaryCPICH-EcNo OPTIONAL,
    sSDT-CellID SSDT-CellID OPTIONAL,
    transmitDiversityIndicator TransmitDiversityIndicator OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstFDD-
ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-AdditionRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

9.3.4 Information Element Definitions

--- Partly Omitted ---

```

-- T
-- ** TODO **
TBD ::= NULL
-- Remove this type

TDD-ChannelisationCode ::= INTEGER (1..31)
TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TFCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32
}

TFCI-Presence ::= ENUMERATED {
    not-present,
    present
}

TFCI-SignallingMode ::= ENUMERATED {
    normal,
    split
}

-- ** TODO **
TimeReference ::= INTEGER
-- TimeReference ::= INTEGER (0..255)

TimeSlot ::= INTEGER (0..14)

ToAWE ::= INTEGER (0..2559)
ToAWS ::= INTEGER (0..1279)

TPC-StepSize ::= ENUMERATED {
    half,
    one
}

TGD ::= INTEGER (0..255)

TGL ::= INTEGER (3| 4| 7| 10| 14)

TransmissionTimeInterval ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80--
-- ...
}

TransportBearerID ::= INTEGER (0..4095)

-- Compare title and IE name in table TransportBearerRequestIndicator vs.
-- FACH-PriorityIndicator
TransportBearerRequestIndicator ::= INTEGER { lowest (0), highest (15) } (0..15)

TransportBlockSize ::= INTEGER (1..5000)
-- Unit is bits

TransmitDiversityIndicator ::= ENUMERATED {
    active,
    inactive
}

TransportFormatCombinationSet ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
    SEQUENCE {

```

```

        cTFC          CTFC,
        iE-Extensions ProtocolExtensionContainer { {TransportFormatCombinationSet-ExtIEs}
} OPTIONAL,
    ...
}

TransportFormatCombinationSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet ::= SEQUENCE {
    dynamicParts      TransportFormatSet-DynamicPartList,
    semi-staticPart  TransportFormatSet-Semi-staticPart,
    iE-Extensions    ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
SEQUENCE {
    nrOfTransportBlocks      NrOfTransportBlocks,
    transportBlockSize      TransportBlockSize      OPTIONAL
    -- This IE is only present if nrOfTransportBlocks is greater than 0 --,
    mode                    TransportFormatSet-ModeDP,
    iE-Extensions          ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-
ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeDP ::= CHOICE {
    tdd          TransmissionTimeIntervallList,
    -- This IE is mandatory if not defined as semistatic parameter, otherwise it is absent --
    ...
}

TransmissionTimeIntervallList ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
SEQUENCE {
    transmissionTimeInterval      TransmissionTimeInterval,
    iE-Extensions                ProtocolExtensionContainer { {TransmissionTimeIntervallList-ExtIEs} }
OPTIONAL,
    ...
}

TransmissionTimeIntervallList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-Semi-staticPart ::= SEQUENCE {
    transmissionTime      TransmissionTimeInterval,
    channelCoding         ChannelCodingType,
    codingRate            CodingRate      OPTIONAL
    -- This IE is only present if channelCoding is 'convolutional' or 'turbo' --,
    rateMatchingAttribute RateMatchingAttribute,
    cRC-Size              CRC-Size,
    mode                  TransportFormatSet-ModeSSP      OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {TransportFormatSet-Semi-staticPart-ExtIEs}
} OPTIONAL,
    ...
}

TransportFormatSet-Semi-staticPart-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
    tdd          SecondInterleavingMode,
    ...
}

SecondInterleavingMode ::= ENUMERATED {
    frame-related,
    timeslot-related,
    ...
}

-- TransportLayerAddress      ::= BIT STRING (1..160, ...)

```

```
TransportLayerAddress      ::= OCTET STRING (SIZE (1..20, ...))  
-- U  
UARFCN                     ::= INTEGER (0..698, ...)
```

CHANGE REQUEST				Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.	
	25.423	CR	16r2	Current Version:	3.0.0
GSM (AA.BB) or 3G (AA.BBB) specification number ↑				↑ CR number as allocated by MCC support team	
For submission to: TSG RAN #7 list expected approval meeting # here ↑	for approval for information	<input checked="" type="checkbox"/>	strategic non-strategic	(for SMG use only)	

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from:
<ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: RAN3 **Date:** 29 February 2000

Subject: Rearrangement of Neighbouring Cell Information group

Work item:

Category:	F Correction <input type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input type="checkbox"/> C Functional modification of feature <input checked="" type="checkbox"/> D Editorial modification <input type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input checked="" type="checkbox"/> Release 00 <input type="checkbox"/>
------------------	--	-----------------	--

(only one category shall be marked with an X)

Reason for change: Currently the Neighbouring Cell Information contains some redundant contents. This CR proposes to rearrange the Neighbouring Cell Information group in order to reduce the number of octet occupied by this group.

Clauses affected: 9.1.4 RADIO LINK SETUP RESPONSE
9.1.5 RADIO LINK SETUP FAILURE
9.1.7 RADIO LINK ADDITION RESPONSE
9.1.8 RADIO LINK ADDITION FAILURE

Other specs affected:

Other 3G core specifications	<input type="checkbox"/>	→ List of CRs:	
Other GSM core specifications	<input type="checkbox"/>	→ List of CRs:	
MS test specifications	<input type="checkbox"/>	→ List of CRs:	
BSS test specifications	<input type="checkbox"/>	→ List of CRs:	
O&M specifications	<input type="checkbox"/>	→ List of CRs:	

Other comments:

9.1.4 RADIO LINK SETUP RESPONSE

9.1.4.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
RL Information Response		1..<maxnoofRLs>		
RL ID	M			
SAI	M			
UL Interference Level	M			
DL Code Information		1.. <maxnoofDLCodes		
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
Diversity Indication	C- NotFirstRL			
CHOICE <i>diversity Indication</i> <i>Combining</i>				
RL ID <i>Non Combining or IE not present</i>	M			Reference RL ID for the combining "IE not present" is equivalent to "First RL".
DCH Information Response		0..<maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Maximum Uplink Eb/No	M		Uplink Eb/No	
Minimum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD-Cell Information		0..<maxnoofneighbouringRNCsmaxnoofFDDneighbours>		
RNCUC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
<u>Per FDD Cell Information</u>		10..<maxnoofFDDneighbours>		
C-Id	M			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD-Cell Information	O	0..<maxnoofneighbouringRNCsmaxnoofTDDneighbours>		
RNCUC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
<u>Per TDD Cell Information</u>		10..<maxnoofTDDneighbours>		
C-Id	M			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Uplink Eb/No Target	O		Uplink Eb/No	
Downlink Eb/No Target	O			
Criticality Diagnostics	O			

Condition	Explanation
IfComb	This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.
IfNotComb	This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B.
NotFirstRL	The IE is present only if the RL is not the first RL in the RL Information
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
<i>MaxnoofneighbouringRNCs</i>	<i>Maximum number of neighbouring RNCs</i>
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell.
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell.

9.1.4.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
RL Information Response		1		
RL ID	M			
SAI	M			
UL Interference Level	M			
Maximum Uplink Eb/No	M		Uplink Eb/No	
Minimum Uplink Eb/No	M		Uplink Eb/No	
Uplink Eb/No Target	O		Uplink Eb/No	
Downlink Eb/No Target	O			
UL CCH Information		1..<maxnoofCCHs>		
CCH ID	M			
UL DPCH Information		1..<MaxnoofDPCHs>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DL CCH Information		1..<maxnoofCCHs>		
CCH ID	M			
DL DPCH Information		1..<MaxnoofDPCHs>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DCH Information Response		1..<maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Neighbouring FDD Cell Information	O	0..<maxnoofneighbouringRNCsmaxnoofFDDneighbours>		
RNC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
Per FDD Cell Information		0+0..<maxnoofFDDneighbours>		
C-Id	M			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information	O	0..<maxnoofneighbouringRNCsmaxnoofTDDneighbours>		
RNC-Id	M			
CN PS Domain Identifier	O			

<u>CN-CS Domain Identifier</u>	O			
Per TDD Cell Information		<i>0+0..<maxnoofTDDn eighbours></i>		
<u>C-Id</u>	M			
<u>UARFCN</u>	M			
<u>Frame Offset</u>	O			
<u>Cell Parameter ID</u>	M			
<u>Sync Case</u>	M			
<u>Time Slot</u>	C-Case1			
<u>PSCH Time Slot</u>	C-Case2&3			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofDPCHs	Maximum no. of DPCHs for one CCTrCH.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
<u>MaxnoofneighbouringRNCs</u>	<u>Maximum number of neighbouring RNCs</u>
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell
MaxnoofCCTrCHs	Maximum no. of CCTrCH for one UE.

9.1.5 RADIO LINK SETUP FAILURE

9.1.5.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
Unsuccessful RL Information Response		1...<maxnoofRLs>		
RL ID	M			
Cause	M			
Successful RL Information Response		0..<maxnoofRLs-1>		
RL ID	M			
SAI	M			
UL Interference Level	M			
DL Code Information		1.. <maxnoofDLCodes		
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
Diversity Indication	M			
CHOICE <i>diversity Indication Combining</i>				
RL ID	M			Reference RL ID for the combining
<i>Non Combining or IE not present</i>				"IE not present" is equivalent to "First RL".
DCH Information Response		0..<maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Neighbouring FDD-Cell Information	O	0..<maxnoofneighbouringRNCs>		
<u>RNCUC-Id</u>	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
Per FDD Cell Information		±0..<maxnoofFDDneighbours>		
<u>C-Id</u>	M			
<u>UARFCN</u>	M			
<u>Frame Offset</u>	O			
<u>Primary Scrambling Code</u>	M			
<u>Primary CPICH Power</u>	O			
Neighbouring TDD-Cell Information	O	0..<maxnoofneighbouringRNCs>		
<u>RNCUC-Id</u>	M			
<u>CN-PS-Domain-Identifier</u>	O			
<u>CN-CS-Domain-Identifier</u>	O			
Per TDD Cell Information		±0..<maxnoofTDDneighbours>		
<u>C-Id</u>	M			
<u>UARFCN</u>	M			
<u>Frame Offset</u>	O			
<u>Cell Parameter ID</u>	M			
<u>Sync Case</u>	M			
<u>Time Slot</u>	C-Case3			
<u>PSCH Time Slot</u>	C-Case2&3			
Uplink Eb/No Target	O		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Minimum Uplink Eb/No	M		Uplink Eb/No	
Downlink Eb/No Target	O			
Criticality Diagnostics	O			

Condition	Explanation
IfComb	This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.
IfNotComb	This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B.
NotFirstRL	The IE is present only if the RL is not the first RL in the RL Information
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
<u>MaxnoofneighbouringRNCs</u>	<u>Maximum number of neighbouring RNCs</u>
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell

9.1.5.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Unsuccessful RL Information Response		1		
RL ID	M			
Cause	M			
Criticality Diagnostics	O			

9.1.7 RADIO LINK ADDITION RESPONSE

9.1.7.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
RL Information Response		1..<maxnoofRLs-1>		
RL ID	M			
SAI	M			
UL Interference Level	M			
DL Code Information		1..<maxnoofDLCode s>		
DL Scrambling Code	M			
DL Channelisation Code	M			
Diversity Indication	M			
CHOICE <i>diversity indication</i>				
<i>Combining</i>				
RL ID	M			Reference RL-Id
<i>Non combining</i>				
DCH Information Response		1..<maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Minimum Uplink Eb/No	M		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD-Cell Information		0..<maxnoofneighbouringRNCsmaxnoof FDDNeighbours>		
RNCUC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
Per FDD Cell Information		±0..<maxnoofFDDneighbours>		
C-Id	M			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD-Cell Information		0..<maxnoofneighbouringRNCsmaxnoof TDDNeighbours>		
RNCUC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
Per TDD Cell Information		±0..<maxnoofTDDneighbours>		
C-Id	M			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
MaxnoofRLs	Maximum number of radio links for one UE
MaxnoofneighbouringRNCs	Maximum number of neighbouring RNCs
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell
MaxnoofDLCodes	Maximum number of DL code information

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
RL Information Response		1		
RL ID	M			
SAI	M			
UL Interference Level	M			
UL CCTrCH Information		1..<maxnoof CCTrCHs>		
CCTrCH ID	M			
UL DPCH Information		1..<maxnoOfDPCHs >		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DL CCTrCH Information		1..<maxnoof CCTrCHs>		
CCTrCH ID	M			
DL DPCH information		1..<maxnoOfDPCHs >		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
Diversity Indication	M			
CHOICE <i>diversity indication</i>				
<i>Combining</i>				
RL ID	M			Reference RL
<i>Non combining</i>				
DCH Information Response		1..<maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Minimum Uplink Eb/No	M		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		0..<maxnoofneighbouringRNCs>0..<maxnoofFDDNeighbours >		
RNCUC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
Per FDD Cell Information		10..<maxnoofFDDneighbours>		
C-Id	M			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information		0..<maxnoofneighbouringRNCs>0..<maxnoofTDDNeighbours >		
RNCUC-Id	M			

<u>CN-PS-Domain-Identifier</u>	O			
<u>CN-CS-Domain-Identifier</u>	O			
Per TDD Cell Information		<u>10..<maxnoofTDDneighbours></u>		
<u>C-Id</u>	M			
<u>UARFCN</u>	M			
<u>Frame Offset</u>	O			
<u>Cell Parameter ID</u>	M			
<u>Sync Case</u>	M			
<u>Time Slot</u>	C-Case1			
<u>PSCH Time Slot</u>	C-Case2&3			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range Bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
<u>MaxnoofneighbouringRNCs</u>	<u>Maximum number of neighbouring RNCs</u>
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell
MaxnoofDLCodes	Maximum number of DL code information
MaxnoOfDPCHs	Maximum number of DPCH in one CCTrCH
MaxnoofCCTrCHs	no. of CCTrCH for one UE.

9.1.8 RADIO LINK ADDITION FAILURE

9.1.8.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Unsuccessful RL Information Response		1..<maxnoofRLs-1>		
RL ID	M			
Cause	M			
Successful RL Information Response		1..<maxnoofRLs-2>		
RL ID	M			
SAI	M			
UL Interference Level	M			
DL Code Information		1..<maxnoofDLCode s>		
DL scrambling code	M			
DL channelisation code	M			
Diversity Indication	M			
CHOICE <i>diversity indication</i>				
<i>Combining</i>				
RL ID	M			Reference RL-Id
<i>Non combining</i>				
DCH Information Response		1..<maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Minimum Uplink Eb/No	M		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		0..<maxnoofneighbouringRNCs>0..<maxnoofFDDNeighbours>		
RNC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
Per FDD Cell Information		10..<maxnoofFDDneighbouring>		
C-Id	M			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information		0..<maxnoofneighbouringRNCs>0..<maxnoofTDDNeighbours>		
RNC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
Per TDD Cell Information		01..<maxnoofTDDneighbouring>		
C-Id	M			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
MaxnoofRLs	Maximum number of radio links for one UE
<u>MaxnoofneighbouringRNCs</u>	<u>Maximum number of neighbouring RNCs</u>
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell
MaxnoofDLCodes	Maximum number of DL code information

9.1.8.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Unsuccessful RL Information Response		1		
RL ID	M			
Cause	M			
Criticality Diagnostics	O			

9.3.3 PDU Definitions to be corrected!!

```

.....
maxNoOfDL-Codes,
maxNrOfCCTrCHs,
maxNrOfDCHs,
maxNrOfDL-Codes,
maxNrOfDPCHs,
maxNrOfFACH-FD-Size,
maxNrOfFDD-Neighbours,
maxNrOfMACcSDU-Length,
maxNrOfTDD-Neighbours,
maxNrOfRLs,
maxNrOfSCCPCHs,
maxRNCinURA,
maxnoofneighbouringRNCs
maxnoofFDDneighboursperRNC
maxnoofTDDneighboursperRNC

FROM RNSAP-Constants;

-- *****
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- *****

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

RadioLinkSetupResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE
optional } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier
PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier
PRESENCE optional } |
    { ID id-RL-InformationResponseList-RL-SetupRspFDD
                CRITICALITY ignore TYPE RL-InformationResponseList-RL-SetupRspFDD
                PRESENCE mandatory } |
    { ID id-UL-EbNoTarget          CRITICALITY ignore TYPE UL-EbNoTarget          PRESENCE
optional } |
    { ID id-DL-EbNoTarget          CRITICALITY ignore TYPE DL-EbNoTarget          PRESENCE
optional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-SetupRspFDD ::= RL-IE-ContainerList { {RL-
InformationResponseItemIEs-RL-SetupRspFDD} }

RL-InformationResponseItemIEs-RL-SetupRspFDD RNSAP-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,
    sAI                  SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation   DL-CodeInformationList-RL-SetupRspFDD,
    sSDT-SupportIndicator SSdT-SupportIndicator,
    maxUL-EbNo           UL-EbNo,
    minUL-EbNo           UL-EbNo,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponseItem-RL-
SetupRspFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **

```

```

DL-CodeInformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-
CodeInformationItem-RL-SetupRspFDD

DL-CodeInformationItem-RL-SetupRspFDD ::= SEQUENCE {
  dl-ScramblingCode          DL-ScramblingCode,
  fdd-DL-ChannelisationCodeNumber      FDD-DL-ChannelisationCodeNumber,
  -- ** NOTE: How many alternatives are there, 2 or 3? **
  diversityIndication        CHOICE {
    combining                  SEQUENCE {
      rL-ID                    RL-ID
    },
    nonCombiningOrIENotPresent SEQUENCE {
      dch-InformationResponse-RL-SetupRspFDD DCH-InformationResponseList-RL-SetupRspFDD
    }
  } OPTIONAL
  }
  -- This IE is present only if the RL is not the first on in the RL Information -- ,
  iE-Extensions              ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
SetupRspFDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CodeInformationItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-SetupRspFDD

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

DCH-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOfFDD-Neighbours)) OF
NeighbouringFDD-CellInformationItem-RL-SetupRsp

NeighbouringFDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
  rNC-IDuC-ID          RL-SetupRsp RL-SetupRsp,
  cN-PS-DomainIdentifier      CN-PS-DomainIdentifier      OPTIONAL,
  cN-CS-DomainIdentifier      CN-CS-DomainIdentifier      OPTIONAL,
  per-FDD-Cell-Information Per-FDD-Cell-Information,
  uARFCN                  UARFCN,
  frameOffset            FrameOffset            OPTIONAL,
  primaryScramblingCode   PrimaryScramblingCode,
  primaryCPICH-Power     PrimaryCPICH-Power     OPTIONAL,
  iE-Extensions              ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
  ...
}

NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

Per-FDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofFDDneighboursperRNC)) OF
SEQUENCE {
  c-Id                      C-Id,
  uARFCN                    UARFCN,
  frameOffset              FrameOffset            OPTIONAL,
  primaryScramblingCode    PrimaryScramblingCode,
  primaryCPICH-Power      PrimaryCPICH-Power     OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { Per-FDD-Cell-Information -
ExtIEs} } OPTIONAL,
  ...
}

Per-FDD-Cell-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

NeighbouringTDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOfTDD-Neighbours)) OF
  NeighbouringTDD-CellInformationItem-RL-SetupRsp

NeighbouringTDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
  rNC-Id-Id RNC-ID-Id,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  per-TDD-Cell-Information Per-TDD-Cell-Information,
  uARFCN UARFCN,
  frameOffset FrameOffset OPTIONAL,
  cellParameterID CellParameterID,
  syncCase SyncCase,
  timeSlot TimeSlot OPTIONAL
  -- This IE is present only if SyncCase is Case1 -- ,
  pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
  This IE is present only if pSCH PCCPCH Allocation = Case3 ,
  ul-EbNo UL-EbNo OPTIONAL,
  dl-EbNo DL-EbNo OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
  ...
}

NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

Per-TDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofTDDneighboursperRNC)) OF
  SEQUENCE {
    c-Id C-Id,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    cellParameterID CellParameterID,
    syncCase SyncCase,
    timeSlot TimeSlot OPTIONAL,
    -- This IE is present only if SyncCase is Case1 -- ,
    pSCH-TimeSlot PSCH-TimeSlot OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { Per-TDD-Cell-Information -
ExtIEs} } OPTIONAL,
    ...
  }

Per-TDD-Cell-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkSetupResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****

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

RadioLinkSetupResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI CRITICALITY ignore TYPE D-RNTI PRESENCE
optional } |
  { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier
PRESENCE optional } |
  { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier
PRESENCE optional } |
  { ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore TYPE RL-InformationResponse-
RL-SetupRspTDD PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
  ...
}

RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
  rL-ID RL-ID,
  sAI SAI,
  ul-InterferenceLevel ScaledUL-InterferenceLevel,
  maxUL-EbNo UL-EbNo,

```

```

minUL-EbNo                UL-EbNo,
ul-EbNoTarget             UL-EbNo                OPTIONAL,
dl-EbNoTarget             DL-EbNo                OPTIONAL,
ul-CCTrCHInformation      UL-CCTrCHInformationList-RL-SetupRspTDD,
dl-CCTrCHInformation      DL-CCTrCHInformationList-RL-SetupRspTDD,
dCH-InformationResponse   DCH-InformationResponseList-RL-SetupRspTDD,
neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
-- refer to "NeighbouringFDD-CellInformationList-RL-SetupRsp" in the "RL Seup Response FDD"
neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
-- refer to "NeighbouringFDD-CellInformationList-RL-SetupRsp" in the "RL Seup Response FDD"
iE-Extensions             ProtocolExtensionContainer { {RL-InformationResponse-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

RL-InformationResponse-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-
CCTrCHInformationItem-RL-SetupRspTDD

UL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
cCTrCH-ID                  CCTrCH-ID,
ul-DPCH-Information        UL-DPCH-InformationList-RL-SetupRspTDD,
iE-Extensions              ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-
InformationItem-RL-SetupRspTDD

-- **NOTE: UL-DPCH-InformationItem-RL-SetupRspTDD and DL-DPCH-InformationItem-RL-SetupRspTDD
-- are currently similar. Combine them? **
UL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
dPCH-ID                    DPCH-ID,
tDD-ChannelisationCode     TDD-ChannelisationCode,
burstType                   BurstType,
midambleShift               MidambleShift,
timeSlot                    TimeSlot,
tDD-PhysicalChannelOffset   TDD-PhysicalChannelOffset,
repetitionPeriod            RepetitionPeriod,
repetitionLength            RepetitionLength,
tFCI-Presence               TFCI-Presence,
iE-Extensions              ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-
CCTrCHInformationItem-RL-SetupRspTDD

DL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
cCTrCH-ID                  CCTrCH-ID,
dl-DPCH-Information        DL-DPCH-InformationList-RL-SetupRspTDD,
iE-Extensions              ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-
InformationItem-RL-SetupRspTDD

DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
dPCH-ID                    DPCH-ID,
tDD-ChannelisationCode     TDD-ChannelisationCode,

```

```

burstType                BurstType,
midambleShift            MidambleShift,
timeSlot                 TimeSlot,
tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
repetitionPeriod         RepetitionPeriod,
repetitionLength         RepetitionLength,
tFCI-Presence            TFCI-Presence,
iE-Extensions            ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-InformationResponseList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-SetupRspTDD

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

DCH-InformationResponseItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkSetupResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK SETUP FAILURE FDD
--
-- *****

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

RadioLinkSetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE
mandatory } |
{ ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier
PRESENCE mandatory } |
{ ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier
PRESENCE mandatory } |
{ ID id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-
SetupFailureFDD
PRESENCE mandatory } |
{ ID id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD
CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-
SetupFailureFDD
PRESENCE mandatory } |
{ ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
...
}

UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList { {UnsuccessfulRL-
InformationResponse-RL-SetupFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
SetupFailureFDD
PRESENCE mandatory },
...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
rL-ID                      RL-ID,
cause                      Cause,

```

```

    iE-Extensions          ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList { {SuccessfulRL-
InformationResponse-RL-SetupFailureFDD-IEs} }

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD
      CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-
SetupFailureFDD
      PRESENCE mandatory },
    ...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    sAI           SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation DL-CodeInformationList-RL-SetupFailureFDD,
    sSDT-SupportIndicator SSdT-SupportIndicator,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupFailureFDD
OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupFailureFDD
OPTIONAL,
    ul-EbNoTarget          UL-EbNo,
    maxUL-EbNo            UL-EbNo,
    minUL-EbNo            UL-EbNo,
    dl-EbNoTarget          DL-EbNo,
    iE-Extensions          ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-
RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}
-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-
CodeInformationItem-RL-SetupFailureFDD

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CodeInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    -- ** NOTE: How many alternatives are there, 2 or 3? **
    diversityIndication        CHOICE {
        combining              SEQUENCE {
            rL-ID              RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dCH-InformationResponse-RL-SetupFailureFDD DCH-InformationResponseList-RL-
SetupFailureFDD OPTIONAL
        }
    }
    OPTIONAL
    -- This IE is present only if the RL is not the first on in the RL Information -- ,
    iE-Extensions          ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CodeInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-SetupFailureFDD

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

DCH-InformationResponseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```



```

}
...
}
NeighbouringFDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOfFDD-Neighbours)) OF
  NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
  rNC-IDuE-ID RNC-IDC-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  per-FDD-Cell-Information Per-FDD-Cell-Information,
  uARFCN UARFCN,
  frameOffset FrameOffset OPTIONAL,
  primaryScramblingCode PrimaryScramblingCode,
  primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

Per-FDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofFDDneighboursperRNC)) OF
  SEQUENCE {
    c-Id C-Id,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { Per-FDD-Cell-Information -
ExtIEs} } OPTIONAL,
    ...
  }

Per-FDD-Cell-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

NeighbouringTDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOfTDD-Neighbours)) OF
  NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
  rNC-IDuE-ID RNC-IDC-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  per-TDD-Cell-Information Per-TDD-Cell-Information,
  uARFCN UARFCN,
  frameOffset FrameOffset OPTIONAL,
  cellParameterID CellParameterID,
  syncCase SyncCase,
  timeSlot TimeSlot,
  pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
  -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
  iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

Per-TDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofTDDneighboursperRNC)) OF
  SEQUENCE {
    c-Id C-Id,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    cellParameterID CellParameterID,
    syncCase SyncCase,
    timeSlot TimeSlot OPTIONAL,
    -- This IE is present only if SyncCase is Case1 -- ,
    pSCH-TimeSlot PSCH-TimeSlot OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { Per-TDD-Cell-Information -
ExtIEs} } OPTIONAL,
    ...
  }

```

```
Per-TDD-Cell-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
RadioLinkSetupFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

-----partly omitted-----

```
-- *****
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

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

RadioLinkAdditionResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
  optional { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE
  { ID id-RL-InformationResponseList-RL-AdditionRspFDD
          CRITICALITY ignore TYPE RL-InformationResponseList-RL-AdditionRspFDD
          PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics  CRITICALITY ignore TYPE CriticalityDiagnostics
  PRESENCE optional },
  ...
}

RL-InformationResponseList-RL-AdditionRspFDD ::= RL-IE-ContainerList { {RL-
InformationResponseItemIEs-RL-AdditionRspFDD} }

RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-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,
  sAI            SAI,
  ul-InterferenceLevel          ScaledUL-InterferenceLevel,
  dl-CodeInformation          DL-CodeInformationList-RL-AdditionRspFDD,
  sSDT-SupportIndicator          SSdT-SupportIndicator,
  maxUL-EbNo          UL-EbNo,
  minUL-EbNo          UL-EbNo,
  neighbouringFDD-CellInformation          NeighbouringFDD-CellInformationList-RL-SetupRsp
OPTIONAL,
  neighbouringTDD-CellInformation          NeighbouringTDD-CellInformationList-RL-SetupRsp
OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { {RL-InformationResponseItem-RL-
AdditionRspFDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-
CodeInformationItem-RL-AdditionRspFDD

DL-CodeInformationItem-RL-AdditionRspFDD ::= SEQUENCE {
  dl-ScramblingCode          DL-ScramblingCode,
  fDD-DL-ChannelisationCodeNumber          FDD-DL-ChannelisationCodeNumber,
  -- ** NOTE: How many alternatives are there, 2 or 3? **
  diversityIndication          CHOICE {
```

```

        combining                               SEQUENCE {
            rL-ID                               RL-ID
        },
        nonCombiningOrIENotPresent             SEQUENCE {
            dCH-InformationResponse-RL-AdditionRspFDD
            DCH-InformationResponseList-RL-
            AdditionRspFDD OPTIONAL
        }
        }
        OPTIONAL
        -- This IE is present only if the RL is not the first on in the RL Information -- ,
        iE-Extensions                          ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
        AdditionRspFDD-ExtIEs} } OPTIONAL,
        ...
    }

DL-CodeInformationItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-AdditionRspFDD

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

DCH-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOfFDD-Neighbours)) OF
NeighbouringFDD-CellInformationItem-RL-AdditionRsp

NeighbouringFDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {

    rNC-IDuE-ID                               RNC-IDC-ID,
    cN-PS-DomainIdentifier                    CN-PS-DomainIdentifier    OPTIONAL,
    cN-CS-DomainIdentifier                    CN-CS-DomainIdentifier    OPTIONAL,
    per-FDD-Cell-Information                  Per-FDD-Cell-Information,
    uARFCN                                    UARFCN,
    frameOffset                               FrameOffset                OPTIONAL,
    primaryScramblingCode                     PrimaryScramblingCode,
    primaryCPICH-Power                        PrimaryCPICH-Power          OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { {NeighbouringFDD-
    CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
    ...

}

NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}


Per-FDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofFDDneighboursperRNC)) OF
SEQUENCE {
    c-Id                                     C-Id,
    uARFCN                                  UARFCN,
    frameOffset                             FrameOffset                OPTIONAL,
    primaryScramblingCode                   PrimaryScramblingCode,
    primaryCPICH-Power                      PrimaryCPICH-Power          OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { { Per-FDD-Cell-Information -
    ExtIEs} } OPTIONAL,
    ...
}

Per-FDD-Cell-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}


NeighbouringTDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOfTDD-Neighbours)) OF
NeighbouringTDD-CellInformationItem-RL-AdditionRsp

NeighbouringTDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {

    rNC-IDuE-ID                               RNC-IDC-ID,
    cN-PS-DomainIdentifier                    CN-PS-DomainIdentifier    OPTIONAL,
    cN-CS-DomainIdentifier                    CN-CS-DomainIdentifier    OPTIONAL,
    per-TDD-Cell-Information                  Per-TDD-Cell-Information,


```

```

uARFCN UARFCN,
frameOffset FrameOffset OPTIONAL,
cellParameterID CellParameterID,
syncCase SyncCase,
timeSlot TimeSlot,
pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
This IE is present only if pSCH-PCCPCH-Allocation = Case3,
iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Per-TDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofTDDneighboursperRNC)) OF
SEQUENCE {
c-Id C-Id,
uARFCN UARFCN,
frameOffset FrameOffset OPTIONAL,
cellParameterID CellParameterID,
syncCase SyncCase,
timeSlot TimeSlot OPTIONAL,
-- This IE is present only if SyncCase is Case1 --,
pSCH-TimeSlot PSCH-TimeSlot OPTIONAL,
iE-Extensions ProtocolExtensionContainer { { Per-TDD-Cell-Information -
ExtIEs} } OPTIONAL,
...
}

Per-TDD-Cell-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkAdditionResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****

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

RadioLinkAdditionResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-D-RNTI CRITICALITY ignore TYPE D-RNTI PRESENCE
optional } |
{ ID id-RL-InformationResponse-RL-AdditionRspTDD
CRITICALITY ignore TYPE RL-InformationResponse-RL-AdditionRspTDD
PRESENCE mandatory } |
{ ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
...
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
rL-ID RL-ID,
sAI SAI,
ul-InterferenceLevel ScaledUL-InterferenceLevel,
ul-CCTrCHInformation UL-CCTrCHInformationList-RL-AdditionRspTDD,
dl-CCTrCHInformation DL-CCTrCHInformationList-RL-AdditionRspTDD,
diversityIndication CHOICE {
combining SEQUENCE {
rL-ID RL-ID
},
nonCombiningOrIENotPresent SEQUENCE {
dCH-InformationResponse-RL-AdditionRspFDD DCH-InformationResponseList-RL-
AdditionRspFDD OPTIONAL
}
OPTIONAL,
maxUL-EbNo UL-EbNo,
minUL-EbNo UL-EbNo,
}

```

```

    neighbouringFDD-CellInformation      NeighbouringFDD-CellInformationList-RL-AdditionRspTDD
OPTIONAL,
    neighbouringTDD-CellInformation      NeighbouringTDD-CellInformationList-RL-AdditionRspTDD
OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { {RL-InformationResponse-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-
CCTrCHInformationItem-RL-AdditionRspTDD

UL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    cCTrCH-ID                           CCTrCH-ID,
    ul-DPCH-Information                  UL-DPCH-InformationList-RL-AdditionRspTDD,
    iE-Extensions                       ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-
InformationItem-RL-AdditionRspTDD

UL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dPCH-ID                             DPCH-ID,
    tDD-ChannelisationCode               TDD-ChannelisationCode,
    burstType                            BurstType,
    midambleShift                        MidambleShift,
    timeSlot                             TimeSlot,
    offset                                Offset,
    tDD-PhysicalChannelOffset            TDD-PhysicalChannelOffset,
    repetitionPeriod                    RepetitionPeriod,
    repetitionLength                    RepetitionLength,
    tFCI-Presence                       TFCI-Presence,
    iE-Extensions                       ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-
CCTrCHInformationItem-RL-AdditionRspTDD

DL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    cCTrCH-ID                           CCTrCH-ID,
    dl-DPCH-Information                  DL-DPCH-InformationList-RL-AdditionRspTDD,
    iE-Extensions                       ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-
InformationItem-RL-AdditionRspTDD

DL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dPCH-ID                             DPCH-ID,
    tDD-ChannelisationCode               TDD-ChannelisationCode,
    burstType                            BurstType,
    midambleShift                        MidambleShift,
    timeSlot                             TimeSlot,
    tDD-PhysicalChannelOffset            TDD-PhysicalChannelOffset,
    repetitionPeriod                    RepetitionPeriod,
    repetitionLength                    RepetitionLength,
    tFCI-Presence                       TFCI-Presence,

```

```

    iE-Extensions          ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringFDD-CellInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOfFDD-Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD

NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    rNC-IDuE-ID          RNC-IDC-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier          OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier          OPTIONAL,
    per-FDD-Cell-Information Per-FDD-Cell-Information,
    uARFCN              UARFCN,
    frameOffset        FrameOffset          OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power PrimaryCPICH-Power   OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Per-FDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofFDDneighboursperRNC)) OF
    SEQUENCE {
        c-Id          C-Id,
        uARFCN        UARFCN,
        frameOffset  FrameOffset          OPTIONAL,
        primaryScramblingCode PrimaryScramblingCode,
        primaryCPICH-Power PrimaryCPICH-Power   OPTIONAL,
        iE-Extensions ProtocolExtensionContainer { { Per-FDD-Cell-Information -
ExtIEs} } OPTIONAL,
        ...
    }

Per-FDD-Cell-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOfTDD-Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD

NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    rNC-IDuE-ID          RNC-IDC-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier          OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier          OPTIONAL,
    per-TDD-Cell-Information Per-TDD-Cell-Information,
    uARFCN              UARFCN,
    frameOffset        FrameOffset          OPTIONAL,
    cellParameterID    CellParameterID,
    syncCase           SyncCase,
    timeSlot           TimeSlot,
    pSCH-TimeSlot      PSCH-TimeSlot        OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
    iE-Extensions      ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Per-TDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofTDDneighboursperRNC)) OF
    SEQUENCE {
        c-Id          C-Id,
        uARFCN        UARFCN,
        frameOffset  FrameOffset          OPTIONAL,
        cellParameterID CellParameterID,
        syncCase     SyncCase,
        timeSlot     TimeSlot          OPTIONAL,
        -- This IE is present only if SyncCase is Case1 -- ,
        pSCH-TimeSlot PSCH-TimeSlot    OPTIONAL,
        iE-Extensions ProtocolExtensionContainer { { Per-TDD-Cell-Information -
ExtIEs} } OPTIONAL,
    }


```

```

...
}

```

```

Per-TDD-Cell-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

...
}

```

```

RadioLinkAdditionResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

-- *****
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- *****

```

```

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

```

```

RadioLinkAdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
  AdditionFailureFDD
  CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-
  PRESENCE mandatory } |
  { ID id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
  AdditionFailureFDD
  CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-
  PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics
  PRESENCE optional },
  ...
}

```

```

UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList {
{UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }

```

```

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
  AdditionFailureFDD
  CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
  PRESENCE mandatory },
  ...
}

```

```

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  cause         Cause,
  iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

```

```

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList { {SuccessfulRL-
InformationResponse-RL-AdditionFailureFDD-IEs} }

```

```

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
  AdditionFailureFDD
  CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-
  PRESENCE mandatory },
  ...
}

```

```

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  SAI           SAI,
  ul-InterferenceLevel ScaledUL-InterferenceLevel,
  dl-CodeInformation DL-CodeInformationList-RL-AdditionFailureFDD,
  sSDT-SupportIndicator SSDT-SupportIndicator,
  maxUL-EbNo      UL-EbNo,
  minUL-EbNo      UL-EbNo,
}

```

```

    neighbouringFDD-CellInformation      NeighbouringFDD-CellInformationList-RL-
AdditionFailureFDD OPTIONAL,
    neighbouringTDD-CellInformation      NeighbouringTDD-CellInformationList-RL-
AdditionFailureFDD OPTIONAL,
    iE-Extensions                        ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-
RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-
CodeInformationItem-RL-AdditionFailureFDD

DL-CodeInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
    dl-ScramblingCode                    DL-ScramblingCode,
    dl-ChannelisationCode                DL-ChannelisationCode,
    diversityIndication                  CHOICE {
        combining                         SEQUENCE {
            rL-ID                          RL-ID
        },
        nonCombiningOrIENotPresent        SEQUENCE {
            dCH-InformationResponse-RL-AdditionFailureFDD      DCH-InformationResponseList-RL-
AdditionFailureFDD OPTIONAL
        }
    } OPTIONAL
    -- This IE is present only if the RL is not the first on in the RL Information -- ,
    iE-Extensions                        ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CodeInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-AdditionFailureFDD

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

DCH-InformationResponseItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOfFDD-Neighbours)) OF
NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
    rNC-IDuC-ID                          RNC-IDC-ID,
    cN-PS-DomainIdentifier                 CN-PS-DomainIdentifier      OPTIONAL,
    cN-CS-DomainIdentifier                 CN-CS-DomainIdentifier      OPTIONAL,
    per-FDD-Cell-Information              Per-FDD-Cell-Information,
    uARFCN                                UARFCN,
    frameOffset                           FrameOffset                OPTIONAL,
    primaryScramblingCode                 PrimaryScramblingCode,
    ePICH Power                           CPICH Power                OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Per-FDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofFDDneighboursperRNC)) OF
SEQUENCE {
    c-Id                                  C-Id,
    uARFCN                                UARFCN,
    frameOffset                           FrameOffset                OPTIONAL,

```



```

primaryScramblingCode PrimaryScramblingCode,
primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
iE-Extensions ProtocolExtensionContainer { { Per-FDD-Cell-Information -
ExtIEs} } OPTIONAL,
...
}

```

```

Per-FDD-Cell-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOfTDD-Neighbours)) OF
NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD

```

```

NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
rNC-IDuC-ID RNC-IDC-ID,
cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
per-TDD-Cell-Information Per-TDD-Cell-Information,
uARFCN UARFCN,
frameOffset FrameOffset OPTIONAL,
cellParameterID CellParameterID,
syncCase SyncCase,
timeSlot TimeSlot,
pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
-- This IE is present only if pSCH-PCCPCH-Allocation = Case3 --,
iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
...
}

```

```

NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

Per-TDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofTDDneighboursperRNC)) OF
SEQUENCE {
c-Id C-Id,
uARFCN UARFCN,
frameOffset FrameOffset OPTIONAL,
cellParameterID CellParameterID,
syncCase SyncCase,
timeSlot TimeSlot OPTIONAL,
-- This IE is present only if SyncCase is Case1 --,
pSCH-TimeSlot PSCH-TimeSlot OPTIONAL,
iE-Extensions ProtocolExtensionContainer { { Per-TDD-Cell-Information -
ExtIEs} } OPTIONAL,
...
}

```

```

Per-TDD-Cell-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

RadioLinkAdditionFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

9.3.6 Constant Definitions

```

-- *****
--
-- Constant definitions
--
-- ....

```

```

-- *****
-- *****
--
-- Lists
--
-- *****

```

```

maxRateMatching INTEGER ::= 10
maxNrOfTFCs INTEGER ::= 10
maxNrOfTFS INTEGER ::= 10

```

maxNoOfDL-Codes	INTEGER ::= 10
maxNrOfCCTrCHs	INTEGER ::= 10
maxNrOfDCHs	INTEGER ::= 10
maxNrOfDL-Codes	INTEGER ::= 10
maxNrOfDPCHs	INTEGER ::= 10
maxNrOfErrors	INTEGER ::= 10
maxNrOfFACH-FD-Size	INTEGER ::= 10
maxNrOfFDD-Neighbours	INTEGER ::= 10
maxNrOfMACcSDU-Length	INTEGER ::= 10
maxNrOfTDD-Neighbours	INTEGER ::= 10
maxNrOfRLs	INTEGER ::= 10
maxNrOfSCCPCHs	INTEGER ::= 10
maxRNCinURA	INTEGER ::= 10
maxTTI-Count	INTEGER ::= 10
<u>maxnoofneighbouringRNCs</u>	<u>INTEGER ::= 10</u>
<u>maxnoofFDDneighboursperRNC</u>	<u>INTEGER ::= 10</u>
<u>maxnoofTDDneighboursperRNC</u>	<u>INTEGER ::= 10</u>

3GPP-RAN-WG3 Meeting #11
Sophia Antipolis, France, 28th February – 3rd
March 2000

Document R3-000975

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST				<i>Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.</i>	
25.423	CR	56r3	Current Version: 3.0.0		
<small>GSM (AA.BB) or 3G (AA.BBB) specification number ↑</small>		<small>↑ CR number as allocated by MCC support team</small>			
For submission to: TSG-RAN#7	for approval	<input checked="" type="checkbox"/>	strategic	<input type="checkbox"/>	<small>(for SMG use only)</small>
<small>list expected approval meeting # here</small>	for information	<input type="checkbox"/>	non-strategic	<input type="checkbox"/>	

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: RAN-WG3 **Date:** 28 February 2000

Subject: CR to 25.423: Refinement of Tabular and ASN.1 in RNSAP.

Work item:

Category: <small>(only one category shall be marked with an X)</small>	F Correction	<input checked="" type="checkbox"/>	Release:	Phase 2	<input type="checkbox"/>
	A Corresponds to a correction in an earlier release	<input type="checkbox"/>		Release 96	<input type="checkbox"/>
	B Addition of feature	<input type="checkbox"/>		Release 97	<input type="checkbox"/>
	C Functional modification of feature	<input type="checkbox"/>		Release 98	<input type="checkbox"/>
	D Editorial modification	<input type="checkbox"/>		Release 99	<input checked="" type="checkbox"/>
			Release 00	<input type="checkbox"/>	

Reason for change:

- The current version of RNSAP has some mistakes in the tabular and ASN.1. This CR provides the refinement of the tabular and ASN.1. The details of the corrections are described in R3-000653.

Clauses affected: 9.1.3.1, 9.1.4.1, 9.1.4.2, 9.1.5.1, 9.1.7.1, 9.1.8.1, 9.1.9.1, 9.1.12.1, 9.1.20, 9.1.28, 9.1.29, 9.1.36.1, 9.1.36.2, 9.2.1.5, 9.2.1.58, 9.2.2.19, 9.2.2.21, 9.2.2.34, 9.2.3.5, 9.3.2, 9.3.3, 9.3.4, and 9.3.7

Other specs affected:	Other 3G core specifications	<input type="checkbox"/>	→ List of CRs:	
	Other GSM core specifications	<input type="checkbox"/>	→ List of CRs:	
	MS test specifications	<input type="checkbox"/>	→ List of CRs:	
	BSS test specifications	<input type="checkbox"/>	→ List of CRs:	
	O&M specifications	<input type="checkbox"/>	→ List of CRs:	

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

9.1.3 RADIO LINK SETUP REQUEST

9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
S-RNTI	M			
D-RNTI	O			
Allowed Queuing time	O			
UL DPCH Information		1		
UL Scrambling Code	M			
Min UL Channelisation Code Length	M			
Max Number of UL DPDCHs	C – CodeLen			
Puncture Limit	M			For the UL.
UL Transport Format Combination Set	M			
UL DPCH Slot Format	M			
UL Eb/No Target	O			
Diversity mode	M			
D Field Length	C-FB			
SSDT Cell ID Length	O			
S Field Length	O			
Mean Bit Rate	O			For the UL.
DL DPCH Information		1		
Transport Format Combination Set	M			
DL DPCH Slot Format	M			
TFCI Signalling Mode	M			
TFCI Presence	C- SlotFormat			
Multiplexing Position	M			
Power Offset Information		1		
PO1	M		Power Offset	Power offset for the TFCI bits.
PO2	M		Power Offset	Power offset for the TPC bits.
PO3	M		Power Offset	Power offset for the pilot bits.
TPC Downlink Step Size	M			
Mean Bit Rate	O			For the DL.
DCH Information		1..<maxnoofDCHs >		
DCH ID	M			
DCH Combination Ind	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
BLER	M			For the UL.
BLER	M			For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
ToAWS	M			
ToAWE	M			
RL Information		1...<maxnoofRLs		

		>		
RL ID	M			
C-ID	M			
Frame Offset	M			
Chip Offset	M			
Propagation Delay	O			
Diversity Control Field	C – NotFirstRL			
Initial DL TX Power	O		DL Power	
Primary CPICH Ec/Io	O			
SSDT Cell ID	O			

Condition	Explanation
CodeLen	This IE is present only if "Min UL Channelisation Code len" equals to 4
FB	This IE is present only if Feed Back mode diversity is activated.
SlotFormat	This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16.
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information .

Range bound	Explanation
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofRLs	Maximum no. of RLs for one UE.

9.1.3.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
S-RNTI	M			
D-RNTI	O			
Allowed Queuing time	O			
Mean Bit Rate	O			For the UL.
Mean Bit Rate	O			For the DL.
UL CTrCH Information		<i>1..<maxnoofCTrCHs></i>		
CTrCH ID	M			
TFCS	M			For the UL.
TFCI Coding	M			
Puncture Limit	M			
DL CTrCH Information		<i>1..<maxnoofCTrCHs></i>		
CTrCH ID	M			
TFCS	M			For the DL.
TFCI Coding	M			
Puncture Limit	M			
DCH Information		<i>1..<maxnoofDCHs></i>		
DCH ID	M			
CTrCH ID	M			UL CTrCH in which the DCH is mapped
CTrCH ID	M			DL CTrCH in which the DCH is mapped
DCH Combination Ind	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
BLER	M			For the UL.
BLER	M			For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
ToAWS	M			
ToAWE	M			
RL Information		<i>1</i>		
RL ID	M			
C-ID	M			
Frame Offset	M			
Primary CCPCH RSCP	O			

Range bound	Explanation
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofCTrCHs	Maximum no. of CTrCH for one UE.

9.1.4 RADIO LINK SETUP RESPONSE

9.1.4.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
RL Information Response		1..<maxnoofRLs>		
RL ID	M			
SAI	M			
UL Interference Level	M			
DL Code Information		1..<maxnoofDLCode s		
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
Diversity Indication	C-NotFirstRL			
CHOICE <i>diversity Indication Combining</i>				
RL ID	M			Reference RL ID for the combining
<i>Non Combining or IE not present</i>				"IE not present" is equivalent to "First RL".
DCH Information Response		0..<maxnoofDCHs >		Only one DCH per set of co-ordinated DCHs shall be included
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Maximum Uplink Eb/No	M		Uplink Eb/No	
Minimum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		0..<maxnoofFDDn eighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information	O	0..<maxnoofTDDn eighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
-Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Uplink Eb/No Target	O		Uplink Eb/No	

Downlink Eb/No Target	O			
Criticality Diagnostics	O			

Condition	Explanation
#Comb	This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.
#NotComb	This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B.
NotFirstRL	The IE is present only if the RL is not the first RL in the RL Information
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell.
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell.

9.1.4.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
RL Information Response		1		
RL ID	M			
SAI	M			
UL Interference Level	M			
Maximum Uplink Eb/No	M		Uplink Eb/No	
Minimum Uplink Eb/No	M		Uplink Eb/No	
Uplink Eb/No Target	\ominus		Uplink Eb/No	
Downlink Eb/No Target	\ominus			
UL CCTrCH Information		1..<maxnoofCCTrCHs>		
CCTrCH ID	M			
UL DPCH Information		1..<MaxnoofDPC Hs>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DL CCTrCH Information		1..<maxnoofCCTrCHs>		
CCTrCH ID	M			
DL DPCH Information		1..<MaxnoofDPC Hs>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DCH Information Response		1..<maxnoofDCHs >		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Neighbouring FDD Cell Information		0..<maxnoofFDDneighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			

Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information	O	<i>0..<maxnoofTDDneighbours></i>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
<u>Uplink Eb/No Target</u>	<u>O</u>		<u>Uplink Eb/No</u>	
<u>Downlink Eb/No Target</u>	<u>O</u>			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofDPCHs	Maximum no. of DPCHs for one CCTrCH.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell
MaxnoofCCTrCHs	Maximum no. of CCTrCH for one UE.

9.1.5 RADIO LINK SETUP FAILURE

9.1.5.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
Unsuccessful RL Information Response		1...<maxnoofRLs>		
RL ID	M			
Cause	M			
Successful RL Information Response		0..<maxnoofRLs-1>		
RL ID	M			
SAI	M			
UL Interference Level	M			
DL Code Information		1..<maxnoofDLCode s>		
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
Diversity Indication	M			
CHOICE <i>diversity Indication Combining</i>				
RL ID	M			Reference RL ID for the combining
<i>Non Combining or IE not present</i>				"IE not present" is equivalent to "First RL".
DCH Information Response		0..<maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Maximum Uplink Eb/No	M		Uplink Eb/No	
Minimum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information	O	0..<maxnoofFDDn eighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information	O	0..<maxnoofTDDn eighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case3			

PSCH Time Slot	C-Case2&3			
Uplink Eb/No Target	O		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Minimum Uplink Eb/No	M		Uplink Eb/No	
Downlink Eb/No Target	O			
Criticality Diagnostics	O			

Condition	Explanation
IfComb	This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node-B.
IfNotComb	This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node-B.
NotFirstRL	The IE is present only if the RL is not the first RL in the RL Information
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofFDDneighbour	Maximum number of neighbouring FDD cell for one cell
MaxnoofTDDneighbour	Maximum number of neighbouring TDD cell for one cell

9.1.5.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Unsuccessful RL Information Response		1		
RL ID	M			
Cause	M			
Criticality Diagnostics	O			

9.1.6 RADIO LINK ADDITION REQUEST

9.1.6.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Uplink Eb/No Target	M		Uplink Eb/No	
RL Information		1..<maxnoofRLs-1>		
RL ID	M			
C-Id	M			
Frame Offset	M			
Chip Offset	M			
Diversity Control Field	M			
Primary CPICH Ec/Io	O			
SSDT Cell Identity	O			

Range bound	Explanation
MaxnoofRLs	Maximum number of radio links for one UE

9.1.6.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
RL Information		1		
RL ID	M			
C-Id	M			
Frame Offset	M			
Diversity Control Field	M			
Primary CCPCH RSCP	O			

9.1.7 RADIO LINK ADDITION RESPONSE

9.1.7.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
RL Information Response		1..<maxnoofRLs-1>		
RL ID	M			
SAI	M			
UL Interference Level	M			
DL Code Information		1..<maxnoofDLCodes>		
DL Scrambling Code	M			
DL Channelisation Code	M			
Diversity Indication	M			
CHOICE diversity indication				
Combining				
RL ID	M			Reference RL-Id
Non combining				
DCH Information Response		1..<maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Minimum Uplink Eb/No	M		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		0..<maxnoofFDD Neighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information		0..<maxnoofTDD Neighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
MaxnoofRLs	Maximum number of radio links for one UE
MaxnoofFDDNeighbours	Maximum number of neighbouring FDD cells for one cell
MaxnoofTDDNeighbours	Maximum number of neighbouring TDD cells for one cell
MaxnoofDLCodes	Maximum number of DL code information

9.1.7.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
RL Information Response		1		
RL ID	M			
SAI	M			
UL Interference Level	M			
UL CTrCH Information		1..<maxnoof CTrCHs>		
CTrCH ID	M			
UL DPCH Information		1..<maxnoOfDPC Hs>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DL CTrCH Information		1..<maxnoof CTrCHs>		
CTrCH ID	M			
DL DPCH information		1..<maxnoOfDPC Hs>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
Diversity Indication	M			
CHOICE <i>diversity indication</i>				
<i>Combining</i>				
RL ID	M			Reference RL
<i>Non combining</i>				
DCH Information Response		1..<maxnoofDCHs >		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Minimum Uplink Eb/No	M		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		0..<maxnoofFDD Neighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			

Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information		<i>0..<maxnoofTDD Neighbours></i>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range Bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
MaxnoofFDDNeighbours	Maximum number of neighbouring FDD cells for one cell
MaxnoofTDDNeighbours	Maximum number of neighbouring TDD cells for one cell
MaxnoofDLCodes	Maximum number of DL code information
MaxnoOfDPCHs	Maximum number of DPCH in one CCTrCH
MaxnoofCCTrCHs	no. of CCTrCH for one UE.

9.1.8 RADIO LINK ADDITION FAILURE

9.1.8.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Unsuccessful RL Information Response		1..<maxnoofRLs-1>		
RL ID	M			
Cause	M			
Succesfull RL Information Response		04..<maxnoofRLs-2>		
RL ID	M			
SAI	M			
UL Interference Level	M			
DL Code Information		1..<maxnoofDLCodes>		
DL scrambling code	M			
FDD DL channelisation code Number	M			
Diversity Indication	M			
_CHOICE diversity indication				
Combining				
RL ID	M			Reference RL-Id
Non combining				
DCH Information Response		1..<maxnoofDCHs>		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Minimum Uplink Eb/No	M		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		0..<maxnoofFDD Neighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information		0..<maxnoofTDD Neighbours>		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Criticality Diagnostics	O			

Condition	Explanation
Case1	This IE is present only if Sync Case = Case1.
Case2&3	This IE is present only if Sync Case = Case2 or Case3.

Range bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
MaxnoofRLs	Maximum number of radio links for one UE
MaxnoofFDDNeighbours	Maximum number of neighbouring FDD cells for one cell
MaxnoofTDDNeighbours	Maximum number of neighbouring TDD cells for one cell
MaxnoofDLCodes	Maximum number of DL code information

9.1.8.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Unsuccessful RL Information Response		1		
RL ID	M			
Cause	M			
Criticality Diagnostics	O			

9.1.9 RADIO LINK DELETION REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
RL Information		1..<maxnoofRLs>		
RL ID	M			

Range bound	Explanation
MaxnoofRLs	Maximum number of radio links for one UE

9.1.10 RADIO LINK DELETION RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Criticality Diagnostics	O			

9.1.11 RADIO LINK RECONFIGURATION PREPARE

9.1.11.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
Allowed Queuing Time	O			
UL DPCH Information		0..1		
UL Scrambling code	O			
Min UL Channelisation Code Length	O			
Max Number of UL DPDCHs	C – CodeLen			
Puncture Limit	O			For the UL.
TFCS	O			TFCS for the UL.
UL DPCCCH Slot Format	O			
SSDT Cell Identity Length	O			
S-Field Length	O			
Mean Bit Rate	O			For the UL.
DL DPCH Information		0..1		
TFCS	O			TFCS for the DL.
DL DPCH Slot Format	O			
TFCI Signalling Mode	O			
TFCI Presence	C- SlotFormat			
MultiplexingPosition	O			
Mean Bit Rate	O			For the DL.
DCHs to Modify		0..<maxnoofDCHs >		
DCH ID	M			
Transport Format Set	O			For the UL.
Transport Format Set	O			For the DL.
Allocation/Retention Priority	O			
Frame Handling Priority	O			
UL FP Mode	O			
ToAWS	O			
ToAWE	O			
DCHs to Add		0..<maxnoofDCHs >		
DCH ID	M			
DCH Combination Indicator	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
BLER	M			For the UL.
BLER	M			For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
ToAWS	M			
ToAWE	M			
DCHs to Delete		0..<maxnoofDCHs >		
DCH ID	M			
RL Information		0..<maxnoofRLs>		
RL ID	M			

SSDT Indication	O			
SSDT Cell Identity	C - SSDTIndON			

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 values 12 to 16.

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofRLs	Maximum number of RLs for a UE.

9.1.11.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
Allowed Queuing Time	O			
Mean Bit Rate	O			For the UL
Mean Bit Rate	O			For the DL
UL CCH Information		<i>0..<maxnoofCCHs></i>		
CCH ID	M			
TFCS	O			For the UL.
TFCI Coding	O			
Puncture Limit	O			
DL CCH Information		<i>0..<maxnoofCCHs></i>		
CCH ID	M			
TFCS	O			For the DL.
TFCI Coding	O			
Puncture Limit	O			
DCHs to Modify		<i>0..<maxnoofDCHs></i>		
DCH ID	M			
CCH Id	O			UL CCH in which the DCH is mapped.
CCH Id	O			DL CCH in which the DCH is mapped
Transport Format Set	O			For the UL.
Transport Format Set	O			For the DL.
Allocation/Retention Priority	O			
Frame Handling Priority	O			
UL FP Mode	O			
ToAWS	O			
ToAWE	O			
DCHs to Add		<i>0..<maxnoofDCHs></i>		
DCH ID	M			
CCH Id	M			UL CCH in which the DCH is mapped.
CCH Id	M			DL CCH in which the DCH is mapped
DCH Combination Indicator	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
BLER	M			For the UL.
BLER	M			For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
ToAWS	M			
ToAWE	M			
DCHs to Delete		<i>0..<maxnoofDCHs></i>		
DCH ID	M			

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.

9.1.12 RADIO LINK RECONFIGURATION READY

9.1.12.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
RL Information Response		0..<maxnoofRLs>		
RL ID	M			
Maximum Uplink Eb/No	O		Uplink Eb/No	
Minimum Uplink Eb/No	O		Uplink Eb/No	
Downlink Code Information		0..<maxnoofDLCodes>		
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
DCH to be Added		0..<maxnoofDCHs>		Only one DCH per set of coordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLs.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
DCH to be Modified		0..<maxnoofDCHs>		Only one DCH per set of coordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLs.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Criticality Diagnostics	O			

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs.
MaxnoofRLs	Maximum number of RLs for a UE.
MaxnoofDLCodes	Maximum number of Downlink Channelisation Codes.

9.1.12.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
RL Information Response		0..1		
RL ID	M			
Maximum Uplink Eb/No	O		Uplink Eb/No	
Minimum Uplink Eb/No	O		Uplink Eb/No	
UL CTrCH Information		0..<maxnoofCTrCHs>		
CTrCH ID	M			
UL DPCH Information		1..<maxnoofDPCHs>		
DPCH ID	M			
TDD Channelisation Code	O			
Burst Type	O			
Midamble Shift	O			
Time Slot	O			
TDD Physical Channel Offset	O			
Repetition Period	O			
Repetition Length	O			
TFCI Presence	O			
DL CTrCH Information		0..<maxnoofCTrCHs>		
CTrCH ID	M			
DL DPCH Information		1..<maxnoofDPCHs>		
DPCH ID	M			
TDD Channelisation Code	O			
Burst Type	O			
Midamble Shift	O			
Time Slot	O			
TDD Physical Channel Offset	O			
Repetition Period	O			
Repetition Length	O			
TFCI Presence	O			
DCH to be Added		0..<maxnoofDCHs>		Only one DCH per set of coordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLs.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
DCH to be Modified		0..<maxnoofDCHs>		Only one DCH per set of coordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLs.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Criticality Diagnostics	O			

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.
Maxnoof DPCHs	Maximum number of DPCHs in one CCTrCH.

9.1.13 RADIO LINK RECONFIGURATION COMMIT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
CFN	M			

9.1.14 RADIO LINK RECONFIGURATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
Cause	M			
RLs Causing Reconfiguration Failure		0..<maxnoofRLs>		
RL ID	M			
Cause	M			
Criticality Diagnostics	O			

Range bound	Explanation
MaxnoofRLs	Maximum number of RLs for a UE.

9.1.15 RADIO LINK RECONFIGURATION CANCEL

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			

9.1.16 RADIO LINK RECONFIGURATION REQUEST

9.1.16.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
Allowed Queuing Time	O			
UL DPCH Information		0..1		
TFCS	O			TFCS for the UL.
Mean Bit Rate	O			
DL DPCH Information		0..1		
TFCS	O			TFCS for the DL.
TFCI Signalling Mode	O			
Mean Bit Rate	O			
DCHs to Modify		0..<maxnoofDCHs >		
DCH ID	M			
Transport Format Set	O			For the UL.
Transport Format Set	O			For the DL.
Allocation/Retention Priority	O			
Frame Handling Priority	O			
UL FP Mode	O			
ToAWS	O			
ToAWE	O			
DCHs to add		0..<maxnoofDCHs >		
DCH ID	M			
DCH Combination Ind	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP mode	M			
ToAWS	M			
ToAWE	M			
DCHs to Delete		0..<maxnoofDCHs >		
DCH ID	M			

Range Bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.

9.1.16.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
Allowed Queuing Time	O			
Mean Bit Rate	O			For the UL
Mean Bit Rate	O			For the DL
UL CCH Information		<i>0..<maxnoofCCHs></i>		
CCH ID	M			
TFCS	M			
DL CCH Information		<i>0..<maxnoofCCHs></i>		
CCH ID	M			
TFCS	M			
DCHs to Modify		<i>0..<maxnoofDCHs></i>		
DCH ID	M			
CCH ID	O			UL CCH in which the DCH is mapped.
CCH ID	O			DL CCH in which the DCH is mapped
Transport Format Set	O			For the UL.
Transport Format Set	O			For the DL.
Allocation/Retention Priority	O			
Frame Handling Priority	O			
UL FP Mode	O			
ToAWS	O			
ToAWE	O			
DCHs to Add		<i>0..<maxnoofDCHs></i>		
DCH ID	M			
RLC Mode	M			
CCH ID	M			UL CCH in which the DCH is mapped.
CCH ID	M			DL CCH in which the DCH is mapped
DCH Combination Ind	O			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
ToAWS	M			
ToAWE	M			
DCHs to Delete		<i>0..<maxnoofDCHs></i>		
DCH ID	M			

Range Bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofCCHs	Maximum number of CCHs for a UE.

9.1.17 RADIO LINK RECONFIGURATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
RL Information Response		0..<maxnoofRLs>		
RL ID	M			
Maximum Uplink Eb/No	O		Uplink Eb/No	
Minimum Uplink Eb/No	O		Uplink Eb/No	
DCH to be Added		0..<maxnoofDCHs>		Only one DCH per set of coordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLs.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
DCH to be Modified		0..<maxnoofDCHs>		Only one DCH per set of coordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLs.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Criticality Diagnostics	O			

Range Bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofRLs	Maximum number of RLs for a UE.

9.1.18 RADIO LINK FAILURE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
RL Information	M	1 .. <MaxnoofRLs>		
RL ID	M			
Cause	M			

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.

9.1.19 RADIO LINK RESTORE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
RL Information		1 .. <MaxnoofRLs>		
RL ID	M			

Range bound	Explanation
MaxnoofRLs	Maximum no. of RLs for one UE.

9.1.20 DL POWER CONTROL REQUEST [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
CHOICE <i>procedure scope</i>				
"ALL RL"				
DL Reference Power	M			
"Individual RLs"				
DL Reference Power Information		1..<maxnoofRLs>		
RL ID	M			
DL Reference Power	M		DL Power	The SRNS requested downlink power to be used by the downlink inner loop power control to eliminate the power drifting problem.

Range Bound	Explanation
MaxnoofRLs	Maximum number of RLs for one UE.

9.1.21 PHYSICAL CHANNEL RECONFIGURATION REQUEST

9.1.21.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
RL Information		1		
RL ID	M			
DL Code Information		1 .. <maxnoofDLCode s>		
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			

Range bound	Explanation
MaxnoofDLcodes	Maximum number of DL codes for one UE

9.1.21.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
RL Information		1		
RL ID	M			
UL CTRCH Information		1..<maxnoofCTRCHs>		
CTRCH ID	M			
UL DPCH Information		1..<MaxnoofDPCHs>		
DPCH ID	M			
TDD Channelisation Code	O			
Burst Type	O			
Midamble Shift	O			
Time Slot	O			
TDD Physical Channel Offset	O			
Repetition Period	O			
Repetition Length	O			
TFCI Presence	O			
DL CTRCH Information		1..<maxnoofCTRCHs>		
CTRCH ID	M			
DL DPCH Information		1..<MaxnoofDPCHs>		
DPCH ID	M			
TDD Channelisation Code	O			
Burst Type	O			
Midamble Shift	O			
Time Slot	O			
TDD Physical Channel Offset	O			
Repetition Period	O			
Repetition Length	O			
TFCI Presence	O			

Range bound	Explanation
MaxnoofDPCHs	Maximum no. of DPCHs for one CTRCH.
MaxnoofCTRCHs	Maximum number of CTRCHs for a UE.

9.1.22 PHYSICAL CHANNEL RECONFIGURATION COMMAND

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
CFN	M			
Criticality Diagnostics	O			

9.1.23 PHYSICAL CHANNEL RECONFIGURATION FAILURE

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Cause	M			
Criticality Diagnostics	O			

9.1.24 UPLINK SIGNALLING TRANSFER INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
UC-ID	M			
SAI	M			
C-RNTI	M			
S-RNTI	M			
D-RNTI	O			
L3 Information	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
URA ID	M			
Multiple URAs Indicator	M			
RNCs with Cells in the Accessed URA		0 .. <MaxRNCinURA-1>		
RNC-Id	M			

Range bound	Explanation
MaxRNCinURA	Maximum number of RNC in one URA

9.1.25 DOWNLINK SIGNALLING TRANSFER REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
C-Id	M			
D-RNTI	M			
L3 Information	M			
D-RNTI Release Indication	M			

9.1.26 RELOCATION COMMIT

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
RANAP Relocation Information	O			

9.1.27 PAGING REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
CHOICE <i>paging area</i>				
"URA"				
URA-Id	M			
"Cell"				
C-Id	M			
SRNC-Id	M		RNC-Id	
S-RNTI	M			
DRX Parameter	M			

9.1.28 DEDICATED MEASUREMENT INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction Id	M			
Measurement Id	M			
Dedicated Measurement Object Type	M			
CHOICE <i>Dedicated Measurement Object Type</i>				
"RL"				
RL Information		1..<maxnoofRLs>		
RL-Id	M			
DPCH Id	O			
Dedicated Measurement Type	M			
Measurement Characteristics	M			
Report Characteristics	M			

Range bound	Explanation
MaxnoofRLs	Maximum number of individual RLs a measurement can be started on.

9.1.29 DEDICATED MEASUREMENT INITIATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction Id	M			Are both transaction id and Measurement id needed ?
Measurement Id	M			
CHOICE <i>Dedicated Measurement Object Type</i>				Dedicated Measurement Object Type the measurement was initiated with
"RL"				
RL Information		1..<maxnoofRLs>		
RL-Id	M			
DPCH Id	O			
Dedicated Measurement Value	M			
"ALLRL"				
Dedicated Measurement Value	M			
CFN	O			Dedicated Measurement Time Reference
Criticality Diagnostics	O			

Range bound	Explanation
MaxnoofRLs	Maximum number of individual RLs the measurement can be started on.

9.1.30 DEDICATED MEASUREMENT INITIATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction Id	M			
Measurement Id	M			
Cause	M			
Criticality Diagnostics	O			

9.1.31 DEDICATED MEASUREMENT REPORT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction Id	M			
Measurement Id	M			
CHOICE <i>Dedicated Measurement Object Type</i>				Dedicated Measurement Object Type the measurement was initiated with
"RL"				
RL Information		1..<maxnoofRLs>		
RL-Id	M			
DPCH Id	O			
Dedicated Measurement Value	M			
"ALLRL"				
Dedicated Measurement Value	M			
CFN	O			Dedicated Measurement Time Reference

Range bound	Explanation
MaxnoofRLs	Maximum number of individual RLs the measurement can be started on.

9.1.32 DEDICATED MEASUREMENT TERMINATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction Id	M			
Measurement Id	M			

9.1.33 DEDICATED MEASUREMENT FAILURE INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction Id	M			
Measurement Id	M			
Cause	M			

9.1.34 COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	M			
C-RNTI	O			Release of an individual C-RNTI.

9.1.35 COMMON TRANSPORT CHANNEL RESOURCES REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	M			
Transport Bearer Request Indicator	M			Request a new transport bearer or to use an existing bearer for the user plane.
Transport Bearer ID	M			Indicates the lur transport bearer to be used for the user plane.

9.1.36 COMMON TRANSPORT CHANNEL RESOURCES RESPONSE

9.1.36.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
S-RNTI	M			
FACH Info for S-CCPCH coupled to PRACH		1		
Priority Indicator & Initial Window Size		1..16		Provide Information for each priority class used
FACH Priority Indicator	M			
MAC-c SDU Length		1..<MaxNbMACcSDULength>		
MAC-c SDU Length	M			
FACH Initial Window Size	M			
FACH Info for optional S-CCPCH	⊖	<u>0..1</u>		
FDD S-CCPCH Offset	M			Corresponds to: $\tau_{S-CCPCH,k}$, see ref. [Error! Reference source not found.]
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
TFCS	M			For the DL.
Secondary CCPCH Slot Format	M			
Pilot Bits Used Indicator	M			
MultiplexingPosition	M			
STTD Indicator	M			
Priority Indicator & Initial Window Size		1..16		Provide Information for each priority class used
FACH Priority Indicator	M			
MAC-c SDU LengthData Frame Size		1..<MaxNbMACcSDULength>		
.....MAC-c SDU Length	M			
FACH Initial Window Size	M			
Transport Layer Address	O			
Binding Identity	O			
Criticality Diagnostics	O			

Range Bound	Explanation
MaxNbMACcSDULength	Maximum number of different MAC-c SDU Lengths.

9.1.36.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
S-RNTI	M			
FACH Info for S-CCPCHs coupled to PRACH		0..1		
Priority Indicator & Initial Window Size		1..16		Provide Information for each priority class used
FACH Priority Indicator	M			
MAC-c SDU Length		1..<MaxNbMACcSDU Length>		
MAC-c SDU Length	M			
FACH Initial Window Size	M			
FACH Info for optional group of S-CCPCHs		0..1		
TFCS	M			For DL CCTrCH supporting several Secondary CCPCHs
Secondary CCPCH	M	1..<MaxnoofSCCPC Hs>		
TDD Channelisation Code	M			
Time Slot	M			
Burst Type	M			
Midamble shift	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
STTD Indicator	M			
Priority Indicator & Initial Window Size		1..16		Provide Information for each priority class used
FACH Priority Indicator	M			
MAC-c SDU LengthData-Frame-Size		1..<MaxNbMACcSDU Length>		
MAC-c SDU Length	M			
FACH Initial Window Size	M			
Transport Layer Address	O			
Binding Identity	O			
Criticality Diagnostics	O			

Range Bound	Explanation
MaxNbMACcSDULength	Maximum number of different MAC-c SDU Lengths.
MaxnoofSCCPCs	TBD

9.1.37 COMMON TRANSPORT CHANNEL RESOURCES FAILURE

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
S-RNTI	M			
Cause	M			
Criticality Diagnostics	O			

9.1.38 COMPRESSED MODE PREPARE [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type				
Transaction ID				
TGP1	M		Gap Period	Applies only to the first and all the subsequent odd gaps if TGP2 is present, see ref. [Error! Bookmark not defined.].
TGP2	O		Gap Period	
TGL	M			
TGD	M			
PD	M			
UL/DL Compressed Mode Selection	M			
Compressed Mode Method	M			
Gap Position Mode	M			
SN	C-Flex			
Downlink Frame Type	M			
Scrambling Code Change	C-SF/2			
Power Control Mode	M			
Power Resume Mode	M			
Uplink Delta Eb/No	M			
Uplink Delta Eb/No After	M			

Condition	Explanation
Flex	This IE is present only if "Gap position Mode" equals to 'flexible'.
SF/2	This IE is present only if Compressed Mode Method equals to SF/2

9.1.39 COMPRESSED MODE READY [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Criticality Diagnostics	O			

9.1.40 COMPRESSED MODE FAILURE [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Cause	M			
Criticality Diagnostics	O			

9.1.41 COMPRESSED MODE COMMIT [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
CFN	M			

9.1.42 COMPRESSED MODE CANCEL [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			

9.1.43 ERROR INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction Id	M			
Cause	C_ifalone			
Criticality Diagnostics	C_ifalone			

Condition	Explanation
C_ifalone	At least either of Cause IE or Criticality Diagnostics IE shall be present.

9.2 Information Element Functional Definition and Contents

9.2.1 Common Parameters

This chapter contains parameters that are common to FDD and TDD.

9.2.1.1 Allocation/Retention Priority

This parameter indicates the priority level in the allocation and retention of DCH resources in DRNS.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
9.2.1.1 Allocation/Retention Priority			Frame Handling Priority	

9.2.1.2 Allowed Queuing Time

This parameter specifies the maximum queuing time that is allowed in the DRNS. The default value is no queuing.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Allowed Queuing Time			INTEGER(0..60)	Seconds

9.2.1.3 Binding ID

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

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

9.2.1.4 BLER

This Block Error Rate defines the radio interface Transport Block Error Rate that shall be guaranteed to the DCH by the SRNC.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
BLER			INTEGER (-63..0)	Step 0.1. (Range -6.3...0). It is the Log10 of the BLER

9.2.1.5 Cause

The purpose of the cause information element is to indicate the reason for a particular event for the whole protocol.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cause Group	M		ENUMERATED (Radio Network Layer, Transport Layer, Protocol, Misc)	
<i>CHOICE cause group</i>				
<i>Radio Network Layer</i>				
Radio Network Layer Cause	M		ENUMERATED (Unknown C-ID, Cell not Available, Power Level not Supported, UL Scrambling Code Already in Use, DL Radio Resources not Available, UL Radio Resources not Available, Measurement not Supported For The Object, Macrodiversity Combining Not Possible, Reconfiguration not Allowed, Requested Configuration not Supported, Synchronisation Failure, Unspecified)	
<i>Transport Layer</i>				
Transport Layer Cause	M		ENUMERATED (Transport link failure, Transmission port not available, Unspecified)	
<i>Protocol</i>				
Protocol Cause			ENUMERATED (Transaction not Allowed, Transfer Syntax Error, Abstract Syntax Error (Reject), Abstract Syntax Error (Ignore and Notify), Message not Compatible with Receiver State, Semantic Error, Unspecified)	
<i>Misc</i>				
Miscellaneous Cause	M		ENUMERATED (Control Processing Overload Hardware Failure, O&M Intervention, Not enough User Plane Processing Resources, Unspecified)	

9.2.1.6 Cell Identifier (C-Id)

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

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

9.2.1.7 Cell Parameter ID

The Cell Parameter ID identifies unambiguously the Code Groups, Scrambling Codes, Midambles and Toffset (see table 9 of ref. [Error! Reference source not found.]).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell Parameter ID			INTEGER (0...127)	

9.2.1.8 CFN

Connection Frame Number for the radio connection, see ref. [Error! Reference source not found.].

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

9.2.1.9 CN CS Domain Identifier

Identification of the CN node in the CS Domain.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CN PS Domain Identifier				
PLMN Id	M		OCTET STRING (3)	- digits 0 to 9, two digits per octet, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n -The PLMN-ID consists of 3 digits from MCC followed by either -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -3 digits from MNC (in case of a 3 digit MNC).
LAC	M		OCTET STRING (3)	0000 and FFFE not allowed

9.2.1.10 CN PS Domain Identifier

Identification of the CN Node in the PS Domain.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CN PS Domain Identifier				
PLMN Id	M		OCTET STRING (3)	- digits 0 to 9, two digits per octet, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n -The PLMN-ID consists of 3 digits from MCC followed by either -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -3 digits from MNC (in case of a 3 digit MNC).
LAC	M		OCTET STRING (2)	0000 and FFFE not allowed
RAC	M		OCTET STRING (1)	

9.2.1.11 Criticality Diagnostics

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Criticality Diagnostics				
Procedure Code	O		INTEGER (0..255)	Procedure code is to be used if Criticality diagnostics is part of Error Indication procedure, and not within the response message of the same operation that caused the error
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 except when the procedure code is not understood.
Criticality Response	O		ENUMERATED (reject, ignore, notify)	This Criticality response IE is used for reporting the Criticality of the Triggering message
Transaction Id	O		INTEGER (0..255)	
Information Element Criticality Diagnostics		1..<maxnoof errors>		
Criticality Response	M		ENUMERATED (reject, ignore, notify)	The Criticality response IE 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 IE as defined in the ASN.1 part of the specification.

Range bound	Explanation
maxnooferrors	Maximum no. of IE errors allowed to be reported with a single message. The value for maxnooferrors is 256.

9.2.1.12 C-RNTI

C-RNTI (Cell RNTI) is the UE identifier in the CRNC to be used over the radio interface. It is unique in the cell.

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

9.2.1.13 DCH Combination Indicator

The DCH Combination Indicator is used to indicate the multiplexing of more than one DCH on transport bearer. The value should be unique for each group of coordinated DCH's per request message.

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

9.2.1.14 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)	

9.2.1.15 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,ALLRL,...)	

9.2.1.16 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,...)	RSCP is used by TDD only.

NOTE: For definitions of the measurement types refer to ref. [Error! Bookmark not defined.] and [Error! Reference source not found.].

9.2.1.17 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	O		Enumerated(-10 .. 20), step 0.1 dB	
SIR error Value	O		Enumerated(-10 .. 10), step 0.1 dB	If SIRerror<=-10, SIR error Value shall be set to -10 If SIRerror=>10, SIR error Value shall be set to 10
Transmitted Code Power Value	O		Enumerated(-35 .. 15), step 0.1 dB	Relative to CPICH
RSCP	O		TBD	TDD only.

<Editors Note: Some adjustment of the ranges for these measurements might be needed as they await a decision on range for this measurement in TSG RAN WG1>

9.2.1.18 Downlink Eb/No Target

It is the Target Downlink Eb/No that shall be used as initial value by the UE.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Downlink Eb/No Target			Uplink Eb/No	

9.2.1.19 D-RNTI

D-RNTI is the UE context identifier in the DRNC.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
D-RNTI			Integer(0..2^20-1)	

9.2.1.20 D-RNTI Release Indication

The D-RNTI Release Indication indicates whether or not a CRNC shall release the D-RNTI allocated for a particular UE.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
D-RNTI Release Indication			ENUMERATED (Release D-RNTI, not Release D-RNTI)	

9.2.1.21 DRX Parameter

[Editor's note: This parameter needs to be defined. Contributions are invited.]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DRX Parameter			TBD	

9.2.1.22 FACH Initial Window Size

Indicates the initial number of MAC-c SDUs that may be transmitted before an acknowledgement is received from the DRNC.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FACH Initial Window Size			INTEGER (0..255)	Number of framesMAC-c SDUs. 255 = Unlimited number of FACH data frames.

9.2.1.23 FACH Priority Indicator

Indicates the relative priority of the FACH data frame. Used by the DRNC when scheduling FACH traffic.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FACH Priority Indicator			INTEGER (0..15)	Relative priority of the FACH data frame: 0=Lowest Priority ... 15=Highest Priority

9.2.1.24 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=Lowest Priority, ... 15=Highest Priority

9.2.1.25 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 Iub/Iur 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

9.2.1.26 MAC-c SDU Length

Indicates the MAC-c SDU Length. There may be multiple data frame sizes per priority class.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
MAC-c SDU Length			INTEGER (1..5000)	Size of the MAC-c SDU in number of bits.

9.2.1.27 Mean Bit Rate

It is the mean user data rate that is expected to be carried by the transport channels of one radio link.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Mean Bit Rate			INTEGER (1...2000)	Kbit/seconds

9.2.1.28 Measurement Characteristics

The Measurement Characteristics indicates how the measurement shall be performed.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Measurement Characteristics				
Measurement Frequency	M		TBD	
Averaging Duration	M		TBD	

Editors Note: The exact definition and structure is this information element awaits decisions in TSG RAN WG2.

9.2.1.29 Measurement ID

The Measurement Id uniquely identifies any measurement on dedicated resources requested over RNSAP.

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

9.2.1.30 Message Type

The Message Type uniquely identifies the message being sent.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type			ENUMERATED (RL Setup Request, RL Setup Response, RL Setup Failure, RL Addition Request, RL Addition Response, RL Addition Failure, RL Deletion Request, RL Deletion Response, RL Reconfiguration Prepare, RL Reconfiguration Ready, RL Reconfiguration Commit, RL Reconfiguration Failure, RL Reconfiguration Cancel, RL Reconfiguration Request, RL Reconfiguration Response, RL Failure Indication, RL Restore Indication, DL Power Control Request, Physical Channel Reconfiguration Request, Physical Channel Reconfiguration Command, Physical Channel Reconfiguration Failure, UL Signalling Transfer Indication, DL Signalling Transfer Request, Relocation Commit, Paging Request, Dedicated Measurement Initiation Request, Dedicated Measurement Initiation Response, Dedicated Measurement Initiation Failure, Dedicated Measurement Report, Dedicated Measurement Termination Request, Dedicated Measurement Failure Indication, Common Transport Channel Resources Release Request, Common Transport Channel Resources Request, Common Transport Channel Resources Response, Common Transport Channel Resources Failure, Compressed Mode Prepare, Compressed Mode Ready, Compressed Mode Failure, Compressed Mode Commit, Compressed Mode Cancel, Error Indication, ...)	Future extensions shall be possible

9.2.1.31 Multiple URAs Indicator

The Multiple URAs Indicator indicates whether the accessed cell has multiple URAs.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Multiple URAs Indicator			Enumerated (Multiple URAs exist, Single URAs Exist)	

9.2.1.32 Payload CRC Present 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)	

9.2.1.33 Primary CPICH Power

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Primary CPICH power			ENUMERATED (-15..40)	Unit dBm Granularity 0.1 dB.

9.2.1.34 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)	

9.2.1.35 PSCH Time Slot

The PSCH Time Slot is only applicable if the value of *Sync Case* IE is Case 2 or 3.

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

9.2.1.36 Puncture Limit

The maximum amount of puncturing for a transport channel in rate matching.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Puncture Limit			INTEGER (0..100)	%

9.2.1.37 RANAP Relocation Information

This parameter is transparent to the RNSAP. The parameter contains information for the Relocation procedure as defined in [Error! Reference source not found.].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RANAP Relocation Information			Bit String	The contents is defined in ref. [Error! Reference source not found.].

9.2.1.38 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. First working assumption!
..Event A	C – Event A			
Measurement Threshold	M		TBD	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		TBD	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 Threshold	M		TBD	
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 Decrease Threshold	M		TBD	
Measurement Change Time	M		ENUMERATED (10ms... 1min) step 10ms,...	The time the measurement entity shall fall (in ms), in order to trigger a measurement report.
Event E	C – Event E			
Measurement Threshold 1	M		TBD	
Measurement Threshold 2	O		TBD	

Measurement Hysteresis Time	O		ENUMERATED (10ms...1min) step 10ms,...	The hysteresis time in ms
Report Periodicity	O		ENUMERATED (10ms...1min) 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		TBD	
Measurement Threshold 2	O		TBD	
Measurement Hysteresis Time	O		ENUMERATED (10ms...1min) step 10ms,...	The hysteresis time in ms
Report Periodicity	O		ENUMERATED (10ms...1min) step 10ms, (1min...1hr) step 1min	The frequency with which the Node B shall send measurement reports.

Editors note: Encoding of threshold TBD.

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

9.2.1.39 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)	

9.2.1.40 RLC Mode

This parameter defines the RLC mode of the logical channels multiplexed on the transport channel.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RLC Mode			ENUMERATED(Acknowledged Mode, Unacknowledged Mode, Transparent Mode)	

9.2.1.41 RNC-Id

This is the identifier of one RNC in UTRAN.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RNC Id			INTEGER (0..4095)	

9.2.1.42 Service Area Identifier (SAI)

This information element is used to uniquely identify an area consisting of one or more cells belonging to the same Location Area. Such an area is called a Service Area and can be used for indicating the location of a UE to the CN.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SAI				
PLMN Id	M		OCTET STRING (3)	- digits 0 to 9, two digits per octet, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n -The PLMN-ID consists of 3 digits from MCC followed by either -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -3 digits from MNC (in case of a 3 digit MNC).
LAC	M		OCTET STRING (2)	0000 and FFFE not allowed
SAC	M		OCTET STRING (2)	

9.2.1.43 S-RNTI

S-RNTI is the UE context identifier in the SRNC.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
S-RNTI			Integer(0..2 ²⁰ -1)	

9.2.1.44 Sync Case

The PSCH and PCCPCH in a TDD cell are mapped on one or two downlink slots per frame. There are three cases of Sync Case as follows:

Case 1) PSCH and PCCPCH allocated in a single TS#k

Case 2) PSCH in two TS and PCCPCH in the same two TS: TS#k and TS#k+8

Case 3) PSCH in two TS, TS#k and TS#k+8, and the PCCPCH in TS#i, pointed by PSCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Sync Case			ENUMERATED (Case1, Case2, Case3)	

9.2.1.45 TFCI Presence

The TFCI Presence parameter indicates whether the TFCI shall be included.

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

9.2.1.46 Time Slot

The Time Slot represents the time interval assigned to a Physical Channel referred to the start of a Radio Frame.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Time Slot			INTEGER (0..14)	

9.2.1.47 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)	msec.

9.2.1.48 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)	msec.

9.2.1.49 Transaction ID

The Transaction ID is used to associate all the messages belonging to the same pending procedure of the same RNSAP procedure type (e.g. Radio Link Addition), i.e. the Request-, Response-, Confirm-type of messages have the same Transaction ID. The messages belonging to different pending procedures have different Transaction IDs.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transaction ID			INTEGER (0..255)	Since the scope is not clear, the range of this parameter is to be considered a working assumption

9.2.1.50 Transport Bearer ID

The Transport Bearer ID uniquely identifies an Iur transport bearer.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transport Bearer ID			INTEGER (0..4095)	

9.2.1.51 Transport Bearer Request Indicator

Indicates whether an Iur transport bearer needs to be established for carrying the FACH data stream(s), or whether an existing transport bearer will be used.

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

9.2.1.52 Transport Layer Address

Transport Layer Address defines the transport address of the DRNS. For details on the Transport Address used see [**Error! Reference source not found.**].

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

9.2.1.53 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.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
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-1)	Integer number calculated according to ref. [Error! Reference source not found.] .

Range bound	Explanation
<i>MaxnoofTFCs</i>	The maximum number of Transport Format Combinations (1024).
<i>MaxCTFC</i>	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 ref. [Error! Reference source not found.] .

9.2.1.54 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..<maxTFcount>		
Number of Transport blocks	M		INTEGER (0..4095)	
Transport Block Size	C – Blocks		INTEGER (1..5000)	Bits
<i>CHOICE mode</i>				
<i>TDD</i>				
Transmission time interval	C-TTIdynamic	1..<maxTTIcount>	Enumerated(10, 20, 40, 80)	
Semi-static Transport Format Information				
Transmission time interval	C-TTIsemistatic		ENUMERATED (10, 20, 40, 80)	Msec
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)	
<i>CHOICE mode</i>				
<i>TDD</i>				
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 not defined as semistatic parameter. Otherwise it is absent.
TTIsemistatic	This IE is mandatory if not defined as dynamic parameter. Otherwise it is absent.

Range bound	Explanation
<i>MaxTFcount</i>	The maximum number of different transport formats that can be included in the Transport format set for one transport channel is 32.
<i>MaxRM</i>	The maximum number that could be set as rate matching attribute for a transport channel is 256.
<i>MaxTTIcount</i>	The amount of different TTI that are possible for that transport format is 4.

9.2.1.55 UARFCN

The UTRAN Absolute Radio Frequency Channel Number defines the carrier.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UARFCN			INTEGER (0..698, ...)	Corresponds to: 1885.2MHz..2024.8MHz see ref. [Error! Reference source not found.].

9.2.1.56 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			ENUMERAT ED(Normal, Silent)	

9.2.1.57 Uplink Eb/No

The UL Eb/No indicates a received UL Eb/No.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Uplink Eb/No			INTEGER (0..255)	Resolution is 0.1 dB, range 0- 25.5 dB.

9.2.1.58 UL Interference Level

The parameter indicates the UL Interference Level in a cell. The UL Interference Level is used by the UE to calculate its initial UL power for the cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL Interference Level			ENUMERAT ED (-128..-60)	Unit: dBm, Step size=0.1 dB

9.2.1.59 URA ID

IE/Group Name	Presence	Range	IE type and reference	Semantics description
URA ID			INTEGER (0..65 535)	

9.2.1.60 UTRAN Cell Identifier (UC-Id)

The UC-ID (UTRAN Cell identifier) is the identifier of a cell in one UTRAN.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UC-ID		1		
RNC-ID	M		INTEGER (0...4095)	
C-ID	M		C-ID	

9.2.1.61 L3 Information

This parameter contains the Layer 3 Information from a Uu message as received from the UE over the Uu interface or the Layer 3 Information for a Uu message to be sent to a UE by the CRNC, as defined in ref. **[Error! Reference source not found.]**.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
L3 Information			Bit String	The content is defined in ref. [Error! Reference source not found.] .

9.2.2 FDD Specific Parameters

This chapter contains parameters that are specific to FDD.

9.2.2.1 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

9.2.2.2 Compressed Mode Method

Defines the method for generating the downlink compressed mode gap, as described in ref. **[Error! Reference source not found.]**.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Compressed Mode Method			ENUMERATED (None, Puncturing, SF/2, Gating)	None = restore the normal mode

9.2.2.3 D-Field Length

Defines the D Field size of the UL DPCH slot.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
D Field Length			ENUMERATED (1, 2)	

9.2.2.4 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)	

9.2.2.5 Diversity Indication

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

9.2.2.6 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)	

9.2.2.7 DL DPCH Slot Format

Indicates the slot format used in DPCH in DL, according to ref. [Error! Reference source not found.].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL DPCH Slot Format			INTEGER (0..16)	

9.2.2.8 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

9.2.2.9 Downlink Frame Type

This parameter defines if frame type 'A' or 'B' shall be used in downlink compressed mode. This is defined in [Error! Reference source not found.].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Downlink Frame Type			ENUMERATED (TypeA, TypeB)	

9.2.2.10 FDD DL Channelisation Code Number

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

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
FDD DL Channelisation Code Number	M		INTEGER(0..255)	The maximum value is equal to the DL spreading factor –1

9.2.2.xx 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.

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
<u>FDD S-CCPCH Offset</u>			<u>INTEGER(0..149)</u>	<u>0: 0 chip</u> <u>1: 256 chip</u> <u>2: 512 chip</u> <u>..</u> <u>149: 38144 chip</u> <u>[TS 25.211]</u>

9.2.2.11 Gap Position Mode

The gap position can be fixed or adjustable, as defined in ref. [Error! Reference source not found.].

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

9.2.2.12 Gap Period (TGP)

Gap Period is the period of repetition of a set of consecutive frames containing up to 2 transmission gaps.

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

9.2.2.13 Gap Starting Slot Number (SN)

It defines the slot number when the transmission gap starts.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SN			Time Slot	

9.2.2.14 Max 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)	

9.2.2.15 Min 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)	

9.2.2.16 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)	

9.2.2.17 Pattern Duration (PD)

Pattern duration is the total time of the compressed mode pattern (all consecutive TGPs) expressed in number of frames.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PD			INTEGER(0..2047, ...)	Frames

9.2.2.18 Power Control Mode (PCM)

Power Control Mode specifies the uplink power mode applied during recovery period after each transmission gap in compressed mode. PCM can take 2 values (0 or 1). The different power control modes are described in ref. [**Error! Reference source not found.**].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Control Mode			ENUMERATED(0, 1, ...)	

9.2.2.19 Power Offset

This IE defines a power offset respect the Downlink transmission power of a DPCH.

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

9.2.2.20 Power Resume Mode (PRM)

Power Resume Mode selects the uplink power control method to calculate the initial transmit power after the gap. PRM can take two values (0 or 1) and is described in ref. [**Error! Reference source not found.**].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Resume Mode			ENUMERATED (0, 1,..)	Described in ref. [Error! Reference source not found.].

9.2.2.21 Primary CPICH Ec/No

Energy per chip divided by the power density per band measured on the Primary CPICH by the terminal.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Primary CPICH Ec/No			INTEGER (-30...+30)	Unit dB, step 1 dB

9.2.2.22 Propagation Delay (PD)

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, ...

9.2.2.23 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)	

9.2.2.24 Scrambling Code Change

This parameter indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Scrambling Code Change			ENUMERATED (Change, No change)	

9.2.2.xx Secondary CCPCH Slot Format

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Secondary CCPCH Slot Format			INTEGER (0..178)	refer to 25.211.

9.2.2.25 Slot Number (SN)

It defines the slot number when the transmission gap starts.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SN			Time Slot	

9.2.2.26 SS DT Cell Identity

The SS DT Cell ID is a temporary ID for SS DT assigned to a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SS DT Cell Identity			ENUMERATED (a, b.., h)	

9.2.2.27 SS DT Cell Identity Length

The SS DT Cell ID Length parameter shows the length of the SS DT Cell ID.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell ID Length			ENUMERATED (Short, Medium, Long)	

9.2.2.28 SS DT Indication

The SS DT Indication indicates whether SS DT is in use by the UE or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SS DT Indication			ENUMERATED (SS DT Active in the UE, SS DT not Active in the UE)	

9.2.2.29 SS DT Support Indicator

The SS DT Support Indicator indicates whether a RL supports SS DT or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SS DT Support Indicator			ENUMERATED (SS DT Supported, SS DT not supported).	

9.2.2.xx STTD Indicator

Indicates if STTD shall be active or not.

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
<u>STTD Indicator</u>			<u>ENUMERATED (active, inactive)</u>	

9.2.2.30 TFCI Signalling Mode

This parameter indicates if the normal or split mode is used for the TFCI.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI Signalling Mode			ENUMERATED (Normal, Split)	

9.2.2.31 TPC Downlink Step Size

This parameter indicates step size for the DL power adjustment.

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

9.2.2.32 Transmission Gap Distance (TGD)

Transmission Gap Distance is the duration of transmission between two consecutive transmission gaps within a transmission gap period, expressed in number of frames. In case there is only one transmission gap in the transmission gap period, this parameter shall be set to zero.

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

9.2.2.33 Transmit Gap Length (TGL)

Transmission Gap Length is the duration of no transmission, expressed in number of slots.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TGL			INTEGER (3,4,7,10,14)	Slot

9.2.2.34 UL/DL Compressed Mode Selection

This parameter specifies whether compressed mode is used in UL only, DL only or both UL and DL

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL/DL Compressed Mode Selection			ENUMERATED (UL only, DL only, both UL and DL)	

9.2.2.35 UL DPCCH Slot Format

Indicates the slot format used in DPCCH in UL, according to ref. [Error! Reference source not found.].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL DPCCH Slot Format			INTEGER (0..5)	

9.2.2.36 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)	

9.2.2.37 Uplink Delta Eb/No

The delta in uplink Eb/No that shall be added to the Eb/No target used during compressed mode frames.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Uplink Delta Eb/No			Enumerated (-6..+10dB)	Step 0.1 dB.

9.2.2.38 Uplink Delta Eb/No After

The delta in uplink Eb/No target that shall be added to the Eb/No target used one frame after the compressed mode frames.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Uplink Delta Eb/No after			Enumerated (-6..+10dB)	Step 0.1 dB.

9.2.3 TDD Specific Parameters

This chapter contains parameters that are specific to TDD.

9.2.3.1 Burst Type

Defines the burst type of the physical channel, see ref. [Error! Reference source not found.].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Burst Type			ENUMERATED (Type1, Type2)	

9.2.3.2 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)	

9.2.3.3 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			INTEGER (0..239)	

9.2.3.4 Midamble Shift

Different bursts transmitted simultaneously, using the same midamble code shall use different Midamble Shifts.

The 256 chip midamble supports 3 different time shifts, the 512 chips midamble may support 8 or even 16 time shifts.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Midamble Shift			INTEGER (0..15)	

9.2.3.5 Primary CCPCH RSCP

Received Signal Code Power is the received power on PCCPCH of the target cell after despreading. The reference point for the RSCP is the antenna connector at the UE, see ref. [Error! Reference source not found.].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Primary CCPCH RSCP			INTEGER (-115..-25.01)	P-CCPCH RSCP is given with a resolution of 1 dBm with the range [-115, ..., -25] dBm According to mapping in 25.225.

9.2.3.6 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.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Repetition Length			INTEGER(1..63)	

9.2.3.7 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).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Repetition Period			ENUMERATED (1,2,4,8,16,32,64)	

9.2.3.8 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))	

9.2.3.9 TDD Physical Channel Offset

The TDD Physical Channel Offset represents the phase information for the allocation of a physical channel. (SFN mod Repetition Period = TDD Physical Channel Offset).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TDD Physical Channel Offset			INTEGER (0..63)	

9.2.3.10 TFCI Coding

The TFCI Coding describes 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	M		Enumerated (4, 8, 16, 32)	

9.3 Message and Information element abstract syntax (with ASN.1)

This chapter is for the time being only **INFORMATIVE**.

In case of misalignment with the tabular format of the messages in chapter 9.1 the ASN.1 needs to be aligned with the tabular format.

The setting of the criticality field and the level on which criticality is set for the IEs and sequences of IEs is still to be decided upon.

9.3.1 Usage of protocol extension mechanism for non-standard use

The protocol extension 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 interoperability.
- By vendors for research purposes, e.g. to implement and evaluate new algorithms/features before such features are proposed for standardisation

The extension mechanism shall not be used for basic functionality. Such functionality shall be standardised.

9.3.2 Elementary Procedure Definitions

```
-- *****
--
-- Elementary Procedure definitions
--
-- *****

RNSAP-PDU-Descriptions -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    Criticality,
    ProcedureID,
    TransactionID
FROM RNSAP-CommonDataTypes

    CommonTransportChannelResourcesFailure,
    CommonTransportChannelResourcesRequest,
    CommonTransportChannelResourcesReleaseRequest,
    CommonTransportChannelResourcesResponseFDD,
    CommonTransportChannelResourcesResponseTDD,
    CompressedModeCancel,
    CompressedModeCommit,
    CompressedModeFailure,
    CompressedModePrepare,
    CompressedModeReady,
    DedicatedMeasurementFailureIndication,
    DedicatedMeasurementInitiationFailure,
    DedicatedMeasurementInitiationRequest,
    DedicatedMeasurementInitiationResponse,
    DedicatedMeasurementReport,
    DedicatedMeasurementTerminationRequest,
    DL-PowerControlRequest,
    DownlinkSignallingTransferRequest,
    ErrorIndication,
    PagingRequest,
```

```

PhysicalChannelReconfigurationCommand,
PhysicalChannelReconfigurationFailure,
PhysicalChannelReconfigurationRequestFDD,
PhysicalChannelReconfigurationRequestTDD,
PrivateMessage,
RadioLinkAdditionFailureFDD,
RadioLinkAdditionFailureTDD,
RadioLinkAdditionRequestFDD,
RadioLinkAdditionRequestTDD,
RadioLinkAdditionResponseFDD,
RadioLinkAdditionResponseTDD,
RadioLinkDeletionRequest,
RadioLinkDeletionResponse,
RadioLinkFailureIndication,
RadioLinkReconfigurationCancel,
RadioLinkReconfigurationCommit,
RadioLinkReconfigurationFailure,
RadioLinkReconfigurationPrepareFDD,
RadioLinkReconfigurationPrepareTDD,
RadioLinkReconfigurationReadyFDD,
RadioLinkReconfigurationReadyTDD,
RadioLinkReconfigurationRequestFDD,
RadioLinkReconfigurationRequestTDD,
RadioLinkReconfigurationResponseFDD,
RadioLinkReconfigurationResponseTDD,
RadioLinkRestoreIndication,
RadioLinkSetupFailureFDD,
RadioLinkSetupFailureTDD,
RadioLinkSetupRequestFDD,
RadioLinkSetupRequestTDD,
RadioLinkSetupResponseFDD,
RadioLinkSetupResponseTDD,
RelocationCommit,
UplinkSignallingTransferIndication
FROM RNSAP-PDU-Contents

```

```

id-commonTransportChannelResourcesInitiationFDD,
id-commonTransportChannelResourcesInitiationTDD,
id-commonTransportChannelResourcesRelease,
id-compressedModeCancellationFDD,
id-compressedModeCommitFDD,
id-compressedModePrepareFDD,
id-downlinkPowerControl,
id-downlinkSignallingTransfer,
id-errorIndication,
id-measurementFailure,
id-measurementInitiation,
id-measurementReporting,
id-measurementTermination,
id-pagingRequest,
id-physicalChannelReconfiguration,
id-privateMessage,
id-radioLinkAddition,
id-radioLinkDeletion,
id-radioLinkFailure,
id-radioLinkRestoration,
id-radioLinkSetup,
id-srnsRelocationCommit,
id-synchronisedRadioLinkReconfigurationCancellation,
id-synchronisedRadioLinkReconfigurationCommit,
id-synchronisedRadioLinkReconfigurationPrepare,
id-unsynchronisedRadioLinkReconfiguration,
id-uplinkSignallingTransfer
FROM RNSAP-Constants;

```

```

-- *****
--
-- Interface Elementary Procedure Class
--
-- *****

```

```

RNSAP-ELEMENTARY-PROCEDURE ::= CLASS {
    &InitiatingMessage           ,
    &SuccessfulOutcome           OPTIONAL,
    &UnsuccessfulOutcome         OPTIONAL,
    &Outcome                     OPTIONAL,
    &procedureID                 ProcedureID  UNIQUE,
    &criticality                 Criticality  DEFAULT ignore
}

```

```

}
WITH SYNTAX {
  INITIATING MESSAGE      &InitiatingMessage
  [SUCCESSFUL OUTCOME     &SuccessfulOutcome]
  [UNSUCCESSFUL OUTCOME   &UnsuccessfulOutcome]
  [OUTCOME                 &Outcome]
  PROCEDURE ID            &procedureID
  [CRITICALITY            &criticality]
}

-- *****
--
-- Interface PDU Definition
--
-- *****

RNSAP-PDU ::= CHOICE {
  initiatingMessage  InitiatingMessage,
  succesfulOutcome   SuccessfulOutcome,
  unsuccessulOutcome UnsuccessfulOutcome,
  outcome            Outcome,
  ...
}

InitiatingMessage ::= SEQUENCE {
  procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ({RNSAP-ELEMENTARY-PROCEDURES}),
  criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality        ({RNSAP-ELEMENTARY-
PROCEDURES}{@procedureID}),
  transactionID TransactionID,
  value        RNSAP-ELEMENTARY-PROCEDURE.&InitiatingMessage  ({RNSAP-ELEMENTARY-
PROCEDURES}{@procedureID})
}

SuccessfulOutcome ::= SEQUENCE {
  procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ({RNSAP-ELEMENTARY-PROCEDURES}),
  criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality        ({RNSAP-ELEMENTARY-
PROCEDURES}{@procedureID}),
  transactionID TransactionID,
  value        RNSAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome  ({RNSAP-ELEMENTARY-
PROCEDURES}{@procedureID})
}

UnsuccessfulOutcome ::= SEQUENCE {
  procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ({RNSAP-ELEMENTARY-PROCEDURES}),
  criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality        ({RNSAP-ELEMENTARY-
PROCEDURES}{@procedureID}),
  transactionID TransactionID,
  value        RNSAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome ({RNSAP-ELEMENTARY-
PROCEDURES}{@procedureID})
}

Outcome ::= SEQUENCE {
  procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ({RNSAP-ELEMENTARY-PROCEDURES}),
  criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality        ({RNSAP-ELEMENTARY-
PROCEDURES}{@procedureID}),
  transactionID TransactionID,
  value        RNSAP-ELEMENTARY-PROCEDURE.&Outcome          ({RNSAP-ELEMENTARY-
PROCEDURES}{@procedureID})
}

-- *****
--
-- Interface Elementary Procedure List
--
-- *****

RNSAP-ELEMENTARY-PROCEDURES RNSAP-ELEMENTARY-PROCEDURE ::= {
  RNSAP-ELEMENTARY-PROCEDURES-CLASS-1      |
  RNSAP-ELEMENTARY-PROCEDURES-CLASS-2      |
  RNSAP-ELEMENTARY-PROCEDURES-CLASS-3      |
  ...
}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 RNSAP-ELEMENTARY-PROCEDURE ::= {
  radioLinkSetupFDD      |
  radioLinkSetupTDD      |
  radioLinkAdditionFDD   |
  radioLinkAdditionTDD   |

```

```

radioLinkDeletion
synchronisedRadioLinkReconfigurationPreparationFDD
synchronisedRadioLinkReconfigurationPreparationTDD
unSynchronisedRadioLinkReconfigurationFDD
unSynchronisedRadioLinkReconfigurationTDD
physicalChannelReconfigurationFDD
physicalChannelReconfigurationTDD
measurementInitiation
compressedModePreparationFDD
commonTransportChannelResourcesInitiationFDD
commonTransportChannelResourcesInitiationTDD
...
}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 RNSAP-ELEMENTARY-PROCEDURE ::= {
  uplinkSignallingTransfer
  downlinkSignallingTransfer
  srnsRelocationCommit
  paging
  synchronisedRadioLinkReconfigurationCommit
  synchronisedRadioLinkReconfigurationCancellation
  radioLinkFailure
  radioLinkRestoration
  measurementReporting
  measurementTermination
  measurementFailure
  downlinkPowerControlFDD
  compressedModeCommitFDD
  compressedModeCancellationFDD
  commonTransportChannelResourcesRelease
  errorIndication
  privateMessage
  ...
}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-3 RNSAP-ELEMENTARY-PROCEDURE ::= {
  ...
}

-- *****
--
-- Interface Elementary Procedures
--
-- *****

radioLinkSetupFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkSetupRequestFDD
  SUCCESSFUL OUTCOME RadioLinkSetupResponseFDD
  UNSUCCESSFUL OUTCOME RadioLinkSetupFailureFDD
  PROCEDURE ID { procedureCode id-radioLinkSetup, ddMode fdd }
  CRITICALITY ignore
}

radioLinkSetupTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkSetupRequestTDD
  SUCCESSFUL OUTCOME RadioLinkSetupResponseTDD
  UNSUCCESSFUL OUTCOME RadioLinkSetupFailureTDD
  PROCEDURE ID { procedureCode id-radioLinkSetup, ddMode tdd }
  CRITICALITY ignore
}

radioLinkAdditionFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkAdditionRequestFDD
  SUCCESSFUL OUTCOME RadioLinkAdditionResponseFDD
  UNSUCCESSFUL OUTCOME RadioLinkAdditionFailureFDD
  PROCEDURE ID { procedureCode id-radioLinkAddition, ddMode fdd }
  CRITICALITY ignore
}

radioLinkAdditionTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkAdditionRequestTDD
  SUCCESSFUL OUTCOME RadioLinkAdditionResponseTDD
  UNSUCCESSFUL OUTCOME RadioLinkAdditionFailureTDD
  PROCEDURE ID { procedureCode id-radioLinkAddition, ddMode tdd }
  CRITICALITY ignore
}

radioLinkDeletion RNSAP-ELEMENTARY-PROCEDURE ::= {

```

```

INITIATING MESSAGE  RadioLinkDeletionRequest
SUCCESSFUL OUTCOME  RadioLinkDeletionResponse
PROCEDURE ID       { procedureCode id-radioLinkDeletion, ddMode common }
CRITICALITY       ignore
}

synchronisedRadioLinkReconfigurationPreparationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationPrepareFDD
  SUCCESSFUL OUTCOME  RadioLinkReconfigurationReadyFDD
  UNSUCCESSFUL OUTCOME  RadioLinkReconfigurationFailure
  PROCEDURE ID       { procedureCode id-synchronisedRadioLinkReconfigurationPrepare, ddMode fdd }
  CRITICALITY       ignore
}

synchronisedRadioLinkReconfigurationPreparationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationPrepareTDD
  SUCCESSFUL OUTCOME  RadioLinkReconfigurationReadyTDD
  UNSUCCESSFUL OUTCOME  RadioLinkReconfigurationFailure
  PROCEDURE ID       { procedureCode id-synchronisedRadioLinkReconfigurationPrepare, ddMode tdd }
  CRITICALITY       ignore
}

unSynchronisedRadioLinkReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationRequestFDD
  SUCCESSFUL OUTCOME  RadioLinkReconfigurationResponseFDD
  UNSUCCESSFUL OUTCOME  RadioLinkReconfigurationFailure
  PROCEDURE ID       { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode fdd }
  CRITICALITY       ignore
}

unSynchronisedRadioLinkReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationRequestTDD
  SUCCESSFUL OUTCOME  RadioLinkReconfigurationResponseTDD
  UNSUCCESSFUL OUTCOME  RadioLinkReconfigurationFailure
  PROCEDURE ID       { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode tdd }
  CRITICALITY       ignore
}

physicalChannelReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  PhysicalChannelReconfigurationRequestFDD
  SUCCESSFUL OUTCOME  PhysicalChannelReconfigurationCommand
  UNSUCCESSFUL OUTCOME  PhysicalChannelReconfigurationFailure
  PROCEDURE ID       { procedureCode id-physicalChannelReconfiguration, ddMode fdd }
  CRITICALITY       ignore
}

physicalChannelReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  PhysicalChannelReconfigurationRequestTDD
  SUCCESSFUL OUTCOME  PhysicalChannelReconfigurationCommand
  UNSUCCESSFUL OUTCOME  PhysicalChannelReconfigurationFailure
  PROCEDURE ID       { procedureCode id-physicalChannelReconfiguration, ddMode tdd }
  CRITICALITY       ignore
}

measurementInitiation RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  DedicatedMeasurementInitiationRequest
  SUCCESSFUL OUTCOME  DedicatedMeasurementInitiationResponse
  UNSUCCESSFUL OUTCOME  DedicatedMeasurementInitiationFailure
  PROCEDURE ID       { procedureCode id-measurementInitiation, ddMode common }
  CRITICALITY       ignore
}

compressedModePreparationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CompressedModePrepare
  SUCCESSFUL OUTCOME  CompressedModeReady
  UNSUCCESSFUL OUTCOME  CompressedModeFailure
  PROCEDURE ID       { procedureCode id-compressedModePrepareFDD, ddMode fdd }
  CRITICALITY       ignore
}

commonTransportChannelResourcesInitiationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CommonTransportChannelResourcesRequest
  SUCCESSFUL OUTCOME  CommonTransportChannelResourcesResponseFDD
  UNSUCCESSFUL OUTCOME  CommonTransportChannelResourcesFailure
  PROCEDURE ID       { procedureCode id-commonTransportChannelResourcesInitiationFDD, ddMode
common }
  CRITICALITY       ignore
}

```



```
commonTransportChannelResourcesInitiationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CommonTransportChannelResourcesRequest
  SUCCESSFUL OUTCOME CommonTransportChannelResourcesResponseTDD
  UNSUCCESSFUL OUTCOME CommonTransportChannelResourcesFailure
  PROCEDURE ID { procedureCode id-commonTransportChannelResourcesInitiationTDD, ddMode
common }
  CRITICALITY ignore
}

uplinkSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE UplinkSignallingTransferIndication
  PROCEDURE ID { procedureCode id-uplinkSignallingTransfer, ddMode common }
  CRITICALITY ignore
}

downlinkSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DownlinkSignallingTransferRequest
  PROCEDURE ID { procedureCode id-downlinkSignallingTransfer, ddMode common }
  CRITICALITY ignore
}

srnsRelocationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RelocationCommit
  PROCEDURE ID { procedureCode id-srnsRelocationCommit, ddMode common }
  CRITICALITY ignore
}

paging RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE PagingRequest
  PROCEDURE ID { procedureCode id-pagingRequest, ddMode common }
  CRITICALITY ignore
}

synchronisedRadioLinkReconfigurationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkReconfigurationCommit
  PROCEDURE ID { procedureCode id-synchronisedRadioLinkReconfigurationCommit, ddMode
common }
  CRITICALITY ignore
}

synchronisedRadioLinkReconfigurationCancellation RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkReconfigurationCancel
  PROCEDURE ID { procedureCode id-synchronisedRadioLinkReconfigurationCancellation, ddMode
common }
  CRITICALITY ignore
}

radioLinkFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkFailureIndication
  PROCEDURE ID { procedureCode id-radioLinkFailure, ddMode common }
  CRITICALITY ignore
}

radioLinkRestoration RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkRestoreIndication
  PROCEDURE ID { procedureCode id-radioLinkRestoration, ddMode common }
  CRITICALITY ignore
}

measurementReporting RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DedicatedMeasurementReport
  PROCEDURE ID { procedureCode id-measurementReporting, ddMode common }
  CRITICALITY ignore
}

measurementTermination RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DedicatedMeasurementTerminationRequest
  PROCEDURE ID { procedureCode id-measurementTermination, ddMode common }
  CRITICALITY ignore
}

measurementFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DedicatedMeasurementFailureIndication
  PROCEDURE ID { procedureCode id-measurementFailure, ddMode common }
  CRITICALITY ignore
}
```

```

downlinkPowerControlFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DL-PowerControlRequest
  PROCEDURE ID       { procedureCode id-downlinkPowerControl, ddMode fdd }
  CRITICALITY       ignore
}

compressedModeCommitFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CompressedModeCommit
  PROCEDURE ID       { procedureCode id-compressedModeCommitFDD, ddMode fdd }
  CRITICALITY       ignore
}

compressedModeCancellationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CompressedModeCancel
  PROCEDURE ID       { procedureCode id-compressedModeCancellationFDD, ddMode fdd }
  CRITICALITY       ignore
}

commonTransportChannelResourcesRelease RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CommonTransportChannelResourcesReleaseRequest
  PROCEDURE ID       { procedureCode id-commonTransportChannelResourcesRelease, ddMode common }
  CRITICALITY       ignore
}

errorIndication RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE ErrorIndication
  PROCEDURE ID       { procedureCode id-errorIndication, ddMode common }
  CRITICALITY       ignore
}

privateMessage RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE PrivateMessage
  PROCEDURE ID       { procedureCode id-privateMessage, ddMode common }
  CRITICALITY       ignore
}

END

```

9.3.3 PDU Definitions

```

-- *****
--
-- PDU definitions for RNSAP.
--
-- *****

RNSAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
  AllocationRetentionPriority,
  AllowedQueuingTime,
  BLER,
  BindingID,
  BurstType,
  C-ID,
  C-RNTI,
  CCTrCH-ID,
  CFN,
  CN-CS-DomainIdentifier,
  CN-PS-DomainIdentifier,
  CPICH-EcIo,
  CPICH-Power,
  Cause,
  CellParameterID,
  ChipOffset,
  CompressedModeMethod,
  CriticalityDiagnostics,
  D-FieldLength,
  D-RNTI,

```

D-RNTI-ReleaseIndication,
 DCH-CombinationInd,
 DCH-ID,
~~DL-ChannelisationCode,~~
~~DL-DPCH-SlotFormat,~~
 DL-DPCH-SlotFormatNumber,
 DL-EbNo,
 DL-EbNoTarget,
 DL-FrameType,
 DL-Power,
 DL-ScramblingCode,
 DPCH-ID,
 DRX-Parameter,
~~DedicatedMeasurementType,~~
 DedicatedMeasurementValue,
 DiversityControlField,
 DiversityMode,
~~FACH-DataFrameSize,~~
 FACH-InitialWindowSize,
 FACH-PriorityIndicator,
 FDD-DL-ChannelisationCodeNumber,
 FDD-S-CCPCH-Offset,
 FrameHandlingPriority,
 FrameOffset,
 GapPeriod,
 GapPositionMode,
 L3-Information,
 MAC-c-SDU-Length,
 MaxNrOfUL-DPCHs,
 MeanBitRate,
 MeasurementCharacteristics,
 MeasurementID,
 MidambleShift,
 MinUL-ChannelisationCodeLength,
 MultipleURAsIndicator,
 MultiplexingPosition,
~~Offset,~~
 PD,
~~PSCH-PCPCH-TimeSlot,~~
 PSCH-TimeSlot,
 PayloadCRC-PresenceIndicator,
~~PilotBitsUsedIndicator,~~
 PowerControlMode,
 PowerOffset,
 PowerResumeMode,
 PrimaryCCPCH-RSCP,
 PrimaryCPICH-EcNo,
 PrimaryCPICH-Power,
 PrimaryScramblingCode,
 PropagationDelay,
 PunctureLimit,
 RANAP-RelocationInformation,
 RL-ID,
 RLC-Mode,
 RNC-ID,
 RepetitionLength,
 RepetitionPeriod,
 ReportCharacteristics,
 S-FieldLength,
 S-RNTI,
 SAI,
 SN,
~~SRNC-ID,~~
 SSDT-CellID,
 SSDT-CellID-Length,
 SSDT-Indication,
 SSDT-SupportIndicator,
~~STD-Indicator,~~
~~ScaledUL-InterferenceLevel,~~
~~ScramblingCode,~~
 ScramblingCodeChange,
 SecondaryCCPCH-SlotFormat,
 SyncCase,
 TDD-ChannelisationCode,
 TDD-PhysicalChannelOffset,
 TFCI-Coding,
 TFCI-Presence,
 TFCI-SignallingMode,

```

TGD,
TGL,
TPC-StepSize,
TimeSlot,
ToAWE,
ToAWS,
TransportBearerID,
TransportBearerRequestIndicator,
TransportFormatCombinationSetTFCS,
TransportFormatSet,
TransportLayerAddress,
UARFCN,
UC-ID,
UL-DeltaEbNo,
UL-DeltaEbNoAfter,
UL-DL-CompressedModeSelection,
UL-DPCCH-SlotFormat,
UL-EbNo,
UL-EbNoTarget,
UL-FP-Mode,
UL-ScramblingCode,
URA-ID
FROM RNSAP-IEs

PrivateExtensionContainer{},
ProtocolExtensionContainer{},
ProtocolIE-ContainerList{},
ProtocolIE-ContainerPair{},
ProtocolIE-ContainerPairList{},
ProtocolIE-Container{},
RNSAP-PRIVATE-EXTENSION,
RNSAP-PROTOCOL-EXTENSION,
RNSAP-PROTOCOL-IES,
RNSAP-PROTOCOL-IES-PAIR
FROM RNSAP-Containers

maxNrOfDL-Codes,
maxNrOfCCTrCHs,
maxNrOfDCHs,
maxNrOfDL-Codes,
maxNrOfDPCHs,
maxNrOfFACH-FD-Size,
maxNrOfFDD-Neighbours,
maxNrOfMACcSDU-Length,
maxNrOfTDD-Neighbours,
maxNrOfRLs,
maxNrOfRLs-1,
maxNrOfRLs-2,
maxNrOfSCCPCHs,
maxRNCinURA,

id-AllowedQueuingTime,
id-BindingID,
id-C-ID,
id-C-RNTI,
id-CCTrCH-ID,
id-CFN,
id-CN-CS-DomainIdentifier,
id-CN-PS-DomainIdentifier,
id-Cause,
id-CompressedModeMethod,
id-CriticalityDiagnostics,
id-D-RNTI,
id-D-RNTI-ReleaseIndication,
id-DCH-AddItem,
id-DCH-AddItem-RL-ReconfPrepFDD,
id-DCH-AddItem-RL-ReconfPrepTDD,
id-DCH-AddItem-RL-ReconfReadyFDD,
id-DCH-AddItem-RL-ReconfReadyTDD,
id-DCH-AddItem-RL-ReconfRqstFDD,
id-DCH-AddItem-RL-ReconfRqstTDD,
id-DCH-AddItem-RL-ReconfRsp,
id-DCH-AddList-RL-ReconfPrepFDD,
id-DCH-AddList-RL-ReconfPrepTDD,
id-DCH-AddList-RL-ReconfRqstFDD,
id-DCH-AddList-RL-ReconfRqstTDD,
id-DCH-DeleteItem-RL-ReconfPrepFDD,

```

id-DCH-DeleteItem-RL-ReconfPrepTDD,
 id-DCH-DeleteItem-RL-ReconfRqstFDD,
 id-DCH-DeleteItem-RL-ReconfRqstTDD,
 id-DCH-DeleteList-RL-ReconfPrepFDD,
 id-DCH-DeleteList-RL-ReconfPrepTDD,
 id-DCH-DeleteList-RL-ReconfRqstFDD,
 id-DCH-DeleteList-RL-ReconfRqstTDD,
 id-DCH-Information-RL-SetupReqgstFDD,
 id-DCH-InformationItem-RL-SetupReqgstFDD,
 id-DCH-InformationItem-RL-SetupReqgstTDD,
 id-DCH-InformationList-RL-SetupReqgstTDD,
~~id-DCH-ModifyItem,~~
 id-DCH-ModifyItem-RL-ReconfPrepFDD,
 id-DCH-ModifyItem-RL-ReconfPrepTDD,
 id-DCH-ModifyItem-RL-ReconfReadyFDD,
~~id-DCH-ModifyItem-RL-ReconfReadyTDD,~~
 id-DCH-ModifyItem-RL-ReconfRqstFDD,
 id-DCH-ModifyItem-RL-ReconfRqstTDD,
~~id-DCH-ModifyItem-RL-ReconfRsp,~~
 id-DCH-ModifyList-RL-ReconfPrepFDD,
 id-DCH-ModifyList-RL-ReconfPrepTDD,
 id-DCH-ModifyList-RL-ReconfRqstFDD,
 id-DCH-ModifyList-RL-ReconfRqstTDD,
 id-DL-CCTrCH-Information-RL-ReconfPrepTDD,
 id-DL-CCTrCH-Information-RL-ReconfRqstTDD,
 id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD,
 id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD,
 id-DL-CCTrChInformationItem-RL-SetupReqgstTDD,
 id-DL-CCTrChInformationList-RL-SetupReqgstTDD,
 id-DL-CodeInformation-PhyChReconfRqstFDD,
 id-DL-DPCH-Information,
 id-DL-DPCH-Information-RL-SetupReqgstFDD,
 id-DL-DPCH-InformationList-PhyChReconfRqstTDD,
 id-DL-DPCH-InformationList-RL-ReconfReadyTDD,
 id-DL-EbNoTarget,
 id-DL-FrameType,
 id-DL-MeanBitRate,
 id-DL-ReferencePowerInformation-DL-PC-Rqst,
 id-DRX-Parameter,
 id-DedicatedMeasurementObjectType-DM-Rprt,
 id-DedicatedMeasurementObjectType-DM-Rqst,
 id-DedicatedMeasurementObjectType-DM-Rspns,
~~id-DedicatedMeasurementType,~~
 id-FACH-InfoForOptionalGroupS-CCPCH-CTCH-ResourceRspFDD,
 id-FACH-InfoForOptionals-CCPCH-CTCH-ResourceRspTDD,
 id-FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspFDD,
~~id-FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspTDD,~~
 id-GapPositionMode,
 id-L3-Information,
~~id-MaxUL-EbNo,~~
 id-MeasurementCharacteristics,
 id-MeasurementID,
~~id-MinUL-EbNo,~~
 id-MultipleURAsIndicator,
 id-PD,
 id-PagingArea-PagingRqst,
 id-PowerControlMode,
 id-PowerResumeMode,
 id-ProcedureScope-DL-PC-Rqst,
 id-RANAP-RelocationInformation,
 id-RL-Information-PhyChReconfRqstFDD,
 id-RL-Information-PhyChReconfRqstTDD,
 id-RL-Information-RL-AdditionRqstFDD,
 id-RL-Information-RL-AdditionRqstTDD,
 id-RL-Information-RL-DeletionRqst,
 id-RL-Information-RL-FailureInd,
 id-RL-Information-RL-ReconfPrepFDD,
 id-RL-Information-RL-RestoreInd,
 id-RL-Information-RL-SetupReqgstFDD,
 id-RL-Information-RL-SetupReqgstTDD,
 id-RL-InformationItem-DM-Rprt,
 id-RL-InformationItem-DM-Rqst,
 id-RL-InformationItem-DM-Rspns,
 id-RL-InformationItem-RL-SetupReqgstFDD,
 id-RL-InformationList-RL-AdditionRqstFDD,
 id-RL-InformationList-RL-DeletionRqst,
 id-RL-InformationList-RL-FailureInd,
 id-RL-InformationList-RL-ReconfPrepFDD,

```

id-RL-InformationList-RL-RestoreInd,
id-RL-InformationResponse-RL-AdditionRspTDD,
id-RL-InformationResponse-RL-ReconfReadyTDD,
id-RL-InformationResponse-RL-SetupRspTDD,
id-RL-InformationResponseItem-RL-AdditionRspFDD,
id-RL-InformationResponseItem-RL-ReconfReadyFDD,
id-RL-InformationResponseItem-RL-ReconfRsp,
id-RL-InformationResponseItem-SetupRspFDD,
id-RL-InformationResponseList-RL-AdditionRspFDD,
id-RL-InformationResponseList-RL-ReconfReadyFDD,
id-RL-InformationResponseList-RL-ReconfRsp,
id-RL-InformationResponseList-SetupRspFDD,
id-RL-ReconfigurationFailure-RL-ReconfFail,
id-RL-ReconfigurationFailureList-RL-ReconfFail,
id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind,
id-ReportCharacteristics,
id-S-RNTI,
id-SAI,
id-SN,
id-SRNC-ID,
id-ScramblingCodeChange,
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
id-TGD,
id-TGL,
id-TGP1,
id-TGP2,
id-TransportBearerID,
id-TransportBearerRequestIndicator,
id-TransportLayerAddress,
id-UC-ID,
id-UL-CCTrCH-Information-RL-ReconfPrepTDD,
id-UL-CCTrCH-Information-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD,
id-UL-CCTrChInformationItem-RL-SetupReqqstTDD,
id-UL-CCTrChInformationList-RL-SetupReqqstTDD,
id-UL-DL-CompressedModeSelection,
id-UL-DPCH-Information,
id-UL-DPCH-Information-RL-SetupReqqstFDD,
id-UL-DPCH-InformationList-PhyChReconfRqstTDD,
id-UL-DPCH-InformationList-RL-ReconfReadyTDD,
id-UL-DeltaEbNo,
id-UL-DeltaEbNoAfter,
id-UL-EbNoTarget,
id-UL-MeanBitRate,
id-URA-ID,
id-UnsuccessfulRL-InformationResponse,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
FROM RNSAP-Constants;

```

```

-- *****
--
-- Common Container List
--
-- *****

```

```

DCH-IE-ContainerList0 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 0,
maxNrOfDCHs, { IEsSetParam } }
DCH-IE-ContainerList1 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 1,
maxNrOfDCHs, { IEsSetParam } }
RL-IE-ContainerList0 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 0,
maxNrOfRLs, { IEsSetParam } }
RL-IE-ContainerList1 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 1,
maxNrOfRLs, { IEsSetParam } }
RL-IE-ContainerList1-1 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 1,
maxNrOfRLs-1, { IEsSetParam } }
RL-IE-ContainerList0-1 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 0,
maxNrOfRLs-1, { IEsSetParam } }
RL-IE-ContainerList0-2 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 0,
maxNrOfRLs-2, { IEsSetParam } }

```

```

CCTrCH-IE-ContainerList0 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 0,
maxNrOfCCTrCHs, { IEsSetParam } }
CCTrCH-IE-ContainerList1 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 1,
maxNrOfCCTrCHs, { IEsSetParam } }
DL-Code-IE-ContainerList0 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 0,
maxNrOfDL-Codes, { IEsSetParam } }
DL-Code-IE-ContainerList1 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 1,
maxNrOfDL-Codes, { IEsSetParam } }

-- *****
--
-- RADIO LINK SETUP REQUEST FDD
--
-- *****

RadioLinkSetupRequestFDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container        {{RadioLinkSetupRequestFDD-IES}},
    protocolExtensions          ProtocolExtensionContainer  {{RadioLinkSetupRequestFDD-
Extensions}}
    ...
}

RadioLinkSetupRequestFDD-IES RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI                CRITICALITY ignore TYPE S-RNTI                PRESENCE
mandatory } |
    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE
optional } |
    { ID id-AllowedQueuingTime    CRITICALITY ignore TYPE AllowedQueuingTime
PRESENCE optional } |
    { ID id-UL-DPCH-Information-RL-SetupReqgstFDD CRITICALITY ignore TYPE UL-DPCH-Information-RL-
SetupReqgstFDD PRESENCE mandatory } |
    { ID id-DL-DPCH-Information-RL-SetupReqgstFDD CRITICALITY ignore TYPE DL-DPCH-Information-RL-
SetupReqgstFDD PRESENCE mandatory } |
    { ID id-DCH-Information-RL-SetupReqgstFDD CRITICALITY ignore TYPE DCH-InformationList-RL-
SetupReqgstFDD PRESENCE mandatory } |
    { ID id-RL-Information-RL-SetupReqgstFDD CRITICALITY ignore TYPE RL-InformationList-RL-
SetupReqgstFDD PRESENCE mandatory },
    ...
}

UL-DPCH-Information-RL-SetupReqgstFDD ::= SEQUENCE {
    ul-ScramblingCode            UL-ScramblingCode,
    minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength,
    maxNrOfUL-DPCHs              MaxNrOfUL-DPCHs            OPTIONAL
    -- This IE is present only if minUL-ChannelisationCodeLength equals to 4 -- ,
    ul-PunctureLimit             PunctureLimit,
    ul-TransportFormatCombinationSetTFCS TransportFormatCombinationSetTFCS,
    ul-DPCCH-SlotFormat          UL-DPCCH-SlotFormat,
    ul-EbNoTarget                UL-EbNoTarget                OPTIONAL,
    diversityMode                 DiversityMode,
    d-FieldLength                 D-FieldLength              OPTIONAL
    -- This IE is present only if Feed Back mode diversity is activated -- ,
    sSDT-CellIdLength            SSDT-CellID-Length      OPTIONAL,
    s-FieldLength                 S-FieldLength            OPTIONAL,
    ul-meanBitRate                MeanBitRate                OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { {UL-DPCH-Information-RL-
SetupReqgstFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-SetupReqgstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupReqgstFDD ::= SEQUENCE {
    transportFormatCombinationSetTFCS TransportFormatCombinationSetTFCS,
    dl-DPCH-SlotFormatNumber      DL-DPCH-SlotFormatNumber,
    tFCI-SignallingMode            TFCI-SignallingMode,
    tFCI-Presence                  TFCI-Presence          OPTIONAL
    -- This IE is present if Slot Format is from 12 to 16 -- ,
    multiplexingPosition           MultiplexingPosition,
    powerOffsetInformation         SEQUENCE {
        po1-ForTFCI-Bits           PowerOffset,
        po2-ForTPC-Bits            PowerOffset,
        po3-ForPilotBits           PowerOffset,
        ...
    },
    dl-TPC-StepSize                TPC-StepSize,

```

```

    meanBitRate                MeanBitRate                OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {DL-DPCH-Information-RL-
| SetupReqqstFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-Information-RL-SetupReqqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationList-RL-SetupReqqstFDD ::= DCH-IE-ContainerList1 { {DCH-InformationItemIEs-
RL-SetupReqqstFDD} }

DCH-InformationItemIEs-RL-SetupReqqstFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationItem-RL-SetupReqqstFDD CRITICALITY ignore TYPE DCH-InformationItem-RL-
SetupReqqstFDD PRESENCE mandatory },
    ...
}

DCH-InformationItem-RL-SetupReqqstFDD ::= SEQUENCE {
    dCH-ID                      DCH-ID,
    dCH-CombinationInd          DCH-CombinationInd          OPTIONAL,
    rLC-Mode                    RLC-Mode,
    ul-transportFormatSet       TransportFormatSet,
    dl-transportFormatSet       TransportFormatSet,
    ul-BLER                     BLER,
    dl-BLER                     BLER,
    allocationRetentionPriority  AllocationRetentionPriority,
    frameHandlingPriority        FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode                  UL-FP-Mode,
    toAWS                       ToAWS,
    toAWE                       ToAWE,
    iE-Extensions              ProtocolExtensionContainer { {DCH-InformationItem-RL-
| SetupReqqstFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationItem-RL-SetupReqqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-SetupReqqstFDD ::= RL-IE-ContainerList1 { {RL-InformationItemIEs-
RL-SetupReqqstFDD} }

RL-InformationItemIEs-RL-SetupReqqstFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-SetupReqqstFDD CRITICALITY ignore TYPE RL-InformationItem-RL-
SetupReqqstFDD PRESENCE mandatory },
    ...
}

RL-InformationItem-RL-SetupReqqstFDD ::= SEQUENCE {
    rL-ID                      RL-ID,
    cC-ID                      C-ID,
    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-InformationList-RL-
SetupReqqstFDD --,
    dl-InitialTX-Power          DL-Power                        OPTIONAL
    -- Initial DL transmission power --,
    cPICH-EcIo                 CPICH-EcIo                    OPTIONAL,
    sSDT-CellID                SSDT-CellID                    OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {RL-InformationItem-RL-
| SetupReqqstFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-RL-SetupReqqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****

```



```

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

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

RadioLinkSetupRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI                CRITICALITY ignore TYPE S-RNTI                PRESENCE
mandatory } |
    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE
optional } |
    { ID id-AllowedQueuingTime    CRITICALITY ignore TYPE AllowedQueuingTime
PRESENCE optional } |
    { ID id-UL-MeanBitRate        CRITICALITY ignore TYPE MeanBitRate          PRESENCE
optional } |
    { ID id-DL-MeanBitRate        CRITICALITY ignore TYPE MeanBitRate          PRESENCE
optional } |
    { ID id-UL-CCTrChInformationList-RL-SetupReqgstTDD CRITICALITY ignore TYPE UL-
CCTrChInformationList-RL-SetupReqgstTDD PRESENCE mandatory } |
    { ID id-DL-CCTrChInformationList-RL-SetupReqgstTDD CRITICALITY ignore TYPE DL-
CCTrChInformationList-RL-SetupReqgstTDD PRESENCE mandatory } |
    { ID id-DCH-InformationList-RL-SetupReqgstTDD CRITICALITY ignore TYPE DCH-InformationList-RL-
SetupReqgstTDD PRESENCE mandatory } |
    { ID id-RL-Information-RL-SetupReqgstTDD CRITICALITY ignore TYPE RL-Information-RL-
SetupReqgstTDD PRESENCE mandatory },
    ...
}

UL-CCTrChInformationList-RL-SetupReqgstTDD ::= CCTrCH-IE-ContainerList1 { {UL-
CCTrChInformationItemIEs-RL-SetupReqgstTDD} }

UL-CCTrChInformationItemIEs-RL-SetupReqgstTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrChInformationItem-RL-SetupReqgstTDD CRITICALITY ignore TYPE UL-
CCTrChInformationItem-RL-SetupReqgstTDD PRESENCE mandatory },
    ...
}

UL-CCTrChInformationItem-RL-SetupReqgstTDD ::= SEQUENCE {
    cCTrCH-ID                    CCTrCH-ID,
    ul-TFCS                      TransportFormatCombinationSetTFCS,
    tFCI-Coding                  TFCI-Coding,
    ul-PunctureLimit             PunctureLimit,
    iE-Extensions                ProtocolExtensionContainer { {UL-CCTrChInformationItem-RL-
SetupReqgstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrChInformationItem-RL-SetupReqgstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrChInformationList-RL-SetupReqgstTDD ::= CCTrCH-IE-ContainerList1 { {DL-
CCTrChInformationItemIEs-RL-SetupReqgstTDD} }

DL-CCTrChInformationItemIEs-RL-SetupReqgstTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrChInformationItem-RL-SetupReqgstTDD CRITICALITY ignore TYPE DL-
CCTrChInformationItem-RL-SetupReqgstTDD PRESENCE mandatory },
    ...
}

DL-CCTrChInformationItem-RL-SetupReqgstTDD ::= SEQUENCE {
    cCTrCH-ID                    CCTrCH-ID,
    dl-TFCS                      TransportFormatCombinationSetTFCS,
    tFCI-Coding                  TFCI-Coding,
    dl-PunctureLimit             PunctureLimit,
    iE-Extensions                ProtocolExtensionContainer { {DL-CCTrChInformationItem-RL-
SetupReqgstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrChInformationItem-RL-SetupReqgstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

DCH-InformationList-RL-SetupReqgstTDD ::= DCH-IE-ContainerList1 { {DCH-InformationItemIEs-
RL-SetupReqgstTDD} }

DCH-InformationItemIEs-RL-SetupReqgstTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationItem-RL-SetupReqgstTDD CRITICALITY ignore TYPE DCH-InformationItem-RL-
SetupReqgstTDD PRESENCE mandatory },
  ...
}

DCH-InformationItem-RL-SetupReqgstTDD ::= SEQUENCE {
  dCH-ID DCH-ID,
  ul-cTrCH-ID CTrCH-ID, -- UL CTrCH in which the DCH is mapped
  dl-cTrCH-ID CTrCH-ID, -- DL CTrCH in which the DCH is mapped
  dCH-CombinationInd DCH-CombinationInd OPTIONAL,
  rLC-Mode RLC-Mode,
  ul-transportFormatSet TransportFormatSet,
  dl-transportFormatSet TransportFormatSet,
  ul-BLER BLER,
  dl-BLER BLER,
  allocationRetentionPriority AllocationRetentionPriority,
  frameHandlingPriority FrameHandlingPriority,
  payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
  ul-FP-Mode UL-FP-Mode,
  toAWS ToAWS,
  toAWE ToAWE,
  iE-Extensions ProtocolExtensionContainer { {DCH-InformationItem-RL-
SetupReqgstTDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-InformationItem-RL-SetupReqgstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Information-RL-SetupReqgstTDD ::= SEQUENCE {
  rL-ID RL-ID,
  c-ID C-ID,
  frameOffset FrameOffset,
  primaryCCPCH-RSCP PrimaryCCPCH-RSCP OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-SetupReqgstTDD-
ExtIEs} } OPTIONAL,
  ...
}

RL-Information-RL-SetupReqgstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

-- *****
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- *****

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

RadioLinkSetupResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI CRITICALITY ignore TYPE D-RNTI PRESENCE
optional } |
  { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier
PRESENCE optional } |
  { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier
PRESENCE optional } |
  { ID id-RL-InformationResponseList-RL-SetupRspFDD
CRITICALITY ignore TYPE RL-InformationResponseList-RL-SetupRspFDD
PRESENCE mandatory } |

```

```

    { ID id-UL-EbNoTarget          CRITICALITY ignore  TYPE UL-EbNoTarget          PRESENCE
optional    } |
    { ID id-DL-EbNoTarget          CRITICALITY ignore  TYPE DL-EbNoTarget          PRESENCE
optional    } |
    { ID id-CriticalityDiagnostics  CRITICALITY ignore  TYPE CriticalityDiagnostics
  PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-SetupRspFDD ::= RL-IE-ContainerList1 { {RL-
InformationResponseItemIEs-RL-SetupRspFDD} }

RL-InformationResponseItemIEs-RL-SetupRspFDD RNSAP-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,
  sAI            SAI,
  ul-InterferenceLevel          SealedUL-InterferenceLevel,
  dl-CodeInformation            DL-CodeInformationList-RL-SetupRspFDD,
  diversityIndication          CHOICE {
    combining          SEQUENCE {
      rL-ID          RL-ID
    },
    nonCombiningOrIENotPresentFirstRL SEQUENCE {
      dCH-InformationResponse-RL-SetupRspFDD          DCH-InformationResponseList-RL-SetupRspFDD
    }
  },
  OPTIONAL
},
  sSDT-SupportIndicator          SSDT-SupportIndicator,
  maxUL-EbNo          UL-EbNo,
  minUL-EbNo          UL-EbNo,
  neighbouringFDD-CellInformation          NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
  neighbouringTDD-CellInformation          NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { {RL-InformationResponseItem-RL-
SetupRspFDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

---** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDL-Codes)) OF DL-
CodeInformationItem-RL-SetupRspFDD

DL-CodeInformationItem-RL-SetupRspFDD ::= SEQUENCE {
  dl-ScramblingCode          DL-ScramblingCode,
  fDD-DL-ChannelisationCodeNumber          FDD-DL-ChannelisationCodeNumber,
  ---** NOTE: How many alternatives are there, 2 or 3? **
  diversityIndication          CHOICE {
    combining          SEQUENCE {
      rL-ID          RL-ID
    },
    nonCombiningOrIENotPresent          SEQUENCE {
      dCH-InformationResponse-RL-SetupRspFDD          DCH-InformationResponseList-RL-SetupRspFDD
    }
  },
  OPTIONAL
}
  OPTIONAL
}

--- This IE is present only if the RL is not the first on in the RL Information ---
  iE-Extensions          ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
SetupRspFDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CodeInformationItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

---** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-SetupRspFDD

```

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

```
DCH-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

~~*** NOTE: Both FDD and TDD messages use these definitions ***~~

```
NeighbouringFDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (0..maxNrOfFDD-Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-SetupRsp
```

```
NeighbouringFDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
    uC-ID          C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN         UARFCN,
    frameOffset    FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
    iE-Extensions   ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
    ...
}
```

```
NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
NeighbouringTDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (0..maxNrOfTDD-Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-SetupRsp
```

```
NeighbouringTDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
    c-ID          C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN         UARFCN,
    frameOffset    FrameOffset OPTIONAL,
    cellParameterID CellParameterID,
    syncCase       SyncCase,
    timeSlot       TimeSlot OPTIONAL
    -- This IE is present only if Sync_Case is Case1 -- ,
    pSCH-TimeSlot  PSCH-TimeSlot OPTIONAL
    -- This IE is present only if Sync_CasePSCH_PCCPCH Allocation = Case2 or Case3 -- ,
ul-EbNo          UL-EbNo OPTIONAL,
dl-EbNo          DL-EbNo OPTIONAL,
    iE-Extensions   ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
    ...
}
```

```
NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
RadioLinkSetupResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****
```

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

```
RadioLinkSetupResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
```

```

    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE
optional } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier
PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier
PRESENCE optional } |
    { ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore TYPE RL-InformationResponse-
RL-SetupRspTDD PRESENCE mandatory } |
    { ID id-UL-EbNoTarget          CRITICALITY ignore TYPE UL-EbNo          PRESENCE
optional } |
    { ID id-DL-EbNoTarget          CRITICALITY ignore TYPE DL-EbNoTarget      PRESENCE
optional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sAI                  SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    maxUL-EbNo          UL-EbNo,
    minUL-EbNo          UL-EbNo,
    ul-EbNoTarget       UL-EbNo OPTIONAL,
    dl-EbNoTarget       DL-EbNo OPTIONAL,
    ul-CCTrCHInformation UL-CCTrCHInformationList-RL-SetupRspTDD,
    dl-CCTrCHInformation DL-CCTrCHInformationList-RL-SetupRspTDD,
    dCH-InformationResponse DCH-InformationResponseList-RL-SetupRspTDD,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponse-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponse-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

--** NOTE: Shall this be made as an IE container? **
UL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-
CCTrCHInformationItem-RL-SetupRspTDD

UL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCtRCH-ID          CCTrCH-ID,
    ul-DPCH-Information UL-DPCH-InformationList-RL-SetupRspTDD,
    iE-Extensions      ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

--** NOTE: Shall this be made as an IE container? **
UL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-
InformationItem-RL-SetupRspTDD

--**NOTE: UL-DPCH-InformationItem-RL-SetupRspTDD and DL-DPCH-InformationItem-RL-SetupRspTDD
are currently similar. Combine them? **
UL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dPCH-ID          DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    burstType        BurstType,
    midambleShift    MidambleShift,
    timeSlot         TimeSlot,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod RepetitionPeriod,
    repetitionLength RepetitionLength,
    tFCI-Presence    TFCI-Presence,
    iE-Extensions    ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

}

~~*** NOTE: Shall this be made as an IE container? ***~~

DL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-SetupRspTDD

```
DL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    dl-DPCH-Information DL-DPCH-InformationList-RL-SetupRspTDD,
    iE-Extensions     ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

~~*** NOTE: Shall this be made as an IE container? ***~~

DL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationItem-RL-SetupRspTDD

```
DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dPCH-ID          DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    burstType        BurstType,
    midambleShift    MidambleShift,
    timeSlot         TimeSlot,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod RepetitionPeriod,
    repetitionLength RepetitionLength,
    tFCI-Presence    TFCI-Presence,
    iE-Extensions     ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

DCH-InformationResponseList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupRspTDD

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

```
DCH-InformationResponseItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
RadioLinkSetupResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
-- *****
--
-- RADIO LINK SETUP FAILURE FDD
--
-- *****
```

```
RadioLinkSetupFailureFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkSetupFailureFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupFailureFDD-
Extensions}}
    ...
}
```

```
RadioLinkSetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE
| mandatoryoptional } |
```

```

    { ID id-CN-PS-DomainIdentifier          CRITICALITY ignore  TYPE CN-PS-DomainIdentifier
    PRESENCE mandatoryoptional } |
    { ID id-CN-CS-DomainIdentifier          CRITICALITY ignore  TYPE CN-CS-DomainIdentifier
    PRESENCE mandatoryoptional } |
    { ID id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
    CRITICALITY ignore  TYPE UnsuccessfulRL-InformationResponseList-RL-
SetupFailureFDD
    PRESENCE mandatory } |
    { ID id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD
    CRITICALITY ignore  TYPE SuccessfulRL-InformationResponseList-RL-
SetupFailureFDD
    PRESENCE mandatoryoptional } |
    { ID id-UL-EbNoTarget                  CRITICALITY ignore  TYPE UL-EbNoTarget          PRESENCE
optional } |
    { ID id-MaxUL-EbNo                     CRITICALITY ignore  TYPE UL-EbNo                     PRESENCE
mandatory } |
    { ID id-MinUL-EbNo                     CRITICALITY ignore  TYPE UL-EbNo                     PRESENCE
mandatory } |
    { ID id-DL-EbNoTarget                  CRITICALITY ignore  TYPE DL-EbNoTarget          PRESENCE
optional } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics
    PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList1 {
{ {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
CRITICALITY ignore  TYPE UnsuccessfulRL-InformationResponse-RL-
SetupFailureFDD
    PRESENCE mandatory },
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
rL-ID          RL-ID,
cause          Cause,
iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList0 { {SuccessfulRL-
InformationResponse-RL-SetupFailureFDD-IEs} }

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD
CRITICALITY ignore  TYPE SuccessfulRL-InformationResponse-RL-
SetupFailureFDD
    PRESENCE mandatory },
    ...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
rL-ID          RL-ID,
sAI           SAI,
ul-InterferenceLevel          ScaledUL-InterferenceLevel,
dl-CodeInformation          DL-CodeInformationList-RL-SetupFailureFDD,
diversityIndication          CHOICE {
    combining          SEQUENCE {
        rL-ID          RL-ID
    },
    nonCombiningOrIENotPresentFirstRL          SEQUENCE {
        dCH-InformationResponse-RL-SetupFailureFDD          DCH-InformationResponseList-RL-
SetupFailureFDD          OPTIONAL
    }
},
sSDT-SupportIndicator          SSdT-SupportIndicator,
maxUL-EbNo          UL-EbNo,
minUL-EbNo          UL-EbNo,
neighbouringFDD-CellInformation          NeighbouringFDD-CellInformationList-RL-SetupFailureFDD
OPTIONAL,

```

```

    neighbouringTDD-CellInformation      NeighbouringTDD-CellInformationList-RL-SetupFailureFDD
OPTIONAL,
ul-EbNoTarget UL-EbNo,
maxUL-EbNo UL-EbNo,
minUL-EbNo UL-EbNo,
dl-EbNoTarget DL-EbNo,
    iE-Extensions      ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-
RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

---** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDL-Codes)) OF DL-
CodeInformationItem-RL-SetupFailureFDD

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DL-CodeInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    dl-ScramblingCode      DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber      FDD-DL-ChannelisationCodeNumber,
---** NOTE: How many alternatives are there, 2 or 3? **
diversityIndication CHOICE {
    combining SEQUENCE {
        rL-ID RL-ID
    },
    nonCombiningOrIENotPresent SEQUENCE {
        dCH-InformationResponse-RL-SetupFailureFDD DCH-InformationResponseList-RL-
SetupFailureFDD- OPTIONAL
    }
    } OPTIONAL
--- This IE is present only if the RL is not the first on in the RL Information ---,
    iE-Extensions      ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CodeInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

---** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-SetupFailureFDD

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

DCH-InformationResponseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringFDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (0..maxNrOfFDD-
Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
uC-ID C-ID,
    cN-PS-DomainIdentifier      CN-PS-DomainIdentifier      OPTIONAL,
    cN-CS-DomainIdentifier      CN-CS-DomainIdentifier      OPTIONAL,
    uARFCN      UARFCN,
    frameOffset      FrameOffset      OPTIONAL,
    primaryScramblingCode      PrimaryScramblingCode,
    primaryCPICH-Power      PrimaryCPICH-Power      OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

```



```

}

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (0..maxNrOfTDD-
Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    uc-ID C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    cellParameterID CellParameterID,
    syncCase SyncCase,
    timeSlot TimeSlot OPTIONAL,
    -- This IE is present only if Sync Case = Case3+ --
    pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
    -- This IE is present only if Sync Case+PSCH-PCCPCH Allocation = Case2 or Case3 -- ,
    iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP FAILURE TDD
--
-- *****

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

RadioLinkSetupFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD
CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
SetupFailureTDD
PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD ::= SEQUENCE {
    rL-ID RL-ID,
    cause Cause,
    iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-RL-SetupFailureTDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupFailureTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION REQUEST FDD
--

```

```

-- *****

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

RadioLinkAdditionRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-EbNoTarget          CRITICALITY ignore TYPE UL-EbNo          PRESENCE
mandatory } |
    { ID id-RL-InformationList-RL-AdditionRqstFDD CRITICALITY ignore TYPE RL-InformationList-RL-
AdditionRqstFDD PRESENCE mandatory },
    ...
}

RL-InformationList-RL-AdditionRqstFDD ::= RL-IE-ContainerList_1 { {RL-Information-RL-
AdditionRqstFDD-IEs} }

RL-Information-RL-AdditionRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-AdditionRqstFDD CRITICALITY ignore TYPE RL-Information-RL-
AdditionRqstFDD PRESENCE mandatory },
    ...
}

RL-Information-RL-AdditionRqstFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    c-ID                 C-ID,
    frameOffset          FrameOffset,
    chipOffset           ChipOffset,
    diversityControlField DiversityControlField,
    primaryCPICH-EcNo    PrimaryCPICH-EcNo OPTIONAL,
    sSDT-CellID          SSDT-CellID OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstFDD-
ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-AdditionRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

RadioLinkAdditionRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-AdditionRqstTDD CRITICALITY ignore TYPE RL-Information-RL-
AdditionRqstTDD PRESENCE mandatory },
    ...
}

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    c-ID                 C-ID,
    frameOffset          FrameOffset,
    chipOffset ChipOffset,
    diversityControlField DiversityControlField,
    primaryCCPCH-RSCP    PrimaryCCPCH-RSCP OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstTDD-
ExtIEs} } OPTIONAL,
    ...
}

```

```

RL-Information-RL-AdditionRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

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

RadioLinkAdditionResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
 { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE
 optional } |
    { ID id-RL-InformationResponseList-RL-AdditionRspFDD
        CRITICALITY ignore TYPE RL-InformationResponseList-RL-AdditionRspFDD

        PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics
        PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-AdditionRspFDD ::= RL-IE-ContainerList1 { {RL-
InformationResponseItemIEs-RL-AdditionRspFDD} }

RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-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,
    sAI                SAI,
    ul-InterferenceLevel          SealedUL-InterferenceLevel,
    dl-CodeInformation            DL-CodeInformationList-RL-AdditionRspFDD,
 diversityIndication            CHOICE {
     combining                SEQUENCE {
         rL-ID                RL-ID
     },
     nonCombining            SEQUENCE {
         dCH-InformationResponse-RL-AdditionRspFDD            DCH-InformationResponseList-RL-
 AdditionRspFDD
     },
    sSDT-SupportIndicator          SSDT-SupportIndicator,
    maxUL-EbNo                UL-EbNo,
    minUL-EbNo                UL-EbNo,
    neighbouringFDD-CellInformation          NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation          NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { {RL-InformationResponseItem-RL-
AdditionRspFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

 ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDL-Codes)) OF DL-
CodeInformationItem-RL-AdditionRspFDD

DL-CodeInformationItem-RL-AdditionRspFDD ::= SEQUENCE {
    dl-ScramblingCode                DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber          FDD-DL-ChannelisationCodeNumber,

```

```


-- ** NOTE: How many alternatives are there, 2 or 3? **
diversityIndication CHOICE {
  combining SEQUENCE {
    rL-ID RL-ID
  },
  nonCombiningOrIENotPresent SEQUENCE {
    dCH-InformationResponse-RL-AdditionRspFDD DCH-InformationResponseList-RL-
AdditionRspFDD OPTIONAL
  }
} OPTIONAL
This IE is present only if the RL is not the first on in the RL Information
iE-Extensions ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
AdditionRspFDD-ExtIEs} } OPTIONAL,
...
}
DL-CodeInformationItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-AdditionRspFDD
DCH-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
  dCH-ID DCH-ID,
  bindingID BindingID,
  transportLayerAddress TransportLayerAddress,
  iE-Extensions ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-
AdditionRspFDD-ExtIEs} } OPTIONAL,
  ...
}
DCH-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (0+..maxNrOfFDD-Neighbours))
OF
  NeighbouringFDD-CellInformationItem-RL-AdditionRsp
NeighbouringFDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
  uC-ID C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN UARFCN,
  frameOffset FrameOffset OPTIONAL,
  primaryScramblingCode PrimaryScramblingCode,
  primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
  ...
}
NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
NeighbouringTDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (0+..maxNrOfTDD-Neighbours))
OF
  NeighbouringTDD-CellInformationItem-RL-AdditionRsp
NeighbouringTDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
  uC-ID C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN UARFCN,
  frameOffset FrameOffset OPTIONAL,
  cellParameterID CellParameterID,
  syncCase SyncCase,
  timeSlot TimeSlot OPTIONAL,
  -- This IE is present only if Sync Case = Case1 --
  pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
  -- This IE is present only if Sync Case pSCH-PCCPCH-Allocation = Case2 or Case3 -- ,
  iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,


```

```

}
...
}
NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
...
}
RadioLinkAdditionResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
}
...
}
-- *****
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****

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

RadioLinkAdditionResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {

    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE
optional }
    { ID id-RL-InformationResponse-RL-AdditionRspTDD
        CRITICALITY ignore TYPE RL-InformationResponse-RL-AdditionRspTDD
        PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics
        PRESENCE optional },
    ...
}
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sAI                SAI,
    ul-InterferenceLevel                SealedUL-InterferenceLevel,
    ul-CCTrCHInformation                UL-CCTrCHInformationList-RL-AdditionRspTDD,
    dl-CCTrCHInformation                DL-CCTrCHInformationList-RL-AdditionRspTDD,
    diversityIndication                CHOICE {
        combining                SEQUENCE {
            rL-ID                RL-ID
        },
        nonCombiningOrIENotPresent                SEQUENCE {
            dCH-InformationResponse-RL-AdditionRspTDD                DCH-InformationResponseList-RL-
AdditionRspTDD-OPTIONAL
        }
    },
    maxUL-EbNo                UL-EbNo,
    minUL-EbNo                UL-EbNo,
    neighbouringFDD-CellInformation                NeighbouringFDD-CellInformationList-RL-AdditionRspTDD
OPTIONAL,
    neighbouringTDD-CellInformation                NeighbouringTDD-CellInformationList-RL-AdditionRspTDD
OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { {RL-InformationResponse-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
...
}


** NOTE: Shall this be made as an IE container? **

UL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-
CCTrCHInformationItem-RL-AdditionRspTDD

UL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    ul-DPCH-Information                UL-DPCH-InformationList-RL-AdditionRspTDD,
    iE-Extensions                ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}

** NOTE: Shall this be made as an IE container? **

UL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-
InformationItem-RL-AdditionRspTDD

UL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    burstType              BurstType,
    midambleShift         MidambleShift,
    timeSlot               TimeSlot,

    offset                 Offset,

    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod       RepetitionPeriod,
    repetitionLength       RepetitionLength,
    tFCI-Presence          TFCI-Presence,
    iE-Extensions          ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```


** NOTE: Shall this be made as an IE container? **

DL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-
CCTrCHInformationItem-RL-AdditionRspTDD

DL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    cCTrCH-ID              CCTrCH-ID,
    dl-DPCH-Information    DL-DPCH-InformationList-RL-AdditionRspTDD,
    iE-Extensions          ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```


** NOTE: Shall this be made as an IE container? **

DL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-
InformationItem-RL-AdditionRspTDD

DL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    burstType              BurstType,
    midambleShift         MidambleShift,
    timeSlot               TimeSlot,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod       RepetitionPeriod,
    repetitionLength       RepetitionLength,
    tFCI-Presence          TFCI-Presence,
    iE-Extensions          ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```


DCH-InformationResponseList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-AdditionRspTDD


```

```


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


```

```

DCH-InformationResponseItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringFDD-CellInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (01..maxNrOfFDD-
Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD

NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    uC-ID C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (01..maxNrOfTDD-
Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD

NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    uC-ID C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    cellParameterID CellParameterID,
    syncCase SyncCase,
    timeSlot TimeSlot OPTIONAL,
    -- This IE is present only if Sync Case = Case1 --
    pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation-Sync Case = Case2 or Case3 -- ,
    iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- *****

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

RadioLinkAdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-
AdditionFailureFDD
PRESENCE mandatory } |
    { ID id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-
AdditionFailureFDD
PRESENCE mandatoryoptional } |
    { ID id-CriticalityDiagnostics
CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },

```

```

}
...
}
UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList1
{ {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
AdditionFailureFDD
    PRESENCE mandatory },
  ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID RL-ID,
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList0
{ {SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-
AdditionFailureFDD
    PRESENCE mandatory },
  ...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID RL-ID,
  SAI SAI,
  ul-InterferenceLevel SealedUL-InterferenceLevel,
  dl-CodeInformation DL-CodeInformationList-RL-AdditionFailureFDD,
  diversityIndication CHOICE {
    combining SEQUENCE {
      rL-ID RL-ID
    },
    nonCombining SEQUENCE {
      dCH-InformationResponse-RL-AdditionFailureFDD DCH-InformationResponseList-RL-
AdditionFailureFDD
    }
  },
  sSDT-SupportIndicator SSdT-SupportIndicator,
  minUL-EbNo UL-EbNo,
  maxUL-EbNo UL-EbNo,
  minUL-EbNo UL-EbNo,
  neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-
AdditionFailureFDD OPTIONAL,
  neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-
AdditionFailureFDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-
RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNreOfDL-Codes)) OF DL-
CodeInformationItem-RL-AdditionFailureFDD

DL-CodeInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  dl-ScramblingCode DL-ScramblingCode,
  fdd-DLdl-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
  diversityIndication CHOICE {
    combining SEQUENCE {
      rL-ID RL-ID

```



```

    },
    nonCombiningOrIENotPresent SEQUENCE {
        dCH-InformationResponse-RL-AdditionFailureFDD DCH-InformationResponseList-RL-
        AdditionFailureFDD OPTIONAL
    }
} OPTIONAL
-- This IE is present only if the RL is not the first one in the RL Information --
iE-Extensions ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
AdditionFailureFDD-ExtIEs} } OPTIONAL,
...
}

DL-CodeInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-AdditionFailureFDD

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

DCH-InformationResponseItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (0+..maxNrOfFDD-
Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
    uC-ID C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
...
}

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (0+..maxNrOfTDD-
Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD

NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
    uC-ID C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    cellParameterID CellParameterID,
    syncCase SyncCase,
    timeSlot TimeSlot OPTIONAL,
    -- This IE is present only if Sync Case = Case1 --
    pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
    -- This IE is present only if Sync CasepSCH-PCCPCH-Allocation = Case2 or Case3 -- ,
    iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
...
}

NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

RadioLinkAdditionFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK ADDITION FAILURE TDD
--
-- *****

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

RadioLinkAdditionFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponse CRITICALITY ignore TYPE UnsuccessfulRL-
InformationResponse PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
  ...
}

UnsuccessfulRL-InformationResponse ::= SEQUENCE {
  rL-ID          RL-ID,
  cause          Cause,
  iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-ExtIEs} } OPTIONAL,
  ...
}

UnsuccessfulRL-InformationResponse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkAdditionFailureTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK DELETION REQUEST
--
-- *****

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

RadioLinkDeletionRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationList-RL-DeletionRqst CRITICALITY ignore TYPE RL-InformationList-RL-
DeletionRqst PRESENCE mandatory },
  ...
}

| RL-InformationList-RL-DeletionRqst          ::= RL-IE-ContainerList1 { {RL-Information-RL-
DeletionRqst-IEs} }

RL-Information-RL-DeletionRqst-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-DeletionRqst CRITICALITY ignore TYPE RL-Information-RL-
DeletionRqst PRESENCE mandatory },
  ...
}

RL-Information-RL-DeletionRqst ::= SEQUENCE {
  rL-ID          RL-ID,
  iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-DeletionRqst-
ExtIEs} } OPTIONAL,
  ...
}

RL-Information-RL-DeletionRqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
RadioLinkDeletionRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
}
...
-- *****
--
-- RADIO LINK DELETION RESPONSE
--
-- *****

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

RadioLinkDeletionResponse-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics
    PRESENCE optional },
    ...
}

RadioLinkDeletionResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
}
...
-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE FDD
--
-- *****

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

RadioLinkReconfigurationPrepareFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime             CRITICALITY ignore TYPE AllowedQueuingTime
    PRESENCE mandatoryoptional } |
    { ID id-UL-DPCH-Information            CRITICALITY ignore TYPE UL-DPCH-Information
    PRESENCE optional } |
    { ID id-DL-DPCH-Information            CRITICALITY ignore TYPE DL-DPCH-Information
    PRESENCE optional } |
    { ID id-DCH-ModifyList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-ModifyList-RL-
ReconfPrepFDD PRESENCE optional } |
    { ID id-DCH-AddList-RL-ReconfPrepFDD   CRITICALITY ignore TYPE DCH-AddList-RL-
ReconfPrepFDD PRESENCE optional } |
    { ID id-DCH-DeleteList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-DeleteList-RL-
ReconfPrepFDD PRESENCE optional } |
    { ID id-RL-InformationList-RL-ReconfPrepFDD CRITICALITY ignore TYPE RL-InformationList-RL-
ReconfPrepFDD PRESENCE optionalmandatory },
    ...
}

UL-DPCH-Information ::= SEQUENCE {
    ul-ScramblingCode                UL-ScramblingCode        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                               TransportFormatCombinationSetTFCS OPTIONAL,
    ul-DPCCH-SlotFormat                UL-DPCCH-SlotFormat    OPTIONAL,
    sSDT-CellIDLength                  SSDT-CellID-Length    OPTIONAL,
    s-FieldLength                       S-FieldLength         OPTIONAL,
    meanBitRate                         MeanBitRate           OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { {UL-DPCH-Information-ExtIEs} }
    OPTIONAL,
    ...
}

```

```

UL-DPCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information ::= SEQUENCE {
    tFCS TransportFormatCombinationSetTFCS OPTIONAL,
    dl-DPCH-SlotFormat DL-DPCH-SlotFormat OPTIONAL,
    tFCI-SignallingMode TFCI-SignallingMode OPTIONAL,
    tFCI-Presence TFCI-Presence OPTIONAL
    -- This IE is present if Slot Format is from 12 to 16 --,
    multiplexingPosition MultiplexingPosition OPTIONAL,
    meanBitRate MeanBitRate OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {DL-DPCH-Information-ExtIEs} }
OPTIONAL,
    ...
}

DL-DPCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfPrepFDD ::= DCH-IE-ContainerList0 { {DCH-Modify-RL-
ReconfPrepFDD-IEs} }

DCH-Modify-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyItem-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-
ReconfPrepFDD PRESENCE mandatory },
    ...
}

DCH-ModifyItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID DCH-ID,
    ul-TransportformatSet TransportFormatSet OPTIONAL,
    dl-TransportformatSet TransportFormatSet OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority FrameHandlingPriority OPTIONAL,
    ul-FP-Mode UL-FP-Mode OPTIONAL,
    toAWS ToAWS OPTIONAL,
    toAWE ToAWE OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfPrepFDD-
ExtIEs} } OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfPrepFDD ::= DCH-IE-ContainerList0 { {DCH-Add-RL-ReconfPrepFDD-
IEs} }

DCH-Add-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddItem-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-AddItem-RL-
ReconfPrepFDD PRESENCE mandatory },
    ...
}

DCH-AddItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID DCH-ID,
    rLC-ModeRLC-Mode,
    dCH-CombinationInd DCH-CombinationInd OPTIONAL,
    rLC-ModeRLC-Mode,
    ul-TransportformatSet TransportFormatSet,
    dl-TransportformatSet TransportFormatSet,
    ul-BLER BLER,
    dl-BLER BLER,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode UL-FP-Mode,
    toAWS ToAWS,
    toAWE ToAWE,
    iE-Extensions ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfPrepFDD-
ExtIEs} } OPTIONAL,
    ...
}

DCH-AddItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
DCH-DeleteList-RL-ReconfPrepFDD ::= DCH-IE-ContainerList0 { {DCH-Delete-RL-
ReconfPrepFDD-IEs} }

DCH-Delete-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-DeleteItem-RL-ReconfPrepFDD      CRITICALITY ignore  TYPE DCH-DeleteItem-RL-
ReconfPrepFDD      PRESENCE mandatory },
  ...
}

DCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
  dCH-ID          DCH-ID,
  iE-Extensions   ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepFDD-
ExtIEs} } OPTIONAL,
  ...
}

DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-InformationList-RL-ReconfPrepFDD ::= RL-IE-ContainerList0± { {RL-Information-RL-
ReconfPrepFDD-IEs} }

RL-Information-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-ReconfPrepFDD      CRITICALITY ignore  TYPE RL-Information-RL-
ReconfPrepFDD      PRESENCE mandatory },
  ...
}

RL-Information-RL-ReconfPrepFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  sSDT-Indication      SSdT-Indication      OPTIONAL,
  sSDT-CellIdentity    SSdT-CellID          OPTIONAL
  -- The IE may be present if the sSDT-Indication is set to 'sSDT-active-in-the-UE' --,
  iE-Extensions       ProtocolExtensionContainer { {RL-Information-RL-ReconfPrepFDD-
ExtIEs} } OPTIONAL,
  ...
}

RL-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkReconfigurationPrepareFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- *****

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

RadioLinkReconfigurationPrepareTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-AllowedQueuingTime      CRITICALITY ignore  TYPE AllowedQueuingTime
  PRESENCE optional } |
  { ID id-UL-MeanBitRate          CRITICALITY ignore  TYPE MeanBitRate
  optional } |
  { ID id-DL-MeanBitRate          CRITICALITY ignore  TYPE MeanBitRate
  optional } |
  { ID id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD
  CRITICALITY ignore  TYPE UL-CCTrCH-InformationList-RL-ReconfPrepTDD
  PRESENCE mandatoryoptional } |
  { ID id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD
  CRITICALITY ignore  TYPE DL-CCTrCH-InformationList-RL-ReconfPrepTDD
  PRESENCE mandatoryoptional } |

```

```

    { ID id-DCH-ModifyList-RL-ReconfPrepTDD
  | ReconfPrepTDD      PRESENCE mandatoryoptional } |
    { ID id-DCH-AddList-RL-ReconfPrepTDD
  | ReconfPrepTDD      PRESENCE mandatoryoptional } |
    { ID id-DCH-DeleteList-RL-ReconfPrepTDD
  | ReconfPrepTDD      PRESENCE mandatoryoptional },
    ...
  }

  UL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= CCTrCH-IE-ContainerList0 { {UL-CCTrCH-
  Information-RL-ReconfPrepTDD-IEs} }

  UL-CCTrCH-Information-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-Information-RL-ReconfPrepTDD CRITICALITY ignore TYPE UL-CCTrCH-Information-
    RL-ReconfPrepTDD PRESENCE mandatory },
    ...
  }

  UL-CCTrCH-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    cCtRCH-ID          CCTrCH-ID,
  | tFCS                TransportFormatCombinationSetTFCS      OPTIONAL,
    tFCI-Coding        TFCI-Coding          OPTIONAL,
    punctureLimit      PunctureLimit        OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { {UL-CCTrCH-Information-RL-
    ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
  }

  UL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
  }

  DL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= CCTrCH-IE-ContainerList0 { {DL-CCTrCH-
  Information-RL-ReconfPrepTDD-IEs} }

  DL-CCTrCH-Information-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-Information-RL-ReconfPrepTDD CRITICALITY ignore TYPE DL-CCTrCH-Information-
    RL-ReconfPrepTDD PRESENCE mandatory },
    ...
  }

  DL-CCTrCH-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    cCtRCH-ID          CCTrCH-ID,
  | tFCS                TransportFormatCombinationSetTFCS      OPTIONAL,
    tFCI-Coding        TFCI-Coding          OPTIONAL,
    punctureLimit      PunctureLimit        OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { {DL-CCTrCH-Information-RL-
    ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
  }

  DL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
  }

  DCH-ModifyList-RL-ReconfPrepTDD ::= DCH-IE-ContainerList0 { {DCH-Modify-RL-
  ReconfPrepTDD-IEs} }

  DCH-Modify-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyItem-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-
    ReconfPrepTDD PRESENCE mandatory },
    ...
  }

  DCH-ModifyItem-RL-ReconfPrepTDD ::= 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,
    ul-FP-Mode         UL-FP-Mode          OPTIONAL,
    toAWS               ToAWS              OPTIONAL,
    toAWE               ToAWE              OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfPrepTDD-
    ExtIEs} } OPTIONAL,
    ...
  }

```

```

}

DCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfPrepTDD ::= DCH-IE-ContainerList0 { {DCH-Add-RL-ReconfPrepTDD-
IEs} }

DCH-Add-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddItem-RL-ReconfPrepTDD      CRITICALITY ignore  TYPE DCH-AddItem-RL-
ReconfPrepTDD      PRESENCE mandatory },
    ...
}

DCH-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    rLC-Mode          RLC-Mode,
    ul-CCTrCH-ID          CCTrCH-ID,
    dl-CCTrCH-ID          CCTrCH-ID,
    dCH-CombinationInd    DCH-CombinationInd OPTIONAL,
    rLC-Mode          RLC-Mode,
    ul-TransportformatSet TransportFormatSet,
    dl-TransportformatSet TransportFormatSet,
    ul-BLER               BLER,
    dl-BLER               BLER,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode            UL-FP-Mode,
    toAWS                 ToAWS,
    toAWE                 ToAWE,
    iE-Extensions        ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfPrepTDD-
ExtIEs} } OPTIONAL,
    ...
}

DCH-AddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfPrepTDD ::= DCH-IE-ContainerList0 { {DCH-Delete-RL-
ReconfPrepTDD-IEs} }

DCH-Delete-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-DeleteItem-RL-ReconfPrepTDD    CRITICALITY ignore  TYPE DCH-DeleteItem-RL-
ReconfPrepTDD      PRESENCE mandatory },
    ...
}

DCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    iE-Extensions        ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepTDD-
ExtIEs} } OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationPrepareTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION READY FDD
--
-- *****

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

```

```
RadioLinkReconfigurationReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseList-RL-ReconfReadyFDD
    CRITICALITY ignore TYPE RL-InformationResponseList-RL-ReconfReadyFDD
    PRESENCE optional } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
    PRESENCE optional },
  ...
}
```

```
RL-InformationResponseList-RL-ReconfReadyFDD ::= RL-IE-ContainerList0+ { {RL-
InformationResponse-RL-ReconfReadyFDD-IEs} }
```

```
RL-InformationResponse-RL-ReconfReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseItem-RL-ReconfReadyFDD
    CRITICALITY ignore TYPE RL-InformationResponseItem-RL-ReconfReadyFDD
    PRESENCE mandatory },
  ...
}
```

```
RL-InformationResponseItem-RL-ReconfReadyFDD ::= SEQUENCE {
  rL-ID RL-ID,
  max-UL-EbNo UL-EbNo OPTIONAL,
  min-UL-EbNo UL-EbNo OPTIONAL,
  dl-CodeInformationList DL-CodeInformationList-RL-ReconfReadyFDD OPTIONAL,
  dCHsToBeAdded DCH-AddList-RL-ReconfReadyFDD OPTIONAL,
  dCHsToBeModified DCH-ModifyList-RL-ReconfReadyFDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {RL-InformationResponseItem-RL-
ReconfReadyFDD-ExtIEs} } OPTIONAL,
  ...
}
```

```
RL-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
DL-CodeInformationList-RL-ReconfReadyFDD ::= SEQUENCE (SIZE (0..maxNrOfDL-Codes)) OF
SEQUENCE {
  dl-ScramblingCode DL-ScramblingCode,
  fdd-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
  iE-Extensions ProtocolExtensionContainer { {DL-CodeInformationList-
RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
  ...
}
```

```
DL-CodeInformationList-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
DCH-AddList-RL-ReconfReadyFDD ::= DCH-IE-ContainerList0 { {DCH-Add-RL-ReconfReadyFDD-
IEs} }
```

```
DCH-Add-RL-ReconfReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-AddItem-RL-ReconfReadyFDD CRITICALITY ignore TYPE DCH-AddItem-RL-
ReconfReadyFDD PRESENCE mandatory },
  ...
}
```

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

```
DCH-AddItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
DCH-ModifyList-RL-ReconfReadyFDD ::= DCH-IE-ContainerList0 { {DCH-Modify-RL-
ReconfReadyFDD-IEs} }
```

```
DCH-Modify-RL-ReconfReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-ModifyItem-RL-ReconfReadyFDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-
ReconfReadyFDD PRESENCE mandatory },
  ...
}
```



```

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

DCH-ModifyItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationReadyFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION READY TDD
--
-- *****

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

RadioLinkReconfigurationReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponse-RL-ReconfReadyTDD
      PRESENCE optional } |
    { ID id-CriticalityDiagnostics
      PRESENCE optional },
    ...
}

RL-InformationResponse-RL-ReconfReadyTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    max-UL-EbNo          UL-EbNo OPTIONAL,
    min-UL-EbNo          UL-EbNo OPTIONAL,
    ul-CCTrCH-Information UL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
    dl-CCTrCH-Information DL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
    dCHsToBeAdded        DCH-AddList-RL-ReconfReadyTDD OPTIONAL,
    dCHsToBeModified     DCH-ModifyList-RL-ReconfReadyTDD OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponse-RL-
ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponse-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= CCTrCH-IE-ContainerList0 { {UL-CCTrCH-
InformationList-RL-ReconfReadyTDD-IEs} }

UL-CCTrCH-InformationList-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CCTrCH-ID
      CRITICALITY ignore TYPE CCTrCH-ID
      PRESENCE mandatory } |
    { ID id-UL-DPCH-InformationList-RL-ReconfReadyTDD
      CRITICALITY ignore TYPE UL-DPCH-InformationList-RL-ReconfReadyTDD
      PRESENCE mandatory },
    ...
}

UL-DPCH-InformationList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF
SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode OPTIONAL,
    burstType              BurstType OPTIONAL,
    midambleShift          MidambleShift OPTIONAL,

```

```

        timeSlot                TimeSlot                OPTIONAL,
        tDD-PhysicalChannelOffset  TDD-PhysicalChannelOffset  OPTIONAL,
        repetitionPeriod          RepetitionPeriod          OPTIONAL,
        repetitionLength          RepetitionLength          OPTIONAL,
        tFCI-Presence             TFCI-Presence             OPTIONAL,
        iE-Extensions             ProtocolExtensionContainer { {UL-DPCH-InformationList-RL-
ReconfReadyTDD-ExtIEs} } OPTIONAL,
        ...
    }

UL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= CCTrCH-IE-ContainerList0 { {DL-CCTrCH-
InformationList-RL-ReconfReadyTDD-IEs} }

DL-CCTrCH-InformationList-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CCTrCH-ID                CRITICALITY ignore TYPE CCTrCH-ID                PRESENCE
mandatory } |
    { ID id-DL-DPCH-InformationList-RL-ReconfReadyTDD
CRITICALITY ignore TYPE DL-DPCH-InformationList-RL-ReconfReadyTDD
PRESENCE mandatory },
    ...
}

DL-DPCH-InformationList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF
SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode  TDD-ChannelisationCode  OPTIONAL,
    burstType              BurstType              OPTIONAL,
    midambleShift          MidambleShift          OPTIONAL,
    timeSlot                TimeSlot                OPTIONAL,
    tDD-PhysicalChannelOffset  TDD-PhysicalChannelOffset  OPTIONAL,
    repetitionPeriod          RepetitionPeriod          OPTIONAL,
    repetitionLength          RepetitionLength          OPTIONAL,
    tFCI-Presence             TFCI-Presence             OPTIONAL,
    iE-Extensions             ProtocolExtensionContainer { {DL-DPCH-InformationList-RL-
ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfReadyTDD ::= DCH-IE-ContainerList0 { {DCH-Add-RL-ReconfReadyTDD-
IEs} }

DCH-Add-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddItem-RL-ReconfReadyTDD
CRITICALITY ignore TYPE DCH-AddItem-RL-
ReconfReadyTDD PRESENCE mandatory },
    ...
}

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

DCH-AddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfReadyTDD ::= DCH-IE-ContainerList0 { {DCH-Modify-RL-
ReconfReadyTDD-IEs} }

DCH-Modify-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyItem-RL-ReconfReadyTDD
CRITICALITY ignore TYPE DCH-ModifyItem-
RL-ReconfReadyTDD PRESENCE mandatory },
    ...
}

DCH-ModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {

```

```

    dCH-ID                DCH-ID,
    bindingID             BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions        ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfReadyTDD-
ExtIEs} } OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationReadyTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION COMMIT
--
-- *****

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

RadioLinkReconfigurationCommit-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CFN                CRITICALITY ignore TYPE CFN                PRESENCE mandatory
    },
    ...
}

RadioLinkReconfigurationCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION FAILURE
--
-- *****

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

RadioLinkReconfigurationFailure-IEs RNSAP-PROTOCOL-IES ::= {
    mandatory { ID id-Cause                CRITICALITY ignore TYPE Cause                PRESENCE
    } |
    { ID id-RL-ReconfigurationFailureList-RL-ReconfFail
    CRITICALITY ignore TYPE RL-ReconfigurationFailureList-RL-ReconfFail
    PRESENCE optionalmandatory } |
    { ID id-CriticalityDiagnostics        CRITICALITY ignore TYPE CriticalityDiagnostics
    PRESENCE optional },
    ...
}

RL-ReconfigurationFailureList-RL-ReconfFail ::= RL-IE-ContainerList01 { {RL-
ReconfigurationFailure-RL-ReconfFail-IEs} }

RL-ReconfigurationFailure-RL-ReconfFail-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-ReconfigurationFailure-RL-ReconfFail CRITICALITY ignore TYPE RL-
ReconfigurationFailure-RL-ReconfFail PRESENCE mandatory },
    ...
}

RL-ReconfigurationFailure-RL-ReconfFail ::= SEQUENCE {
    rL-ID                RL-ID,
    cause                Cause,

```

```

    iE-Extensions
ReconfFail-ExtIEs} } OPTIONAL,
    ...
}

RL-ReconfigurationFailure-RL-ReconfFail-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION CANCEL
--
-- *****

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

RadioLinkReconfigurationCancel-IEs RNSAP-PROTOCOL-IES ::= {
    ...
}

RadioLinkReconfigurationCancel-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST FDD
--
-- *****

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

RadioLinkReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime
        PRESENCE mandatoryoptional } |
    { ID id-UL-DPCH-Information
        PRESENCE optional } |
    { ID id-DL-DPCH-Information
        PRESENCE optional } |
    { ID id-DCH-ModifyList-RL-ReconfRqstFDD
        PRESENCE mandatoryoptional } |
    { ID id-DCH-AddList-RL-ReconfRqstFDD
        PRESENCE mandatoryoptional } |
    { ID id-DCH-DeleteList-RL-ReconfRqstFDD
        PRESENCE mandatoryoptional },
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    tFCS
        TransportFormatCombinationSetTFCS
        OPTIONAL,
    meanBitRate
        MeanBitRate
        OPTIONAL,
    iE-Extensions
        ProtocolExtensionContainer
            {{UL-DPCH-Information-RL-
ReconfRqstFDD-ExtIEs}}
    OPTIONAL,
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {

```

```

tFCS TransportFormatCombinationSetTFCS OPTIONAL,
tFCI-SignallingMode TFCI-SignallingMode OPTIONAL,
meanBitRate MeanBitRate OPTIONAL,
iE-Extensions ProtocolExtensionContainer { {DL-DPCH-Information-RL-
ReconfRqstFDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-ModifyList-RL-ReconfRqstFDD ::= DCH-IE-ContainerList0 { {DCH-Modify-RL-
ReconfRqstFDD-IEs} }

DCH-Modify-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-ModifyItem-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-
ReconfRqstFDD PRESENCE mandatory },
...
}

DCH-ModifyItem-RL-ReconfRqstFDD ::= SEQUENCE {
dCH-ID DCH-ID,
ul-TransportformatSet TransportFormatSet OPTIONAL,
dl-TransportformatSet TransportFormatSet OPTIONAL,
allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
frameHandlingPriority FrameHandlingPriority OPTIONAL,
ul-FP-Mode UL-FP-Mode OPTIONAL,
toAWS ToAWS OPTIONAL,
toAWE ToAWE OPTIONAL,
iE-Extensions ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRqstFDD-
ExtIEs} } OPTIONAL,
...
}

DCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-AddList-RL-ReconfRqstFDD ::= DCH-IE-ContainerList0 { {DCH-Add-RL-ReconfRqstFDD-
IEs} }

DCH-Add-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-AddItem-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-AddItem-RL-
ReconfRqstFDD PRESENCE mandatory },
...
}

DCH-AddItem-RL-ReconfRqstFDD ::= SEQUENCE {
dCH-ID DCH-ID,
rLC-Mode RLC-Mode,
dCH-CombinationInd DCH-CombinationInd OPTIONAL,
rLC-Mode RLC-Mode,
ul-TransportformatSet TransportFormatSet,
dl-TransportformatSet TransportFormatSet,
allocationRetentionPriority AllocationRetentionPriority,
frameHandlingPriority FrameHandlingPriority,
payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
ul-FP-Mode UL-FP-Mode,
toAWS ToAWS,
toAWE ToAWE,
iE-Extensions ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstFDD-
ExtIEs} } OPTIONAL,
...
}

DCH-AddItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-DeleteList-RL-ReconfRqstFDD ::= DCH-IE-ContainerList0 { {DCH-Delete-RL-
ReconfRqstFDD-IEs} }

DCH-Delete-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-DeleteItem-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-DeleteItem-RL-
ReconfRqstFDD PRESENCE mandatory },
...
}

```

```

DCH-DeleteItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dCH-ID          DCH-ID,
    iE-Extensions   ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRqstFDD-
ExtIEs} } OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--
-- *****

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

RadioLinkReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY ignore  TYPE AllowedQueuingTime
    PRESENCE optional } |
    { ID id-UL-MeanBitRate              CRITICALITY ignore  TYPE MeanBitRate           PRESENCE
optional } |
    { ID id-DL-MeanBitRate              CRITICALITY ignore  TYPE MeanBitRate           PRESENCE
optional } |
    { ID id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD
    PRESENCE mandatoryoptional } |
    { ID id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD
    PRESENCE mandatoryoptional } |
    { ID id-DCH-ModifyList-RL-ReconfRqstTDD          CRITICALITY ignore  TYPE DCH-ModifyList-RL-
ReconfRqstTDD          PRESENCE mandatoryoptional } |
    { ID id-DCH-AddList-RL-ReconfRqstTDD            CRITICALITY ignore  TYPE DCH-AddList-RL-
ReconfRqstTDD          PRESENCE mandatoryoptional } |
    { ID id-DCH-DeleteList-RL-ReconfRqstTDD         CRITICALITY ignore  TYPE DCH-DeleteList-RL-
ReconfRqstTDD          PRESENCE mandatoryoptional },
    ...
}

UL-CCTrCH-InformationList-RL-ReconfRqstTDD ::= CCTrCH-IE-ContainerList0 { {UL-CCTrCH-
Information-RL-ReconfRqstTDD-IEs} }

UL-CCTrCH-Information-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-Information-RL-ReconfRqstTDD CRITICALITY ignore  TYPE UL-CCTrCH-Information-
RL-ReconfRqstTDD          PRESENCE mandatory },
    ...
}

UL-CCTrCH-Information-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    tFCS               TransportFormatCombinationSetTFCS,
    iE-Extensions      ProtocolExtensionContainer { {UL-CCTrCH-Information-RL-
ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-ReconfRqstTDD ::= CCTrCH-IE-ContainerList0 { {DL-CCTrCH-
Information-RL-ReconfRqstTDD-IEs} }

DL-CCTrCH-Information-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-DL-CCTrCH-Information-RL-ReconfRqstTDD CRITICALITY ignore TYPE DL-CCTrCH-Information-
    RL-ReconfRqstTDD PRESENCE mandatory },
    ...
}

DL-CCTrCH-Information-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID CCTrCH-ID,
    tFCS TransportFormatCombinationSetTFCS,
    iE-Extensions ProtocolExtensionContainer { {DL-CCTrCH-Information-RL-
    ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfRqstTDD ::= DCH-IE-ContainerList0 { {DCH-Modify-RL-
    ReconfRqstTDD-IEs} }

DCH-Modify-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyItem-RL-ReconfRqstTDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-
    ReconfRqstTDD PRESENCE mandatory },
    ...
}

DCH-ModifyItem-RL-ReconfRqstTDD ::= 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,
    ul-FP-Mode UL-FP-Mode OPTIONAL,
    toAWS ToAWS OPTIONAL,
    toAWE ToAWE OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRqstTDD-
    ExtIEs} } OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfRqstTDD ::= DCH-IE-ContainerList0 { {DCH-Add-RL-ReconfRqstTDD-
    IEs} }

DCH-Add-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddItem-RL-ReconfRqstTDD CRITICALITY ignore TYPE DCH-AddItem-RL-
    ReconfRqstTDD PRESENCE mandatory },
    ...
}

DCH-AddItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID DCH-ID,
    rLC-Mode RLC-Mode,
    ul-CCTrCH-ID CCTrCH-ID,
    dl-CCTrCH-ID CCTrCH-ID,
    dCH-CombinationInd DCH-CombinationInd OPTIONAL,
    ul-TransportformatSet TransportFormatSet,
    dl-TransportformatSet TransportFormatSet,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority FrameHandlingPriority,
    ul-FP-Mode UL-FP-Mode,
    toAWS ToAWS,
    toAWE ToAWE,
    iE-Extensions ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstTDD-
    ExtIEs} } OPTIONAL,
    ...
}

DCH-AddItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

DCH-DeleteList-RL-ReconfRqstTDD ::= DCH-IE-ContainerList0 { {DCH-Delete-RL-
ReconfRqstTDD-IEs} }

DCH-Delete-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-DeleteItem-RL-ReconfRqstTDD      CRITICALITY ignore  TYPE DCH-DeleteItem-RL-
ReconfRqstTDD      PRESENCE mandatory },
  ...
}

DCH-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
  dCH-ID          DCH-ID,
  iE-Extensions  ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRqstTDD-
ExtIEs} } OPTIONAL,
  ...
}

DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE FDD
--
-- *****

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

RadioLinkReconfigurationResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseList-RL-ReconfRsp      CRITICALITY ignore  TYPE RL-
InformationResponseList-RL-ReconfRsp      PRESENCE optionalmandatory } |
  { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics
PRESENCE optional },
  ...
}

RL-InformationResponseList-RL-ReconfRsp      ::= RL-IE-ContainerList1 { {RL-InformationResponse-RL-
ReconfRsp-IEs} }

RL-InformationResponse-RL-ReconfRsp-IEs RNSAP-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,
  max-UL-EbNo   UL-EbNo          OPTIONAL,
  min-UL-EbNo   UL-EbNo          OPTIONAL,
  dCHsToBeAdded DCH-AddList-RL-ReconfRsp          OPTIONAL,
  dCHsToBeModified DCH-ModifyList-RL-ReconfRsp      OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {RL-InformationResponseItem-RL-
ReconfRsp-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-ReconfRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-AddList-RL-ReconfRsp ::= DCH-IE-ContainerList0 { {DCH-Add-RL-ReconfRsp-IEs} }

DCH-Add-RL-ReconfRsp-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-AddItem-RL-ReconfRsp      CRITICALITY ignore  TYPE DCH-AddItem-RL-ReconfRsp
PRESENCE mandatory },
  ...
}

```



```

DCH-AddItem-RL-ReconfRsp ::= SEQUENCE {
    dCH-ID DCH-ID,
    bindingID BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRspFDD-
ExtIes} } OPTIONAL,
    ...
}

DCH-AddItem-RL-ReconfRspFDD-ExtIes RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfRsp ::= DCH-IE-ContainerList0 { {DCH-Modify-RL-ReconfRsp-IEs} }

DCH-Modify-RL-ReconfRsp-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyItem-RL-ReconfRsp CRITICALITY ignore TYPE DCH-ModifyItem-RL-ReconfRsp
PRESENCE mandatory },
    ...
}

DCH-ModifyItem-RL-ReconfRsp ::= SEQUENCE {
    dCH-ID DCH-ID,
    bindingID BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRsp-
ExtIes} } OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfRsp-ExtIes RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-----
--
-- RADIO LINK RECONFIGURATION RESPONSE TDD
--
-----

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

RadioLinkReconfigurationResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

RadioLinkReconfigurationResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

--
-- *****
--
-- RADIO LINK FAILURE INDICATION
--
-- *****

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

RadioLinkFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationList-RL-FailureInd CRITICALITY ignore TYPE RL-InformationList-RL-
FailureInd PRESENCE mandatory },
}

```

```

}
...
}
| RL-InformationList-RL-FailureInd ::= RL-IE-ContainerList1 { {RL-Information-RL-
FailureInd-IEs} }

RL-Information-RL-FailureInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-FailureInd      CRITICALITY ignore  TYPE RL-Information-RL-
FailureInd      PRESENCE mandatory  },
  ...
}

RL-Information-RL-FailureInd ::= SEQUENCE {
  rL-ID          RL-ID,
  cause          Cause,
  iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-FailureInd-
ExtIEs} } OPTIONAL,
  ...
}

RL-Information-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RESTORE INDICATION
--
-- *****

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

RadioLinkRestoreIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationList-RL-RestoreInd  CRITICALITY ignore  TYPE RL-InformationList-RL-
RestoreInd      PRESENCE mandatory  },
  ...
}

| RL-InformationList-RL-RestoreInd ::= RL-IE-ContainerList1 { {RL-Information-RL-
RestoreInd-IEs} }

RL-Information-RL-RestoreInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-RestoreInd      CRITICALITY ignore  TYPE RL-Information-RL-
RestoreInd      PRESENCE mandatory  },
  ...
}

RL-Information-RL-RestoreInd ::= SEQUENCE {
  rL-ID          RL-ID,
  iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-RestoreInd-
ExtIEs} } OPTIONAL,
  ...
}

RL-Information-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkRestoreIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DOWNLINK POWER CONTROL REQUEST
--
-- *****

```

```

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

DL-PowerControlRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-ProcedureScope-DL-PC-Rqst          CRITICALITY ignore TYPE ProcedureScope-DL-PC-Rqst
    PRESENCE mandatory },
    ...
}

ProcedureScope-DL-PC-Rqst ::= CHOICE {
    allRLs          DL-Power,
    individualRLs   DL-ReferencePowerInformationList-DL-PC-Rqst,
    ...
}

DL-ReferencePowerInformationList-DL-PC-Rqst ::= RL-IE-ContainerList1 { {DL-
ReferencePowerInformation-DL-PC-Rqst-IEs} }

DL-ReferencePowerInformation-DL-PC-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-ReferencePowerInformation-DL-PC-Rqst CRITICALITY ignore TYPE DL-
ReferencePowerInformation-DL-PC-Rqst PRESENCE mandatory },
    ...
}

DL-ReferencePowerInformation-DL-PC-Rqst ::= SEQUENCE {
    rL-ID          RL-ID,
    dl-Reference-Power          DL-Power,
    iE-Extensions          ProtocolExtensionContainer { {DL-ReferencePowerInformation-DL-
PC-Rqst-ExtIEs} } OPTIONAL,
    ...
}

DL-ReferencePowerInformation-DL-PC-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-PowerControlRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST FDD
--
-- *****

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

PhysicalChannelReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-PhyChReconfRqstFDD CRITICALITY ignore TYPE RL-Information-
PhyChReconfRqstFDD PRESENCE mandatory },
    ...
}

RL-Information-PhyChReconfRqstFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    dl-CodeInformations          DL-CodeInformationList-PhyChReconfRqstFDD,
    iE-Extensions          ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstFDD-
ExtIEs} } OPTIONAL,
    ...
}

RL-Information-PhyChReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CodeInformationList-PhyChReconfRqstFDD ::= DL-Code-IE-ContainerList1 { {DL-CodeInformation-
PhyChReconfRqstFDD-IEs} }

```

```

DL-CodeInformation-PhyChReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CodeInformation-PhyChReconfRqstFDD  CRITICALITY ignore  TYPE DL-CodeInformation-
PhyChReconfRqstFDD  PRESENCE mandatory },
  ...
}

DL-CodeInformation-PhyChReconfRqstFDD ::= SEQUENCE {
  dl-scramblingCode          DL-ScramblingCode,
  fDD-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
  iE-Extensions              ProtocolExtensionContainer { {DL-CodeInformation-
PhyChReconfRqstFDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CodeInformation-PhyChReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

PhysicalChannelReconfigurationRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST TDD
--
-- *****

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

PhysicalChannelReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-PhyChReconfRqstTDD  CRITICALITY ignore  TYPE RL-Information-
PhyChReconfRqstTDD  PRESENCE mandatory },
  ...
}

RL-Information-PhyChReconfRqstTDD ::= SEQUENCE {
  rL-ID                    RL-ID,
  ul-CCTrCH-Information    UL-CCTrCH-InformationList-PhyChReconfRqstTDD,
  dl-CCTrCH-Information    DL-CCTrCH-InformationList-PhyChReconfRqstTDD,
  iE-Extensions            ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstTDD-
ExtIEs} } OPTIONAL,
  ...
}

RL-Information-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

| UL-CCTrCH-InformationList-PhyChReconfRqstTDD          ::= CCTrCH-IE-ContainerList1 { {UL-CCTrCH-
InformationList-PhyChReconfRqstTDD-IEs} }

UL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CCTrCH-ID          CRITICALITY ignore  TYPE CCTrCH-ID          PRESENCE
mandatory } |
  { ID id-UL-DPCH-InformationList-PhyChReconfRqstTDD
          CRITICALITY ignore  TYPE UL-DPCH-InformationList-PhyChReconfRqstTDD
          PRESENCE mandatory },
  ...
}

-- List items have same criticality as parent
UL-DPCH-InformationList-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF
SEQUENCE {
  dPCH-ID                    DPCH-ID,
  tDD-ChannelisationCode    TDD-ChannelisationCode          OPTIONAL,
  burstType                  BurstType          OPTIONAL,
  midambleShift              MidambleShift          OPTIONAL,
  timeSlot                    TimeSlot          OPTIONAL,
  tDD-PhysicalChannelOffset  TDD-PhysicalChannelOffset    OPTIONAL,
  repetitionPeriod            RepetitionPeriod          OPTIONAL,
}

```

```

        repetitionLength          RepetitionLength          OPTIONAL,
        tFCI-Presence              TFCI-Presence          OPTIONAL,
        iE-Extensions              ProtocolExtensionContainer { {UL-DPCH-InformationList-
PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
        ...
    }

UL-DPCH-InformationList-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-PhyChReconfRqstTDD ::= CCTrCH-IE-ContainerList1 { {DL-CCTrCH-
InformationList-PhyChReconfRqstTDD-IEs} }

DL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CCTrCH-ID              CRITICALITY ignore TYPE CCTrCH-ID              PRESENCE
mandatory } |
    { ID id-DL-DPCH-InformationList-PhyChReconfRqstTDD
CRITICALITY ignore TYPE DL-DPCH-InformationList-PhyChReconfRqstTDD
PRESENCE mandatory },
    ...
}

-- List items have same criticality as parent
DL-DPCH-InformationList-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF
SEQUENCE {
    dPCH-ID                        DPCH-ID,
    tDD-ChannelisationCode          TDD-ChannelisationCode          OPTIONAL,
    burstType                       BurstType                       OPTIONAL,
    midambleShift                   MidambleShift                   OPTIONAL,
    timeSlot                         Timeslot                       OPTIONAL,
    tDD-PhysicalChannelOffset        TDD-PhysicalChannelOffset        OPTIONAL,
    repetitionPeriod                 RepetitionPeriod                 OPTIONAL,
    repetitionLength                 RepetitionLength                 OPTIONAL,
    tFCI-Presence                    TFCI-Presence                    OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { {DL-DPCH-InformationList-
PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationList-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PhysicalChannelReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION COMMAND
--
-- *****

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

PhysicalChannelReconfigurationCommand-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CFN                      CRITICALITY ignore TYPE CFN                      PRESENCE mandatory
    } |
    { ID id-CriticalityDiagnostics    CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

PhysicalChannelReconfigurationCommand-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION FAILURE
--
-- *****

```

```

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

PhysicalChannelReconfigurationFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE
mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

PhysicalChannelReconfigurationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- UPLINK SIGNALLING TRANSFER INDICATION
--
-- *****

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

UplinkSignallingTransferIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UC-ID          CRITICALITY ignore TYPE UC-ID          PRESENCE
mandatory } |
    { ID id-SAI            CRITICALITY ignore TYPE SAI            PRESENCE mandatory
} |
    { ID id-C-RNTI         CRITICALITY ignore TYPE C-RNTI        PRESENCE
mandatory } |
    { ID id-S-RNTI         CRITICALITY ignore TYPE S-RNTI        PRESENCE
mandatory } |
    { ID id-D-RNTI         CRITICALITY ignore TYPE D-RNTI        PRESENCE
optional } |
    { ID id-L3-Information CRITICALITY ignore TYPE L3-Information PRESENCE
mandatory } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier
PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier
PRESENCE optional } |
    { ID id-URA-ID        CRITICALITY ignore TYPE URA-ID        PRESENCE
mandatory } |
    { ID id-MultipleURAsIndicator CRITICALITY ignore TYPE MultipleURAsIndicator
PRESENCE mandatory } |
    { ID id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind
CRITICALITY ignore TYPE RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind
PRESENCE mandatoryoptional },
    ...
}

-- All RNC-IDs share same criticality!
RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind ::= SEQUENCE (SIZE (0+..maxRNCinURA)) OF
SEQUENCE {
    rNC-ID          RNC-ID,
    iE-Extensions   ProtocolExtensionContainer { {RNCsWithCellsInTheAccessedURA-
List-UL-ST-Ind-ExtIEs} } OPTIONAL,
    ...
}

RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UplinkSignallingTransferIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
-- *****
--
-- DOWNLINK SIGNALLING TRANSFER REQUEST
--
-- *****

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

DownlinkSignallingTransferRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-C-ID                CRITICALITY ignore TYPE C-ID                PRESENCE
    mandatory } |
    { ID id-D-RNTI              CRITICALITY ignore TYPE D-RNTI              PRESENCE
    mandatory } |
    { ID id-L3-Information       CRITICALITY ignore TYPE L3-Information       PRESENCE
    mandatory } |
    { ID id-D-RNTI-ReleaseIndication CRITICALITY ignore TYPE D-RNTI-ReleaseIndication
    PRESENCE mandatory },
    ...
}

DownlinkSignallingTransferRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RELOCATION COMMIT
--
-- *****

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

RelocationCommit-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI              CRITICALITY ignore TYPE D-RNTI              PRESENCE
    mandatory } |
    { ID id-RANAP-RelocationInformation CRITICALITY ignore TYPE RANAP-RelocationInformation
    PRESENCE mandatory },
    ...
}

RelocationCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PAGING REQUEST
--
-- *****

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

PagingRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-PagingArea-PagingRqst CRITICALITY ignore TYPE PagingArea-PagingRqst
    PRESENCE mandatory } |
    { ID id-SRNC-ID              CRITICALITY ignore TYPE SRNC-ID              PRESENCE
    mandatory } |
    { ID id-S-RNTI              CRITICALITY ignore TYPE S-RNTI              PRESENCE
    mandatory } |

```

```

    { ID id-DRX-Parameter          CRITICALITY ignore TYPE DRX-Parameter          PRESENCE
mandatory   },
    ...
}

PagingArea-PagingRqst ::= CHOICE {
    uRA          URA-ID,
    cell        C-ID,
    ...
}

PagingRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION REQUEST
--
-- *****

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

DedicatedMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE
mandatory   } |
    { ID id-DedicatedMeasurementObjectType-DM-Rqst CRITICALITY ignore TYPE
DedicatedMeasurementObjectType-DM-Rqst PRESENCE mandatory } |
    { ID id-DedicatedMeasurementType          CRITICALITY ignore TYPE DedicatedMeasurementType
PRESENCE mandatory } |
    { ID id-MeasurementCharacteristics        CRITICALITY ignore TYPE MeasurementCharacteristics
PRESENCE mandatory } |
    { ID id-ReportCharacteristics            CRITICALITY ignore TYPE ReportCharacteristics
PRESENCE mandatory },
    ...
}

DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {
    rLs          RL-InformationList-DM-Rqst,
    ...
}

RL-InformationList-DM-Rqst ::= RL-IE-ContainerList1 { {RL-Information-DM-Rqst-
IEs} }

RL-Information-DM-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rqst          CRITICALITY ignore 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 RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementInitiationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION RESPONSE
--
-- *****

```



```

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

DedicatedMeasurementInitiationResponse-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE
mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rspns CRITICALITY ignore TYPE
DedicatedMeasurementObjectType-DM-Rspns PRESENCE mandatory } |
    { ID id-CFN                    CRITICALITY ignore TYPE CFN                    PRESENCE
mandatoryoptional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

DedicatedMeasurementObjectType-DM-Rspns ::= CHOICE {
    rLs          RL-InformationList-DM-Rspns,
    allRL        AllRL-Information-DM-Rspns,
    ...
}

RL-InformationList-DM-Rspns ::= RL-IE-ContainerList1 { {RL-Information-DM-Rspns-
IEs} }

RL-Information-DM-Rspns-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rspns CRITICALITY ignore TYPE RL-InformationItem-DM-Rspns
PRESENCE mandatory },
    ...
}

RL-InformationItem-DM-Rspns ::= SEQUENCE {
    rL-ID          RL-ID,
    dPCH-ID        DPCH-ID          OPTIONAL,
    dedicatedMeasurementValue DedicatedMeasurementValue,
    iE-Extensions ProtocolExtensionContainer { {RL-InformationItem-DM-Rspns-
ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

AllRL-Information-DM-Rspns ::= SEQUENCE {
    dedicatedMeasurementValue DedicatedMeasurementValue,
    iE-Extensions ProtocolExtensionContainer { {AllRL-Information-DM-Rspns-
ExtIEs} } OPTIONAL,
    ...
}

AllRL-Information-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementInitiationResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION FAILURE
--
-- *****

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

```

```

DedicatedMeasurementInitiationFailure-IEs RNSAP-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 },
  ...
}

DedicatedMeasurementInitiationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DEDICATED MEASUREMENT REPORT
--
-- *****

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

DedicatedMeasurementReport-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE
mandatory } |
  { ID id-DedicatedMeasurementObjectType-DM-Rpirt CRITICALITY ignore TYPE
DedicatedMeasurementObjectType-DM-Rpirt PRESENCE mandatory } |
  { ID id-CFN                    CRITICALITY ignore TYPE CFN                    PRESENCE optional },
  ...
}

DedicatedMeasurementObjectType-DM-Rpirt ::= CHOICE {
  rLs          RL-InformationList-DM-Rpirt,
  allRL        AllRL-Information-DM-Rpirt,
  ...
}

RL-InformationList-DM-Rpirt ::= RL-IE-ContainerList_1 { {RL-Information-DM-Rpirt-
IEs} }

RL-Information-DM-Rpirt-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-DM-Rpirt CRITICALITY ignore TYPE RL-InformationItem-DM-Rpirt
PRESENCE mandatory },
  ...
}

RL-InformationItem-DM-Rpirt ::= SEQUENCE {
  rL-ID          RL-ID,
  dPCH-ID        DPCH-ID          OPTIONAL,
  dedicatedMeasurementValue DedicatedMeasurementValue,
  iE-Extensions  ProtocolExtensionContainer { {RL-InformationItem-DM-Rpirt-
ExtIEs} } OPTIONAL,
  ...
}

RL-InformationItem-DM-Rpirt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

AllRL-Information-DM-Rpirt ::= SEQUENCE {
  dedicatedMeasurementValue DedicatedMeasurementValue,
  iE-Extensions             ProtocolExtensionContainer { {AllRL-Information-DM-Rpirt-
ExtIEs} } OPTIONAL,
  ...
}

AllRL-Information-DM-Rpirt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DedicatedMeasurementReport-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

-- *****
--
-- DEDICATED MEASUREMENT TERMINATION REQUEST
--
-- *****

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

DedicatedMeasurementTerminationRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore  TYPE MeasurementID          PRESENCE
mandatory   },
    ...
}

DedicatedMeasurementTerminationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT FAILURE INDICATION
--
-- *****

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

DedicatedMeasurementFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore  TYPE MeasurementID          PRESENCE
mandatory   } |
    { ID id-Cause                  CRITICALITY ignore  TYPE Cause                  PRESENCE
mandatory   },
    ...
}

DedicatedMeasurementFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST
--
-- *****

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

CommonTransportChannelResourcesReleaseRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                CRITICALITY ignore  TYPE D-RNTI                PRESENCE
mandatory   } |
    { ID id-C-RNTI                CRITICALITY ignore  TYPE C-RNTI                PRESENCE
optional    },
    ...
}

CommonTransportChannelResourcesReleaseRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****

```

```

--
-- COMMON TRANSPORT CHANNEL RESOURCES REQUEST
--
-- *****

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

CommonTransportChannelResourcesRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE
mandatory } |
    { ID id-TransportBearerRequestIndicator    CRITICALITY ignore TYPE
TransportBearerRequestIndicator    PRESENCE mandatory } |
    { ID id-TransportBearerID                CRITICALITY ignore TYPE TransportBearerID
PRESENCE mandatory },
    ...
}

CommonTransportChannelResourcesRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RESPONSE FDD
--
-- *****

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

CommonTransportChannelResourcesResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI                CRITICALITY ignore TYPE S-RNTI                PRESENCE
mandatory } |
    { ID id-FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspFDD    CRITICALITY ignore TYPE FACH-
InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspFDD    PRESENCE mandatory } |
    { ID id-FACH-InfoForOptionals-CCPCH-CTCH-ResourceRspFDD    CRITICALITY ignore TYPE FACH-
InfoForOptionals-CCPCH-CTCH-ResourceRspFDD    PRESENCE optional } |
    { ID id-TransportLayerAddress    CRITICALITY ignore TYPE TransportLayerAddress
PRESENCE optional } |
    { ID id-BindingID                CRITICALITY ignore TYPE BindingID                PRESENCE
optional } |
    { ID id-CriticalityDiagnostics    CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspFDD ::= SEQUENCE {
    priorityIndicatorAndInitialWindowSize    PriorityIndicatorAndInitialWindowSizeList-CTCH-
ResourceRspFDD,
    iE-Extensions                ProtocolExtensionContainer { {FACH-InfoForS-CCPCH-
CoupledToPRACH-CTCH-ResourceRspFDD-ExtIEs} } OPTIONAL,
    ...
}

FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PriorityIndicatorAndInitialWindowSizeList-CTCH-ResourceRspFDD ::= SEQUENCE (SIZE (1..16)) OF
SEQUENCE {
    fACH-PriorityIndicator                FACH-PriorityIndicator,
    mAC-c-SDU-Lengths                    MAC-c-SDU-LengthList-CTCH-ResourceRspFDD,
    fACH-InitialWindowSize                FACH-InitialWindowSize,
    iE-Extensions                ProtocolExtensionContainer
} { {PriorityIndicatorAndInitialWindowSizeList-CTCH-ResourceRspFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

PriorityIndicatorAndInitialWindowSizeList-CTCH-ResourceRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MAC-c-SDU-LengthList-CTCH-ResourceRspFDD ::= SEQUENCE (SIZE (1..maxNrOfMACcSDU-Length)) OF
SEQUENCE {
    mAC-c-SDU-Length          MAC-c-SDU-Length,
    iE-Extensions            ProtocolExtensionContainer { {MAC-c-SDU-LengthList-CTCH-
ResourceRspFDD-ExtIEs} } OPTIONAL,
    ...
}

MAC-c-SDU-LengthList-CTCH-ResourceRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-InfoForOptionals-CCPCH-CTCH-ResourceRspFDD ::= SEQUENCE {
    fDD-S-CCPCH-Offset          FDD-S-CCPCH-Offset,
    dl-ScramblingCode          DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    dl-TFCS                    TransportFormatCombinationSetTFCS,
    secondaryCCPCHs-SlotFormat SecondaryCCPCH-SlotFormatList,
    pilotBitsUsedIndicator      PilotBitsUsedIndicator,
    multiplexingPosition        MultiplexingPosition,
    sTTDSDF-Indicator          sTTDSDF-Indicator,
    priorityIndicatorAndInitialWindowSizeList PriorityIndicatorAndInitialWindowSizeList-option-
CTCH-ResourceRspFDD,
    fACH-DataFrameSize          FACH-DataFrameSize,
    fACH-InitialWindowSize      FACH-InitialWindowSize,
    iE-Extensions              ProtocolExtensionContainer { {FACH-InfoForOptionals-CCPCH-CTCH-
ResourceRspFDD-ExtIEs} } OPTIONAL,
    ...
}

FACH-InfoForOptionals-CCPCH-CTCH-ResourceRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PriorityIndicatorAndInitialWindowSizeList-option-CTCH-ResourceRspFDD ::= SEQUENCE (SIZE (1..16)) OF
SEQUENCE {
    fACH-PriorityIndicator      FACH-PriorityIndicator,
    mAC-c-SDU-Lengths          MAC-c-SDU-LengthList-option-CTCH-ResourceRspFDD,
    fACH-InitialWindowSize      FACH-InitialWindowSize,
    iE-Extensions              ProtocolExtensionContainer
{ {PriorityIndicatorAndInitialWindowSizeList-option-CTCH-ResourceRspFDD-ExtIEs} } OPTIONAL,
    ...
}

PriorityIndicatorAndInitialWindowSizeList-option-CTCH-ResourceRspFDD-ExtIEs RNSAP-PROTOCOL-
EXTENSION ::= {
    ...
}

MAC-c-SDU-LengthList-option-CTCH-ResourceRspFDD ::= SEQUENCE (SIZE (1..maxNrOfMACcSDU-Length)) OF
SEQUENCE {
    mAC-c-SDU-Length          MAC-c-SDU-Length,
    iE-Extensions            ProtocolExtensionContainer { {MAC-c-SDU-LengthList-option-
CTCH-ResourceRspFDD-ExtIEs} } OPTIONAL,
    ...
}

MAC-c-SDU-LengthList-option-CTCH-ResourceRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCCPCH-List ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF
SEQUENCE {
    tDD-ChannelisationCode      TDD-ChannelisationCode,
    timeSlot                    TimeSlot,
    burstType                    BurstType,
    midambleShift                MidambleShift,
    offset                       Offset,
    repetitionPeriod             RepetitionPeriod,
    repetitionLength             RepetitionLength,
    iE-Extensions              ProtocolExtensionContainer { {SecondaryCCPCH-List-ExtIEs} }
OPTIONAL,
    ...
}

```

```

SecondaryCCPCH-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonTransportChannelResourcesResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RESPONSE TDD
--
-- *****

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

CommonTransportChannelResourcesResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI                CRITICALITY ignore TYPE S-RNTI                PRESENCE
mandatory } |
    { ID id-FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspTDD CRITICALITY ignore TYPE FACH-
InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspTDD PRESENCE mandatory } |
    { ID id-FACH-InfoForOptionalGroupS-CCPCH-CTCH-ResourceRspTDD CRITICALITY ignore TYPE FACH-
InfoForOptionalGroupOfS-CCPCH-CTCH-ResourceRspTDD PRESENCE optional } |
    { ID id-TransportLayerAddress CRITICALITY ignore TYPE TransportLayerAddress
PRESENCE optional } |
    { ID id-BindingID                CRITICALITY ignore TYPE BindingID                PRESENCE
optional } |
    { ID id-CriticalityDiagnostics    CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspTDD ::= SEQUENCE {
    priorityIndicatorAndInitialWindowSizes PriorityIndicatorAndInitialWindowSizeList-CTCH-
ResourceRspTDD,
    iE-Extensions                ProtocolExtensionContainer { {FACH-InfoForS-CCPCH-
CoupledToPRACH-CTCH-ResourceRspTDD-ExtIEs} } OPTIONAL,
    ...
}

FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PriorityIndicatorAndInitialWindowSizeList-CTCH-ResourceRspTDD ::= SEQUENCE (SIZE (1..16)) OF
    SEQUENCE {
        fACH-PriorityIndicator                FACH-PriorityIndicator,
        mAC-c-SDU-Lengths                    MAC-c-SDU-LengthList-CTCH-ResourceRspTDD,
        fACH-InitialWindowSize                FACH-InitialWindowSize,
        iE-Extensions                        ProtocolExtensionContainer
    } { {PriorityIndicatorAndInitialWindowSizeList-CTCH-ResourceRspTDD-ExtIEs} } OPTIONAL,
    ...
}

PriorityIndicatorAndInitialWindowSizeList-CTCH-ResourceRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MAC-c-SDU-LengthList-CTCH-ResourceRspTDD ::= SEQUENCE (SIZE (1..maxNrOfMACcSDU-Length)) OF
    SEQUENCE {
        mAC-c-SDU-Length                    MAC-c-SDU-Length,
        iE-Extensions                        ProtocolExtensionContainer { {MAC-c-SDU-LengthList-CTCH-
ResourceRspTDD-ExtIEs} } OPTIONAL,
        ...
}

MAC-c-SDU-LengthList-CTCH-ResourceRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-InfoForOptionalGroupOfS-CCPCH-CTCH-ResourceRspTDD ::= SEQUENCE {

```

```

    dl-TFCS                TransportFormatCombinationSetTFCS,
    secondaryCCPCHs        SecondaryCCPCH-TDD-List-CTCH-ResourceRspTDD,
    iE-Extensions          ProtocolExtensionContainer { {FACH-InfoForOptionalGroupOfS-
CCPCH-CTCH-ResourceRspTDD-ExtIEs} } OPTIONAL,
    ...
}

FACH-InfoForOptionalGroupOfS-CCPCH-CTCH-ResourceRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCCPCH-TDD-List-CTCH-ResourceRspTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF
SEQUENCE {
    tDD-ChannelisationCode    TDD-ChannelisationCode,
    timeSlot                  TimeSlot,
    burstType                  BurstType,
    midambleShift             MidambleShift,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    sTTDSBT-Indicator         sTTDSBT-Indicator,
    priorityIndicatorAndInitialWindowSizeList PriorityIndicatorAndInitialWindowSizeList-CTCH-
ResourceRspTDD,
    iE-Extensions            ProtocolExtensionContainer { {SecondaryCCPCH-TDD-List-CTCH-
ResourceRspTDD-ExtIEs} } OPTIONAL,
    ...
}

SecondaryCCPCH-TDD-List-CTCH-ResourceRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PriorityIndicatorAndInitialWindowSizeList-option-CTCH-ResourceRspTDD ::= SEQUENCE (SIZE (1..16)) OF
SEQUENCE {
    fACH-PriorityIndicator    FACH-PriorityIndicator,
    mAC-c-SDU-Lengths         MAC-c-SDU-LengthList-option-CTCH-ResourceRspTDD,
    fACH-InitialWindowSize    FACH-InitialWindowSize,
    iE-Extensions            ProtocolExtensionContainer
{ {PriorityIndicatorAndInitialWindowSizeList-option-CTCH-ResourceRspTDD-ExtIEs} } OPTIONAL,
    ...
}

PriorityIndicatorAndInitialWindowSizeList-option-CTCH-ResourceRspTDD-ExtIEs RNSAP-PROTOCOL-
EXTENSION ::= {
    ...
}

MAC-c-SDU-LengthList-option-CTCH-ResourceRspTDD ::= SEQUENCE (SIZE (1..maxNrOfMACcSDU-Length)) OF
SEQUENCE {
    mAC-c-SDU-Length          MAC-c-SDU-Length,
    iE-Extensions            ProtocolExtensionContainer { {MAC-c-SDU-LengthList-option-
CTCH-ResourceRspTDD-ExtIEs} } OPTIONAL,
    ...
}

MAC-c-SDU-LengthList-option-CTCH-ResourceRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonTransportChannelResourcesResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES FAILURE
--
-- *****

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

CommonTransportChannelResourcesFailure-IEs RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE
mandatory } |
    { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE
mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
  PRESENCE optional },
    ...
}

CommonTransportChannelResourcesFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMPRESSED MODE PREPARE
--
-- *****

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

CompressedModePrepare-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-TGPI          CRITICALITY ignore TYPE GapPeriod          PRESENCE
mandatory } |
  { ID id-TGP2          CRITICALITY ignore TYPE GapPeriod          PRESENCE
optional } |
  { ID id-TGL           CRITICALITY ignore TYPE TGL                PRESENCE mandatory
} |
  { ID id-TGD           CRITICALITY ignore TYPE TGD                PRESENCE mandatory
} |
  { ID id-PD            CRITICALITY ignore TYPE PD                 PRESENCE mandatory
} |
  { ID id-UL-DL-CompressedModeSelection CRITICALITY ignore TYPE UL-DL-
CompressedModeSelection PRESENCE mandatory } |
  { ID id-CompressedModeMethod CRITICALITY ignore TYPE CompressedModeMethod
  PRESENCE mandatory } |
  { ID id-GapPositionMode CRITICALITY ignore TYPE GapPositionMode
  PRESENCE mandatory } |
  { ID id-SN            CRITICALITY ignore TYPE SN                  PRESENCE conditional
-- This IE is present only if "GapPositionMode" equals to "flexible" --
} |
  { ID id-DL-FrameType CRITICALITY ignore TYPE DL-FrameType       PRESENCE
mandatory } |
  { ID id-ScramblingCodeChange CRITICALITY ignore TYPE ScramblingCodeChange
  PRESENCE conditional
-- This IE is present only if "CompressedModeMethod" equals to "SF/2" --
} |
  { ID id-PowerControlMode CRITICALITY ignore TYPE PowerControlMode
  PRESENCE mandatory } |
  { ID id-PowerResumeMode CRITICALITY ignore TYPE PowerResumeMode
  PRESENCE mandatory } |
  { ID id-UL-DeltaEbNo CRITICALITY ignore TYPE UL-DeltaEbNo
  PRESENCE mandatory } |
  { ID id-UL-DeltaEbNoAfter CRITICALITY ignore TYPE UL-DeltaEbNoAfter
  PRESENCE mandatory },
  ...
}

CompressedModePrepare-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMPRESSED MODE READY
--
-- *****

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

```



```

}

CompressedModeReady-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics
    PRESENCE optional  },
  ...
}

CompressedModeReady-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMPRESSED MODE FAILURE
--
-- *****

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

CompressedModeFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-Cause          CRITICALITY ignore  TYPE Cause          PRESENCE
mandatory  } |
  { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics
    PRESENCE optional  },
  ...
}

CompressedModeFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMPRESSED MODE COMMIT
--
-- *****

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

CompressedModeCommit-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CFN          CRITICALITY ignore  TYPE CFN          PRESENCE mandatory
  },
  ...
}

CompressedModeCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMPRESSED MODE CANCEL
--
-- *****

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

CompressedModeCancel-IEs RNSAP-PROTOCOL-IES ::= {
  ...
}

CompressedModeCancel-Extensions RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
-- *****
--
-- ERROR INDICATION
--
-- *****

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

ErrorIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause                CRITICALITY ignore TYPE Cause                PRESENCE
conditional
  -- At least either of Cause IE or Criticality IE shall be present --
    } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE conditional
  -- At least either of Cause IE or Criticality IE shall be present --
    },
    ...
}

ErrorIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PRIVATE MESSAGE
--
-- *****

PrivateMessage ::= SEQUENCE {
    privateExtensions          PrivateExtensionContainer {{PrivateExtensions}},
    ...
}

PrivateExtensions RNSAP-PRIVATE-EXTENSION ::= {
    ...
}

END

```

9.3.4 Information Elements Definitions

```

-- *****
--
-- Information Element Definitions
--
-- *****

RNSAP-IEs -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxNrOfErrors,
    maxRateMatching,
    maxNrOfTFCs,
    maxNrOfTFs,
    maxCTFC-1,
    maxTTI-Count
FROM RNSAP-Constants

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM RNSAP-CommonDataTypes

```

```

    ProtocolExtensionContainer{},
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;

-- A

AllocationRetentionPriority ::= FrameHandlingPriority

AllowedQueuingTime ::= INTEGER (0..60)
-- seconds

-- B

*** NOTE: Size in tabular 1..4,...
BindingID ::= OCTET STRING (SIZE (1..4MAX,...))

BLER ::= INTEGER (-63..0)
-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER

BurstType ::= ENUMERATED {
    type1 (1),
    type2 (2)
}

-- C

Cause ::= CHOICE {
    radioNetwork CauseRadioNetwork,
transportTransmissionNetwork CauseTransportTransmissionNetwork,
    protocol CauseProtocol,
    misc CauseMisc,
    ...
}

CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    om-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    ...
}

CauseProtocol ::= ENUMERATED {
    transaction-not-allowed,
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
message-not-compatible-with-receiver-state,
semantic-error,
    unspecified,
    ...
}

CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    ul-scrambling-code-already-in-use,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    measurement-not-supported-for-the-object,
    macrodiversity-combining-not-possible,
    reconfiguration-not-allowed,
requested-configuration-not-supported,
Synchronisation-failure,
    unspecified,
    ...
}

CauseTransportTransmissionNetwork ::= ENUMERATED {
    transmission-link-failure,
    transmission-port-not-available,
    unspecified,
    ...
}

C-ID ::= INTEGER (0..65535)

```

```

CCTrCH-ID                ::= INTEGER (0..15)

CellParameterID          ::= INTEGER (0..127)

CFN                      ::= INTEGER (0..255)

ChannelCodingType ::= ENUMERATED {
    no-coding,
    convolutional-coding,
    turbo-coding--,
-- ...
}

--- ** TODO **
ChipOffset                ::= INTEGER (0..38399)

CodingRate ::= ENUMERATED {
    half,
    third--,
-- ...
}

CompressedModeMethod ::= ENUMERATED {
    none,
    puncturing,
    sF2,
    gating
}

CPICH-EcIo                ::= INTEGER

CRC-Size                  ::= INTEGER-ENUMERATED {(0|8|12|16|24)}
    v0,
    v8,
    v12,
    v16,
    v24
}

CriticalityDiagnostics ::= SEQUENCE {
    procedureCode          ProcedureCode          OPTIONAL,
    triggeringMessage      TriggeringMessage      OPTIONAL,
    criticalityResponse    Criticality            OPTIONAL,
    transactionID         TransactionID          OPTIONAL,
    iEsCriticalityResponses CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

CriticalityDiagnostics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
    SEQUENCE {
        criticalityResponse    Criticality,
        iE-ID                  ProtocolIE-ID,
        iE-Extensions         ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-
ExtIEs} } OPTIONAL,
        ...
    }

CriticalityDiagnostics-IE-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

--- ** TODO **
CTFC                      ::= INTEGER (0..maxCTFC-1)
--- See formula (must be resolved) ---

CN-CS-DomainIdentifier ::= SEQUENCE {
    pLMN-ID                 PLMN-ID,
    lAC                     LAC,
    iE-Extensions          ProtocolExtensionContainer { {CN-CS-DomainIdentifier-ExtIEs} } OPTIONAL,
    lAC                     LAC
}

```

```

CN-CS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CN-PS-DomainIdentifier ::= SEQUENCE {
    PLMN-ID          PLMN-ID,
    LAC              LAC,
    rAC           RAC,
    iE-Extensions   ProtocolExtensionContainer { {CN-PS-DomainIdentifier-ExtIEs} } OPTIONAL,
    rAC           RAC
}

CN-PS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

--- **TODO**
CPICH-Power ::= INTEGER

C-RNTI          ::= INTEGER (0..65535)

-- D

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

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

DedicatedMeasurementObjectType ::= ENUMERATED {
    r1,
    all-r1,
    ...
}

--- ** OR: ---
DedicatedMeasurementObjectType ::= INTEGER {
  r1(0),
  allR1(1)
  } (0..255)
--- **

DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rSCP,
    ...
}

--- timeslotTSCP is used by TDD only

--- ** OR: ---
DedicatedMeasurementType ::= INTEGER {
  sir(0),
  sir-Error(1),
  transmittedCodePower(2),
  rSCP(3)
  } (0..255)
--- **

--- ** NOTE: Extensibility added **
--- **TODO**

DedicatedMeasurementValue ::= SEQUENCE {
    sIR-Value          ScaledSIR-Value          OPTIONAL,
    sIR-ErrorValue     ScaledSIR-ErrorValue     OPTIONAL,
    transmittedCodePowerValue ScaledTransmittedCodePowerValue OPTIONAL, -- Relative to CPICH
    rSCP               TBD                     OPTIONAL, -- TDD only
    iE-Extensions     ProtocolExtensionContainer { {DedicatedMeasurementValue-ExtIEs} }
OPTIONAL,
    ...
}

DedicatedMeasurementValue-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

--- ** TODO **
DiversityControlField ::= INTEGERENUMERATED {
  may,

```

```

    must,
    must-not
}


** TODO **
DiversityMode ::= INTEGERENUMERATED {
    none,
    sTTD,
    closedLoopModel1,
    closedLoopMode2
}
** TODO **
DL-ChannelisationCode ::= INTEGER
** TODO **
DL-DPCCH-SlotFormat ::= INTEGER
** TODO **
DL-DPCH-SlotFormatNumber ::= INTEGER (0..16)
DL-EbNo ::= ScaledUL-EbNo
DL-EbNoTarget ::= ScaledUL-EbNo
-- ** TODO **
DL-Power ::= INTEGER
D-RNTI ::= INTEGER (0..10485756)

** OR:
D-RNTI ::= BIT STRING (SIZE (20))
**
D-RNTI-ReleaseIndication ::= ENUMERATED {
    not-release-D-RNTI,
    release-D-RNTI,
    not-release-D-RNTI
}
** TODO **
DL-ScramblingCode ::= INTEGER (0..15)
DL-FrameType ::= ENUMERATED {
    typeA,
    typeB,
    ...
}
DPCH-ID ::= INTEGER (0..239)
-- **TODO**
DRX-Parameter ::= TBD

**TODO**
DSCH-TransportFormatCombinationSet ::= INTEGER
**TODO**
DSCH-TFS ::= INTEGER
**TODO**
D-FieldLength ::= INTEGERENUMERATED {
    v1,
    v2
}
-- E
EventA ::= SEQUENCE {
    measurementTreshold MeasurementThreshold,
    measurementHysteresisTime ScaledMeasurementHysteresisTime OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {EventA-ExtIEs} } OPTIONAL,
    ...
}
EventA-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {


```

```

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

EventC ::= SEQUENCE {
  measurementIncreaseThreshold MeasurementIncreaseThreshold,
  measurementChangeTime       ScaledMeasurementChangeTime,
  ...
}

EventB-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

EventD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

EventE-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

EventF-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- F
FACH-DataFrameSize ::= INTEGER (1..5000)
Size of data frame in number of bits

FACH-InitialWindowSize ::= INTEGER { unlimited(255) } (0..255)
-- Number of frames MAC-c SDUsFACH data frames.
-- 255 = Unlimited number of FACH data frames

*** TODO **
FACH-InfoForOptionalS-CCPCH ::= INTEGER

*** TODO **
FACH-InfoForS-CCPCH-CoupledToPRACH ::= INTEGER

*** TODO **
FDD-DL-ChannelisationCodeNumber ::= INTEGER (0..255)

*** TODO **
FDD-FL-ChannelisationCodeNumber ::= INTEGER

```

```

--- ** TODO **
FDD-S-CCPCH-Offset ::= INTEGER (0..149)

FACH-PriorityIndicator ::= INTEGER { lowest(0), highest(15) } (0..15)
FrameHandlingPriority ::= INTEGER { lowest(0), highest(15) } (0..15)
FrameOffset ::= INTEGER (0..255)
-- Frames
-- G
GapPositionMode ::= ENUMERATED {
    fixed,
    flexible
}
GapPeriod ::= INTEGER (0..255)
-- H
-- I

--- **TODO**
InitialDL-TX-Power ::= INTEGER
-- J
-- K
-- L
LAC ::= OCTET STRING (SIZE (2)) --(EXCEPT ('0000'H|'FFFF'H))

--- ** TODO **
L3-Information ::= INTEGERBIT STRING
-- M

--- ** TODO **
MaxNrOfUL-DPCHs ::= INTEGER (1..6)
MAC-c-SDU-Length ::= INTEGER (1..5000)

--- **TODO**
MACd-MACsh-TransportFormatSet ::= INTEGER

-- #TBD#
--- **NOTE: extensibility**
MeasurementCharacteristics ::= SEQUENCE {
    measurementFrequency TBD,
    averagingDuration TBD,
    iE-Extensions ProtocolExtensionContainer { {MeasurementCharacteristics-ExtIEs} }
OPTIONAL,
    ...
}
MeasurementCharacteristics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

--- ** TODO **
MeanBitRate ::= INTEGER (1..2000)

MeasurementID ::= INTEGER (0..10485756)
--- **OR:
MeasurementID ::= BIT STRING (SIZE (20))
---

MultipleURAsIndicator ::= ENUMERATED {
multiple-URAs-exist,
    single-URA-exists,
multiple-URAs-exist
}

--- ** TODO **
MCC-Digit ::= OCTET STRING (SIZE (3))
--- FFS
--- Reference: 24.008

```



```

-- ** TODO **
MNC-Digit ::= OCTET STRING (SIZE (3))
-- FFS
-- Reference: 24.008

SealedMeasurementChangeTime ::= INTEGER (1..64000)
-- ValueMeasurementChangeTime = SealedThe MeasurementChangeTime *10 gives the MeasurementChangeTime
-- in number of 10 ms periods.
-- E.g. Value 6000 means 60000ms(1min)
-- Unit is ms, Step is 10 ms

-- ** TODO **
MeasurementDecreaseThreshold ::= TBDINTEGER

SealedMeasurementHysteresisTime ::= INTEGER (1..64000)
-- ValueMeasurementHysteresisTime = SealedThe MeasurementHysteresisTime *10 gives the
-- MeasurementHysteresisTime in number of 10 ms periods.
-- E.g. Value 6000 means 60000ms(1min)
-- Unit is ms, Step is 10ms

-- ** TODO **
MeasurementIncreaseThreshold ::= TBDINTEGER

-- ** TODO **
MeasurementThreshold ::= TBDINTEGER

MidambleShift ::= INTEGER (0..15)

MinUL-ChannelisationCodeLength ::= INTEGERENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256
}

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

-- N

NrOfTransportBlocks ::= INTEGER (0..4095)

-- O

Offset ::= INTEGER (0..63)

-- P

PD ::= INTEGER (0..2047, ...)

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    crc-included,
    crc-not-included,
    cre-included,
    ...
}

PSCH-TimeSlot ::= INTEGER (0..6)

Periodic ::= SEQUENCE {
    reportPeriodicity ReportPeriodicity,
    IE-Extensions ProtocolExtensionContainer { {Periodic-ExtIEs} } OPTIONAL,
    ...
}

Periodic-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
PilotBitsUsedIndicator ::= INTEGERENUMERATED {
    pilot bits used,

```

```


pilot-bits-not-used
}

-- ** TODO **
PLMN-ID ::= OCTET STRING (SIZE(3))SEQUENCE {

mcc-digit MCC-Digit,
ie-Extensions ProtocolExtensionContainer { {PLMN-ID-ExtIEs} } OPTIONAL,
mnc-digit MNC-Digit
}
}
FFS

PLMN-ID-ExtIEs-RNSAP-PROTOCOL-EXTENSION ::= {
...
}

PowerControlMode ::= ENUMERATED {
v0,
v1,
...
}

PowerOffset ::= INTEGER (0..24)

PowerResumeMode ::= ENUMERATED {
v0,
v1,
...
}

-- ** TODO **
PrimaryCPICH-Power ::= INTEGER

PrimaryCPICH-EcNo ::= INTEGER (-30..30)

-- ** TODO **
PrimaryCCPCH-RSCP ::= INTEGER (0-115.91-25)
-- Unit dBm, Range -115dBm .. -25dBm, Step +1dBm
-- refer according to mapping in 25.225, 25.215

PrimaryScramblingCode ::= ScramblingCodeINTEGER (0..511)

PropagationDelay ::= INTEGER (0..255)

SyncCase ::= ENUMERATED {
case1,
case2,
case3-- ,
-- ...
}

-- ** TODO **
PSCH-CCPCH-TimeSlot ::= TimeSlot

-- ** TODO **
PSCH-PCCPCH-TimeSlot ::= TimeSlot

-- ** TODO **
P-CPICH-Power ::= INTEGER

PunctureLimit ::= INTEGER (0..100)
-- Unit is %

-- Q
-- R

-- ** TODO **
RAC ::= INTEGEROCTET STRING (SIZE(1))

-- ** TODO **
OCTET STRING?
RANAP-RelocationInformation ::= BIT STRING

RateMatchingAttribute ::= INTEGER (1..maxRateMatching)

RepetitionLength ::= INTEGER (1..63)

RepetitionPeriod ::= ENUMERATED {
v1,

```

```

v2,
v4,
v8,
v16,
v32,
v64-- ,
-- ...
}

```

~~This is changed from the tabular format because it seems that this is what is wanted.~~

```

ReportCharacteristics ::= CHOICE {
  onDemand          NULL,
  periodic          Periodic,
  eventA            EventA,
  eventB            EventB,
  eventC            EventC,
  eventD            EventD,
  eventE            EventE,
  eventF            EventF-- ,
-- ...
}

```

~~Changed~~

```

ReportPeriodicity ::= CHOICE {
  len-msec          INTEGER (1..64000),
-- The Report Periodicity gives the reporting periodicity in number of 10 ms periods.
-- E.g. value 6000 means 60000ms (i.e. 1min)
-- Unit ms, Step 10ms
  min              INTEGER (1..60)
-- Unit min, Step 1min
}

```

```

RLC-Mode ::= ENUMERATED {
  acknowledged-mode,
  unacknowledged-mode,
  transparent-mode
}

```

```

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

```

```

RNC-ID ::= INTEGER (0..4095)

```

```

-- S

```

~~Changed BIT STRING -> OCTET STRING~~

```

SAC ::= OCTET STRING (SIZE (2))

```

```

SAI ::= SEQUENCE {
  plmn-id          PLMN-ID,
  lac              LAC,
  sac              SAC,
  ie-extensions    ProtocolExtensionContainer { {SAI-ExtIEs} } OPTIONAL
}

```

```

SAI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

~~** TODO **~~

```

ScramblingCode ::= INTEGER

```

```

ScramblingCodeChange ::= ENUMERATED {
  code-change,
  no-code-change_7,
  code-change
}

```

```

ScaledSIR-ErrorValue ::= INTEGER (-100..100)

```

~~ScaledSIR-ErrorValue - The SIR-ErrorValue /* 10 gives the SIR-ErrorValue in number of 0.1 dB steps.~~

~~E.g. value 100 means 10dB~~

~~If SIR-ErrorValue <= -10 ScaledSIR-ErrorValue shall be set to -100~~

~~If SIR-ErrorValue >= 10 ScaledSIR-ErrorValue shall be set to 100~~

~~SIR-ErrorValueUnit is dB. s)step 0.1 dB~~

```

ScaledSIR-Value ::= INTEGER (-100..200)

```

~~ScaledSIR-Value - The SIR-Value /* 10 gives the SIR-Value in number of 0.1 dB steps.~~

```

-- E.g. value 200 means 20dB
-- SIR-ValueUnit dB, sStep 0.1 dB

SealedTransmittedCodePowerValue ::= INTEGER (-350..150)
-- SealedTransmittedCodePowerValue = The TransmittedCodePowerValue / * 10 gives the Transmitted Code
-- Power in number of 0.1 dB steps.
-- E.g. value 150 means 15dB
-- TransmittedCodePowerValueUnit dB, sStep 0.1 dB

-- ** TODO **
SharedChannelType ::= INTEGER

-- ** TODO **
SecondaryCCPCH-SlotFormat ::= INTEGER (0..178)
-- refer to 25.211

SN ::= TimeSlot

SpreadingFactorOfChannelisationCode ::= ENUMERATED {
  v256,
  v128,
  v64,
  v32,
  v16,
  v8,
  v4,
  v2,
  v1
}

-- Changed
S-FieldLength ::= INTEGER (1..2)ENUMERATED {
  v1,
  v2
}

S-RNTI ::= INTEGER (0..1048575)
-- From 0 to 2^20-1

-- ** TODO **
SRNC-ID ::= INTEGER

SSDT-CellID ::= 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
}

SSDT-SupportIndicator ::= ENUMERATED {
  sSDT-supported,
  sSDT-not-supported_7,
  sSDT-supported
}

STTD-Indicator ::= ENUMERATED {
  active,
  inactive
}

-- T
-- ** TODO **

```

```

TBD ::= NULL
-- Remove this type

TDD-ChannelisationCode ::= INTEGER (1..31)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-PhysicalChannelOffset ::= INTEGER (0..63)

TFCI-Coding ::= ENUMERATED {
  v4,
  v8,
  v16,
  v32
}

TFCI-Presence ::= ENUMERATED {
  present,
  not-present,
  present
}

TFCI-SignallingMode ::= ENUMERATED {
  normal,
  split
}

--- ** TODO **
TimeReference ::= INTEGER
TimeReference ::= INTEGER (0..255)

TimeSlot ::= INTEGER (0..14)

ToAWE ::= INTEGER (0..2559)

ToAWS ::= INTEGER (0..1279)

TPC-StepSize ::= ENUMERATED {
  half,
  one
}

TGD ::= INTEGER (0..255)

TGL ::= INTEGER (3| 4| 7| 10| 14)

TransmissionTimeInterval ::= ENUMERATED {

```

```

msec-10,
msec-20,
msec-40,
msec-80--,
-- ...
}

TransportBearerID ::= INTEGER (0..4095)

--- Compare title and IE name in table TransportBearerRequestIndicator vs-
--- FACH PriorityIndicator
TransportBearerRequestIndicator ::= INTEGER { lowest (0), highest (15) } (0..15)ENUMERATED {
bearer-requested,
bearer-not-requested
}

TransportBlockSize ::= INTEGER (1..5000)
-- Unit is bits

TransportFormatCombinationSetTFCS ::= SEQUENCE (SIZE (1..maxNrOfTFCS)) OF
SEQUENCE {
cTFC CTFC,
iE-Extensions ProtocolExtensionContainer { {TransportFormatCombinationSetTFCS-
ExtIEs} } OPTIONAL,
...
}

TransportFormatCombinationSetTFCS-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

TransportFormatSet ::= SEQUENCE {
dynamicParts TransportFormatSet-DynamicPartList,
semi-staticPart TransportFormatSet-Semi-staticPart,
iE-Extensions ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
...
}

TransportFormatSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
SEQUENCE {
nrOfTransportBlocks NrOfTransportBlocks,
transportBlockSize TransportBlockSize OPTIONAL
-- This IE is only present if nrOfTransportBlocks is greater than 0 --,
mode TransportFormatSet-ModeDP,
iE-Extensions ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-
ExtIEs} } OPTIONAL,
...
}

TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

TransportFormatSet-ModeDP ::= CHOICE {
tdd TransmissionTimeIntervalList,
-- This IE is mandatory if not defined as semistatic parameter, otherwise it is absent --
...
}

TransmissionTimeIntervalList ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
SEQUENCE {
transmissionTimeInterval TransmissionTimeInterval,
iE-Extensions ProtocolExtensionContainer { {TransmissionTimeIntervalList-ExtIEs} }
OPTIONAL,
...
}

TransmissionTimeIntervalList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

TransportFormatSet-Semi-staticPart ::= SEQUENCE {
transmissionTime TransmissionTimeInterval,

```

```

channelCoding          ChannelCodingType,
codingRate             CodingRate          OPTIONAL
-- This IE is only present if channelCoding is 'convolutional' or 'turbo' --,
rateMatchingAttribute RateMatchingAttribute,
CRC-Size              CRC-Size,
mode                  TransportFormatSet-ModeSSP OPTIONAL,
iE-Extensions         ProtocolExtensionContainer { {TransportFormatSet-Semi-staticPart-
ExtIEs} } OPTIONAL,
...
}

TransportFormatSet-Semi-staticPart-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

TransportFormatSet-ModeSSP ::= CHOICE {
tdd                SecondInterleavingMode,
...
}

SecondInterleavingMode ::= ENUMERATED {
frame-related,
timeslot-related,
...
}

TransportLayerAddress ::= BIT STRING (SIZE(1..160, ...))
TransportLayerAddress ::= OCTET STRING (SIZE(1..20, ...))

-- U

UARFCN                ::= INTEGER (0..698, ...)

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

UL-DeltaEbNo          ::= INTEGER (-60..100)
-- Value = The UL-Deltaat EbNo / 10 gives the UL-Delta-EbNo in number of 0.1 dB steps.
-- E.g. Value 100 means 10 dB
-- Unit dB. Step 0.1 dB.

UL-DeltaEbNoAfter     ::= INTEGER (-60..100)
-- Value = The UL-Delat-EbNo-After / 10 gives the UL-Delta-EbNo-After in number of 0.1 dB steps.
-- E.g. Value 100 means 10 dB
-- Unit dB. Step 0.1 dB.

-- ** TODO **

UL-EbNo                ::= INTEGER

UL-EbNoTarget ::= UL-EbNoINTEGER

UC-ID ::= SEQUENCE {
rNC-ID                RNC-ID,
c-ID                  C-ID,
iE-Extensions         ProtocolExtensionContainer { {UC-ID-ExtIEs} } OPTIONAL,
...
}

UC-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

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

ScaledUL-EbNo ::= INTEGER (0..255)
UL-EbNo = ScaledUL-EbNo / 10

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

```

```

SealedUL-InterferenceLevel ::= INTEGER (-1280..-600)
-- ValueUL-InterferenceLevel--The UL-InterferenceLevel --logives the UL-InterferenceLevel in number
-- of 0.1 dBm steps
-- E.g. Value -600 means -60 dBm
-- Unit dBm, Step 0.1 dBm

-- Relation to the ScramblingCode??
UL-ScramblingCode ::= SEQUENCE {
    ul-ScramblingCodeNumber    UL-ScramblingCodeNumber,
    ul-ScramblingCodeLength    UL-ScramblingCodeLength,
    iE-Extensions              ProtocolExtensionContainer { {UL-ScramblingCode-ExtIEs} } OPTIONAL
}

UL-ScramblingCode-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long
}

UL-ScramblingCodeNumber ::= INTEGER (0..16777215)

URA-ID ::= INTEGER (0..65535)

-- V
-- W
-- X
-- Y
-- Z

END

```

9.3.5 Common Definitions

```

-- *****
--
-- Common definitions
--
-- *****

RNSAP-CommonDataTypes -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

Criticality ::= ENUMERATED { reject, ignore, notify }

Presence ::= ENUMERATED { optional, conditional, mandatory }

PrivateExtensionID ::= CHOICE {
    local          INTEGER (0..65535),
    global         OBJECT IDENTIFIER
}

ProcedureCode ::= INTEGER (0..255)

ProcedureID ::= SEQUENCE {
    procedureCode    ProcedureCode,
    ddMode           ENUMERATED { tdd, fdd, common }
}

ProtocolExtensionID ::= INTEGER (0..65535)

ProtocolIE-ID ::= INTEGER (0..65535)

TransactionID ::= INTEGER (0..65535)

TriggeringMessage ::= ENUMERATED { initiating-message, successful-outcome, unsuccessful-outcome,
outcome }

END

```

9.3.6 Constant Definitions

```

-- *****

```



```

--
-- Constant definitions
--
-- *****

RNSAP-Constants -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- Elementary Procedures
--
-- *****

id-commonTransportChannelResourcesInitiationFDD          INTEGER ::= 0
id-commonTransportChannelResourcesInitiationTDD         INTEGER ::= 1
id-commonTransportChannelResourcesRelease               INTEGER ::= 2
id-compressedModeCancellationFDD                       INTEGER ::= 3
id-compressedModeCommitFDD                             INTEGER ::= 4
id-compressedModePrepareFDD                            INTEGER ::= 5
id-downlinkPowerControl                                INTEGER ::= 6
id-downlinkSignallingTransfer                           INTEGER ::= 7
id-errorIndication                                     INTEGER ::= 8
id-measurementFailure                                  INTEGER ::= 9
id-measurementInitiation                               INTEGER ::= 10
id-measurementReporting                                 INTEGER ::= 11
id-measurementTermination                              INTEGER ::= 12
id-pagingRequest                                       INTEGER ::= 13
id-physicalChannelReconfiguration                       INTEGER ::= 14
id-privateMessage                                      INTEGER ::= 15
id-radioLinkAddition                                   INTEGER ::= 16
id-radioLinkDeletion                                   INTEGER ::= 17
id-radioLinkFailure                                    INTEGER ::= 18
id-radioLinkRestoration                                INTEGER ::= 19
id-radioLinkSetup                                       INTEGER ::= 20
id-srnsRelocationCommit                                INTEGER ::= 21
id-synchronisedRadioLinkReconfigurationCancellation     INTEGER ::= 22
id-synchronisedRadioLinkReconfigurationCommit           INTEGER ::= 23
id-synchronisedRadioLinkReconfigurationPrepare         INTEGER ::= 24
id-unSynchronisedRadioLinkReconfiguration              INTEGER ::= 25
id-uplinkSignallingTransfer                             INTEGER ::= 26

-- *****
--
-- Extension constants
--
-- *****

maxPrivateExtensions          INTEGER ::= 65535
maxProtocolExtensions         INTEGER ::= 65535
maxProtocolIEs                INTEGER ::= 65535

-- *****
--
-- Lists
--
-- *****

maxRateMatching                INTEGER ::= 10
maxNrOfTFCs                    INTEGER ::= 10
maxNrOfTFs                     INTEGER ::= 10

maxNrOfDL-Codes                INTEGER ::= 10
maxNrOfCCTrCHs                INTEGER ::= 10
maxNrOfDCHs                    INTEGER ::= 10
maxNrOfDL-Codes                INTEGER ::= 10
maxNrOfDPCHs                   INTEGER ::= 10
maxNrOfErrors                   INTEGER ::= 10
maxNrOfFACH-FD-Size            INTEGER ::= 10
maxNrOfFDD-Neighbours          INTEGER ::= 10
maxNrOfMACcSDU-Length          INTEGER ::= 10
maxNrOfTDD-Neighbours          INTEGER ::= 10
maxNrOfRLs                     INTEGER ::= 10
maxNrOfRLs-1                   INTEGER ::= 10
maxNrOfRLs-2                   INTEGER ::= 10
maxNrOfSCCPCHs                 INTEGER ::= 10

```

```

maxRNCinURA                INTEGER ::= 10
maxTTI-Count                 INTEGER ::= 10
maxCTFC-1                    INTEGER ::= 10
-- *****
--
-- IEs
--
-- *****

id-AllowedQueuingTime        INTEGER ::= 0
id-BindingID                 INTEGER ::= 1
id-C-ID                     INTEGER ::= 2
id-C-RNTI                   INTEGER ::= 3
id-CCTrCH-ID                INTEGER ::= 4
id-CFN                      INTEGER ::= 5
id-CN-CS-DomainIdentifier    INTEGER ::= 6
id-CN-PS-DomainIdentifier    INTEGER ::= 7
id-Cause                    INTEGER ::= 8
id-CompressedModeMethod      INTEGER ::= 9
id-D-RNTI                   INTEGER ::= 10
id-D-RNTI-ReleaseIndication  INTEGER ::= 11
id-DCH-AddItem               INTEGER ::= 12
id-DCH-AddItem-RL-ReconfPrepFDD  INTEGER ::= 13
id-DCH-AddItem-RL-ReconfPrepTDD  INTEGER ::= 14
id-DCH-AddItem-RL-ReconfReadyFDD  INTEGER ::= 15
id-DCH-AddItem-RL-ReconfRqstFDD  INTEGER ::= 16
id-DCH-AddItem-RL-ReconfRqstTDD  INTEGER ::= 17
id-DCH-AddList-RL-ReconfPrepFDD  INTEGER ::= 18
id-DCH-AddList-RL-ReconfPrepTDD  INTEGER ::= 19
id-DCH-AddList-RL-ReconfRqstFDD  INTEGER ::= 20
id-DCH-AddList-RL-ReconfRqstTDD  INTEGER ::= 21
id-DCH-DeleteItem-RL-ReconfPrepFDD  INTEGER ::= 22
id-DCH-DeleteItem-RL-ReconfPrepTDD  INTEGER ::= 23
id-DCH-DeleteItem-RL-ReconfRqstFDD  INTEGER ::= 24
id-DCH-DeleteItem-RL-ReconfRqstTDD  INTEGER ::= 25
id-DCH-DeleteList-RL-ReconfPrepFDD  INTEGER ::= 26
id-DCH-DeleteList-RL-ReconfPrepTDD  INTEGER ::= 27
id-DCH-DeleteList-RL-ReconfRqstFDD  INTEGER ::= 28
id-DCH-DeleteList-RL-ReconfRqstTDD  INTEGER ::= 29
id-DCH-Information-RL-SetupReqqstFDD  INTEGER ::= 30
id-DCH-InformationItem-RL-SetupReqqstFDD  INTEGER ::= 31
id-DCH-InformationItem-RL-SetupReqqstTDD  INTEGER ::= 32
id-DCH-InformationList-RL-SetupReqqstTDD  INTEGER ::= 33
id-DCH-ModifyItem           INTEGER ::= 34
id-DCH-ModifyItem-RL-ReconfPrepFDD  INTEGER ::= 35
id-DCH-ModifyItem-RL-ReconfPrepTDD  INTEGER ::= 36
id-DCH-ModifyItem-RL-ReconfReadyFDD  INTEGER ::= 37
id-DCH-ModifyItem-RL-ReconfRqstFDD  INTEGER ::= 38
id-DCH-ModifyItem-RL-ReconfRqstTDD  INTEGER ::= 39
id-DCH-ModifyList-RL-ReconfPrepFDD  INTEGER ::= 40
id-DCH-ModifyList-RL-ReconfPrepTDD  INTEGER ::= 41
id-DCH-ModifyList-RL-ReconfRqstFDD  INTEGER ::= 42
id-DCH-ModifyList-RL-ReconfRqstTDD  INTEGER ::= 43
id-DL-CCTrCH-Information-RL-ReconfPrepTDD  INTEGER ::= 44
id-DL-CCTrCH-Information-RL-ReconfRqstTDD  INTEGER ::= 45
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD  INTEGER ::= 46
id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD  INTEGER ::= 47
id-DL-CCTrChInformationItem-RL-SetupReqqstTDD  INTEGER ::= 48
id-DL-CCTrChInformationList-RL-SetupReqqstTDD  INTEGER ::= 49
id-DL-CodeInformation-PhyChReconfRqstFDD  INTEGER ::= 50
id-DL-DPCH-Information      INTEGER ::= 51
id-DL-DPCH-Information-RL-SetupReqqstFDD  INTEGER ::= 52
id-DL-DPCH-InformationList-PhyChReconfRqstTDD  INTEGER ::= 53
id-DL-DPCH-InformationList-RL-ReconfReadyTDD  INTEGER ::= 54
id-DL-EbNoTarget           INTEGER ::= 55
id-DL-FrameType            INTEGER ::= 56
id-DL-MeanBitRate          INTEGER ::= 57
id-DL-ReferencePowerInformation-DL-PC-Rqst  INTEGER ::= 58
id-DRX-Parameter           INTEGER ::= 59
id-DedicatedMeasurementObjectType-DM-Rprt  INTEGER ::= 60
id-DedicatedMeasurementObjectType-DM-Rqst  INTEGER ::= 61
id-DedicatedMeasurementObjectType-DM-Rspns  INTEGER ::= 62
id-FACH-InfoForOptionalGroupS-CCPCH-CTCH-ResourceRspFDD  INTEGER ::= 63
id-FACH-InfoForOptionals-CCPCH-CTCH-ResourceRspTDD  INTEGER ::= 64
id-FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspFDD  INTEGER ::= 65
id-GapPositionMode         INTEGER ::= 66
id-L3-Information          INTEGER ::= 67

```

id-MeasurementCharacteristics	INTEGER ::= 68
id-MeasurementID	INTEGER ::= 69
id-MultipleURAsIndicator	INTEGER ::= 70
id-PD	INTEGER ::= 71
id-PagingArea-PagingRqst	INTEGER ::= 72
id-PowerControlMode	INTEGER ::= 73
id-PowerResumeMode	INTEGER ::= 74
id-ProcedureScope-DL-PC-Rqst	INTEGER ::= 75
id-RANAP-RelocationInformation	INTEGER ::= 76
id-RL-Information-PhyChReconfRqstFDD	INTEGER ::= 77
id-RL-Information-PhyChReconfRqstTDD	INTEGER ::= 78
id-RL-Information-RL-AdditionRqstFDD	INTEGER ::= 79
id-RL-Information-RL-AdditionRqstTDD	INTEGER ::= 80
id-RL-Information-RL-DeletionRqst	INTEGER ::= 81
id-RL-Information-RL-FailureInd	INTEGER ::= 82
id-RL-Information-RL-ReconfPrepFDD	INTEGER ::= 83
id-RL-Information-RL-RestoreInd	INTEGER ::= 84
id-RL-Information-RL-SetupReqstFDD	INTEGER ::= 85
id-RL-Information-RL-SetupReqstTDD	INTEGER ::= 86
id-RL-InformationItem-DM-Rprt	INTEGER ::= 87
id-RL-InformationItem-DM-Rqst	INTEGER ::= 88
id-RL-InformationItem-DM-Rspns	INTEGER ::= 89
id-RL-InformationItem-RL-SetupReqstFDD	INTEGER ::= 90
id-RL-InformationList-RL-AdditionRqstFDD	INTEGER ::= 91
id-RL-InformationList-RL-DeletionRqst	INTEGER ::= 92
id-RL-InformationList-RL-FailureInd	INTEGER ::= 93
id-RL-InformationList-RL-ReconfPrepFDD	INTEGER ::= 94
id-RL-InformationList-RL-RestoreInd	INTEGER ::= 95
id-RL-InformationResponse-RL-AdditionRspTDD	INTEGER ::= 96
id-RL-InformationResponse-RL-ReconfReadyTDD	INTEGER ::= 97
id-RL-InformationResponse-RL-SetupRspTDD	INTEGER ::= 98
id-RL-InformationResponseItem-RL-AdditionRspFDD	INTEGER ::= 99
id-RL-InformationResponseItem-RL-ReconfReadyFDD	INTEGER ::= 100
id-RL-InformationResponseItem-RL-SetupRspFDD	INTEGER ::= 101
id-RL-InformationResponseList-RL-AdditionRspFDD	INTEGER ::= 102
id-RL-InformationResponseList-RL-ReconfReadyFDD	INTEGER ::= 103
id-RL-InformationResponseList-RL-SetupRspFDD	INTEGER ::= 104
id-RL-ReconfigurationFailure-RL-ReconfFail	INTEGER ::= 105
id-RL-ReconfigurationFailureList-RL-ReconfFail	INTEGER ::= 106
id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind	INTEGER ::= 107
id-ReportCharacteristics	INTEGER ::= 108
id-S-RNTI	INTEGER ::= 109
id-SAI	INTEGER ::= 110
id-SN	INTEGER ::= 111
id-SRNC-ID	INTEGER ::= 112
id-ScramblingCodeChange	INTEGER ::= 113
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD	INTEGER ::= 114
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD	INTEGER ::= 115
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD	INTEGER ::= 116
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD	INTEGER ::= 117
id-TGD	INTEGER ::= 118
id-TGL	INTEGER ::= 119
id-TGP1	INTEGER ::= 120
id-TGP2	INTEGER ::= 121
id-TransportBearerID	INTEGER ::= 122
id-TransportBearerRequestIndicator	INTEGER ::= 123
id-TransportLayerAddress	INTEGER ::= 124
id-UC-ID	INTEGER ::= 125
id-UL-CCTrCH-Information-RL-ReconfPrepTDD	INTEGER ::= 126
id-UL-CCTrCH-Information-RL-ReconfRqstTDD	INTEGER ::= 127
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD	INTEGER ::= 128
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD	INTEGER ::= 129
id-UL-CCTrChInformationItem-RL-SetupReqstTDD	INTEGER ::= 130
id-UL-CCTrChInformationList-RL-SetupReqstTDD	INTEGER ::= 131
id-UL-DL-CompressedModeSelection	INTEGER ::= 132
id-UL-DPCH-Information	INTEGER ::= 133
id-UL-DPCH-Information-RL-SetupReqstFDD	INTEGER ::= 134
id-UL-DPCH-InformationList-PhyChReconfRqstTDD	INTEGER ::= 135
id-UL-DPCH-InformationList-RL-ReconfReadyTDD	INTEGER ::= 136
id-UL-DeltaEbNo	INTEGER ::= 137
id-UL-DeltaEbNoAfter	INTEGER ::= 138
id-UL-EbNoTarget	INTEGER ::= 139
id-UL-MeanBitRate	INTEGER ::= 140
id-URA-ID	INTEGER ::= 141
id-UnsuccessfulRL-InformationResponse	INTEGER ::= 142
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD	INTEGER ::= 143
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD	INTEGER ::= 144
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD	INTEGER ::= 145

id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD	INTEGER ::= 146
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD	INTEGER ::= 147
id-CriticalityDiagnostics	INTEGER ::= 148
id-DCH-AddItem-RL-ReconfReadyTDD	INTEGER ::= 149
id-DCH-AddItem-RL-ReconfRsp	INTEGER ::= 150
id-DCH-ModifyItem-RL-ReconfReadyTDD	INTEGER ::= 151
id-DCH-ModifyItem-RL-ReconfRsp	INTEGER ::= 152
id-DedicatedMeasurementType	INTEGER ::= 153
id-FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspTDD	INTEGER ::= 154
id-MaxUL-EbNo	INTEGER ::= 155
id-MinUL-EbNo	INTEGER ::= 156
id-RL-InformationResponseItem-RL-ReconfRsp	INTEGER ::= 157
id-RL-InformationResponseList-RL-ReconfRsp	INTEGER ::= 158

END

9.3.7 Container Definitions

```

-- *****
--
-- Container definitions
--
-- *****

RNSAP-Containers -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    Criticality,
    Presence,
    PrivateExtensionID,
    ProtocolExtensionID,
    ProtocolIE-ID
FROM RNSAP-CommonDataTypes

    maxPrivateExtensions,
    maxProtocolExtensions,
    maxProtocolIEs
FROM RNSAP-Constants;

-- *****
--
-- Class Definition for Protocol IEs
--
-- *****

RNSAP-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
--
-- *****

RNSAP-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
--
-- *****

RNSAP-PROTOCOL-EXTENSION ::= CLASS {
    &id                ProtocolExtensionID           UNIQUE,
    &criticality       Criticality,
    &Extension
}
WITH SYNTAX {
    ID                &id
    CRITICALITY       &criticality
    EXTENSION         &Extension
}

-- *****
--
-- Class Definition for Private Extensions
--
-- *****

RNSAP-PRIVATE-EXTENSION ::= CLASS {
    &id                PrivateExtensionID,
    &criticality       Criticality,
    &Extension
}
WITH SYNTAX {
    ID                &id
    CRITICALITY       &criticality
    EXTENSION         &Extension
}

-- *****
--
-- Container for Protocol IEs
--
-- *****

ProtocolIE-Container {RNSAP-PROTOCOL-IES : IEsSetParam} ::=
    SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Field {RNSAP-PROTOCOL-IES : IEsSetParam} ::= SEQUENCE {
    id                RNSAP-PROTOCOL-IES.&id           ({{IEsSetParam}}),
    criticality       RNSAP-PROTOCOL-IES.&criticality   ({{IEsSetParam}}{@id}),
    value            RNSAP-PROTOCOL-IES.&Value         ({{IEsSetParam}}{@id})
}

-- *****
--
-- Container for Protocol IE Pairs
--
-- *****

ProtocolIE-ContainerPair {RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
    SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-FieldPair {{IEsSetParam}}

ProtocolIE-FieldPair {RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::= SEQUENCE {
    id                RNSAP-PROTOCOL-IES-PAIR.&id       ({{IEsSetParam}}),
    firstCriticality  RNSAP-PROTOCOL-IES-PAIR.&firstCriticality ({{IEsSetParam}}{@id}),
    firstValue       RNSAP-PROTOCOL-IES-PAIR.&FirstValue ({{IEsSetParam}}{@id}),
    secondCriticality RNSAP-PROTOCOL-IES-PAIR.&secondCriticality ({{IEsSetParam}}{@id}),
    secondValue      RNSAP-PROTOCOL-IES-PAIR.&SecondValue ({{IEsSetParam}}{@id})
}

```

```

}

-- *****
--
-- Container Lists for Protocol IE Containers
--
-- *****

ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, RNSAP-PROTOCOL-IES :
IEsSetParam} ::=
  SEQUENCE (SIZE (lowerBound..upperBound)) OF
  ProtocolIE-Container {{IEsSetParam}}

ProtocolIE-ContainerPairList {INTEGER : lowerBound, INTEGER : upperBound, RNSAP-PROTOCOL-IES-PAIR :
IEsSetParam} ::=
  SEQUENCE (SIZE (lowerBound..upperBound)) OF
  ProtocolIE-ContainerPair {{IEsSetParam}}

-- *****
--
-- Container for Protocol Extensions
--
-- *****

ProtocolExtensionContainer {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=
  SEQUENCE (SIZE (1..maxProtocolExtensions)) OF
  ProtocolExtensionField {{ExtensionSetParam}}

ProtocolExtensionField {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
  id          RNSAP-PROTOCOL-EXTENSION.&id          ({ExtensionSetParam}),
  criticality RNSAP-PROTOCOL-EXTENSION.&criticality ({ExtensionSetParam}@id)},
  extensionValue RNSAP-PROTOCOL-EXTENSION.&Extension ({ExtensionSetParam}@id)}
}

-- *****
--
-- Container for Private Extensions
--
-- *****

PrivateExtensionContainer {RNSAP-PRIVATE-EXTENSION : ExtensionSetParam} ::=
  SEQUENCE (SIZE (1..maxPrivateExtensions)) OF
  PrivateExtensionField {{ExtensionSetParam}}

PrivateExtensionField {RNSAP-PRIVATE-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
  id          RNSAP-PRIVATE-EXTENSION.&id          ({ExtensionSetParam}),
  criticality RNSAP-PRIVATE-EXTENSION.&criticality ({ExtensionSetParam}@id)},
  extensionValue RNSAP-PRIVATE-EXTENSION.&Extension ({ExtensionSetParam}@id)}
}

END

```